The findings and recommendations in this report are those of the authors and do not necessarily represent the views of the Department for Communities and Local Government.
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Section 1 Introduction and context

1.1 Neighbourhood-level indicator datasets

1.1.1 There is now a great deal of information available to partners wanting to better target and assess local neighbourhood regeneration and renewal programmes. Many local users are highly skilled and experienced in using these datasets to target and assess local programmes. However, there is a consistent message that more help is needed to support the use of data at neighbourhood-level in driving performance improvement and in reporting on progress and impact.

1.1.2 This report, one of two reports published from the Neighbourhood-level Data project, provides data users with five practical guides to help support the use of neighbourhood-level data. These practical guides are not intended to provide a comprehensive guide to using neighbourhood-level data, but rather to complement existing advice and guidance from the Supporting Evidence for Local Delivery (SELD) programme, Neighbourhood Statistics and other sources.

1.1.3 The five practical guides covered in this report give an overview of using different types of small area data associated with a selection of renewal and regeneration themes. The practical guides cover:

- Monitoring change and identifying programme effectiveness in a deprived neighbourhood: The elephant in the room
- Using updated population estimates rather than Census data when looking at trends
- Health outcomes at neighbourhood-level
- Are my datasets fit for purpose?
- Using crime data at neighbourhood-level to target programmes

1.1.4 In each guide we review the key issues, using neighbourhood renewal and regeneration related examples for illustration. Some guides focus on practical solutions for users; for example we identify that updated population estimates should be used rather than Census data when looking at trends. Other guides highlight potential pitfalls for users; for example all users should be careful not to over-interpret data in the cases where indicators are subject to uncertainty (such as survey data which should always be used and reported with the relevant Confidence Intervals) or because of other reliability issues concerning the data or the way an indicator has been calculated.
1.1.5 Each guide closes with a summary of the practical lessons for data users with pointers and web-links to further case studies and relevant datasets. All web-links are for free and publicly available resources.

The national performance framework and indicator set

1.1.6 The practical solutions illustrated in this report are generic examples and are not intended to be specific to the new performance framework for local authorities. However, the reports will be useful for local authorities when considering what their local priorities should be. Furthermore many of the issues discussed will also be relevant to the use of small area data in the LAA process.

1.1.7 Although local authorities and their partners will need to report data for the national indicator set, they can set targets in their LAA at a spatially disaggregated level where evidence suggests this might be appropriate. The LAA framework operational guidance (2007) states that:

“Local authorities and their partners may choose to break down data to levels below that set out in the national indicator set, to cover key equalities strands including age, gender, disability, ethnicity, religion, sexual orientation, vulnerable people, socio-economic classification, alongside data for small area geographies. Where there is a clear need from evidence which reveals inequalities in outcomes for particular groups or areas, local authorities and partners may wish to set specific targets on a particular indicator.... Such targets can be included as designated targets, and partners are not required to set an additional target at the level set out in the national indicator set unless they so choose.”

Many well known data sources do not produce reliable statistics at sub-district level

1.1.8 There are data sources collected for national, regional or sub-regional purpose that are not suitable for use at neighbourhood level. Indicator datasets may be sound enough for assessing performance at a national or regional level, but have limitations for accurately and reliably measuring change and assessing performance at the neighbourhood or even District level.

1.1.9 For example the employment rate derived from the Labour Force Survey/Annual Population Survey is published at district and parliamentary constituency level, however it is subject to wide confidence intervals and therefore is not accurate enough for reliable performance monitoring particularly at the neighbourhood level.

Not all neighbourhood-level data is of good quality

1.1.10 Although there is a great deal of information specifically produced at neighbourhood-level, not all of this data is suitable or robust enough to

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accurately measure the prevalence of an incident or to identify differences between neighbourhoods or over time.

1.1.11 Some neighbourhood-level data sets are produced via modelling techniques that estimate the occurrences, incidents or events rather than directly measure them: these data sets are intended to be used for identification and prioritisation and not for performance monitoring.

**Advice about the strengths and weaknesses of specific indicators is provided in an accompanying report**

1.1.12 The practical guide in this report – “Are my datasets fit for purpose?” – outlines some ways by which users can assess the quality of datasets. This is explored further in the accompanying report output from this Neighbourhood-level Data project, which provides detailed assessments on the strengths and weaknesses of specific datasets at the neighbourhood-level:


**What this report doesn’t cover**

1.1.13 Although called for by many users, this report does not provide a comprehensive guide to what indicators are available at neighbourhood-level or how to calculate them. Good starting points for this include:


1.1.14 Additionally, this report does not provide detailed advice on how to create indicators from underlying datasets, although the examples provided do highlight where users can obtain the datasets discussed. Guidance on creating indicators can be found on the Neighbourhood Statistics website:


1.1.15 The report discusses a number of practical issues when trying to assess the impact attributable to local programmes and projects. We also highlight the importance of considering a wide range of relevant data, including administrative, quantitative and qualitative, as well as using project output and programme outcome data to strengthen the analysis of the impact of local interventions. Though providing some discussion around the issues, the report does not cover all the different approaches to evaluation according to different contexts and objectives. Neither do we examine in detail how
Practical Guides for Using Neighbourhood-Level Data
to evaluate the multiple or indirect effects of individual interventions; for example, interventions aimed at reducing worklessness can also have a positive effect on mental health issues. More information on programme evaluations can be found on the Partnerships and places library\(^2\) and in the other sources supplied at the end of this Section (and the end of Section 2).

1.2 Practical guides for using neighbourhood-level indicator datasets

1.2.1 The five practical guides we cover are:

1) Monitoring change and identifying programme effectiveness in a deprived neighbourhood: The elephant in the room

1.2.2 In this first practical guide we give an overview of some of the key issues local partners grapple with when trying to monitor change and measure the impact attributable to local programmes.

1.2.3 When we evaluate or assess the impact of programmes and projects we may try to link their effectiveness with changes in outcome and indicator data. We should not underestimate how complex and difficult this can be to do in practice, especially as the relationships between programme activity, specific outputs, general outcomes and other impacts may not be clear or readily quantifiable. This difficulty is often skated over by partners at all levels – hence the elephant of the title!

1.2.4 Despite the difficulty, partners are expected to show their progress or performance in relation to change in particular outcomes usually on an annual basis. Also, organisations may wish to try to assess and attribute the impact of a particular activity in order to help identify what works and why. This guide provides some discussion around these issues, helping to inform all users about some of the strengths and limitations of available data especially in the context of performance assessment. It highlights the importance of good quality project data in helping to assess the impact of local interventions, particularly in those cases where standard or ad hoc survey data and administrative data sources have limitations in providing an accurate and reliable measure of outcome or indicator data, especially at neighbourhood-level, for annual monitoring and performance assessment purposes.

1.2.5 The practical guide highlights key lessons for data users:

- Do acknowledge and commit to good quality local project data – this can be invaluable in helping to understand and measure who is benefiting from particular initiatives and may also help in quantifying the impact of local projects on more broad-brush outcome data

\(^2\) www.idea.gov.uk/idk/laa/home.do
All users of data, across and between all partnership bodies and agencies need to be aware of the limitations of data and data sources especially in the context of target-setting and performance assessment.

Do be aware that although local survey data can provide useful contextual data it does have limitations for annual monitoring and performance assessment purposes. Confidence Intervals (or margins of error) apply to survey findings and these can compromise effective target monitoring, evaluation and performance assessment activities. There are also issues of comparability between areas and consistency of methodology for local surveys.

Do be aware that when assessing and understanding performance it is important to consider a range of data, indicators and evidence, backed up by plausible theories of change, as well as taking account of data uncertainties.

2) Use updated population estimates rather than Census data when looking at trends

1.2.6 Our second practical guide covers the critical area of which population denominators to use when looking at trends over time.

1.2.7 As an example, we look at a London Borough with a fast growing population, and look at how the numbers and proportions of working-age people receiving DWP benefits are changing over time at Borough and sub-Borough level. We use ONS small-area population estimates to look at trends over time, and then compare this analysis with using population denominator data from the 2001 Census.

1.2.8 The guide illustrates that using Census data for examining trends can give us a false impression of what is happening: the lesson from this practical guide is that when we are looking at trends over time – for example, in assessing whether change has occurred or targets are being reached – it is important to use population data that is up-to-date and regularly updated.

1.2.9 The practical guide highlights key lessons for data users:

- Do use regularly updated population estimates, such as ONS Lower Super Output Area estimates to calculate rates, rather than 2001 Census data – especially for areas experiencing notable population change since 2001

- Do quote the population source and date of data, in all documentation, where rates have been calculated

- Do be aware that ONS produce annual estimates (2001 to 2005) of ethnic population groups (based on Census categories) at District level. However, generally speaking we are still dependent on 2001 Census data for sub-District ethnicity measures, although this may be inadequate for accurately assessing the size of particular population groups.
• Do be aware that if you produce more up-to-date ethnicity estimates at sub-District level based on local survey data, that observed findings may be subject to wide Confidence Intervals (or margins of error)

3) Health outcomes at neighbourhood-level

1.2.10 Although many case studies look at the range of worklessness data, relatively few explore the wide range of Health data sources relevant to tackling neighbourhood renewal and social exclusion issues.

1.2.11 In our third practical guide we briefly outline the key sources available, and look at using the data to measure change at neighbourhood-level for three different health areas – teenage pregnancy; work-limiting ill health, and mental health. In each case we provide pointers to more in-depth relevant material.

1.2.12 The practical guide highlights key lessons for data users:

• Do be aware that DWP publish a range of datasets at neighbourhood-level useful for health work, including the number of people receiving Attendance Allowance, Disability Living Allowance, and Incapacity Benefit (including the number of people receiving Incapacity Benefit by main cause – mental health, respiratory or circulatory and musco-skeletal). These datasets can be useful in comparing between areas and monitoring change over time

• Do be aware that it is generally difficult to accurately and reliably measure many standard health indicators at neighbourhood-level on an annual basis because of the issue of statistically ‘small numbers’

• Do be aware that health measures derived from local survey data, such as % of the population smoking, may be subject to wide Confidence Intervals especially at the neighbourhood-level. It therefore may be difficult to accurately and reliably measure change over time for sound performance monitoring purposes

4) Are my datasets fit for purpose?

1.2.13 Local partners often highlight difficulty in identifying which datasets are ‘fit for purpose’ in terms of setting targets or monitoring change, and the difficulty they face in identifying appropriate (and rejecting inappropriate) indicators and performance targets. The fourth practical guide aims to help partners in this area, suggesting ways of assessing the quality of datasets.

1.2.14 When setting targets and assessing performance against those targets, we need to take into account the quality, relevance and precision of the datasets we are using. This is particularly important where users are assessing annual change and / or making judgements about performance. We highlight some of the key ways that datasets are assessed, focusing on ways of identifying whether datasets can accurately identify changes over time at Local Authority and neighbourhood-level, using worklessness data covering Coventry and the City’s priority neighbourhoods.
1.2.15 The practical guide highlights key lessons for data users:

- Do carry out your own assessment of the strengths and weaknesses of datasets. Where indicator rates are being used, you should also think about the strengths and weaknesses of the population denominator used to calculate the rates.
- Do be aware that survey-based indicators are subject to uncertainty, and always report Confidence Intervals alongside the actual data values for survey data.
- Although administrative datasets are generally more reliable data sources for annual monitoring purposes than survey data, do be aware that administrative datasets are a by-product of the system from which they are derived and may therefore only be a proxy for the outcome or concept you are interested in. As a result, these indicators may also be subject to uncertainty, and Confidence Intervals may need to be taken into account.
- Do be aware of the implications that the level of uncertainty on data has for accurate and reliable target-setting and monitoring.
- Do look at ways of identifying whether differences between areas and over time are significant, for example forthcoming ONS work on ‘closing the gap’ between the most deprived areas in an LA and the LA as a whole.

5) Using crime data at neighbourhood-level to target programmes

1.2.16 The causes of crime can be complex and thus interventions to tackle these causes often require a co-ordinated response from different agencies. Whereas historically it was uncommon for organisations to share ‘their’ data with other organisations, the introduction of the Crime and Disorder Act 1998 both encouraged and facilitated inter-agency data sharing for the purposes of tackling crime, disorder and their causes. Nevertheless, in many areas there are still considerable obstacles to overcome in order to achieve effective partnership working and data sharing.

1.2.17 This practical guide outlines key issues and data sources, with particular emphasis on identifying and overcoming barriers to establishing successful evidence-based interventions. Examples are used to demonstrate good practice at local level.

1.2.18 The practical guide highlights key lessons for data users:

- Do engage with a wide variety of partner agencies, including voluntary organisations, and use all available data when identifying local problems.
- Do set targets against which progress can be monitored and evaluated.
- Do give careful consideration to the issues around evaluating success of interventions, including being mindful of potential unintended consequences.
- Do respect legal requirements on data protection, and adhere to sound procedures for managing and using data. But be clear on the
circumstances where data can legitimately be shared between partners. Data exchange protocols can provide a legal gateway to facilitate access.

- Don’t simply restrict interventions to only those with an obvious causal link to reducing a particular crime rate – innovative approaches to intervening early to tackle problems before they arise can have major effects in the short, medium and long term.
- Don’t use data for targeting, implementing and evaluating interventions without first considering its strengths and weaknesses. Where possible compare more than one related data source to assess whether trends are consistent between sources, and do take into account the relative robustness, relevance and reliability of the different data sources when making assessments or conclusions.

1.3 Where to find further practical guides

1.3.1 Each practical guide provides pointers to further work. These are summarised in Appendix A.

1.3.2 Key sources for further practical guides and case studies include:

- Partnerships and places library
  www.idea.gov.uk/idk/laa/home.do
- SELD Frequently Answered Questions
  www.data4nr.net/supporting
- SELD general data and evidence resources
  www.data4nr.net/supporting
- ONS Neighbourhood Statistics Analysis Toolkit
- Green Book, Appraisal and evaluation in central government, HM Treasury
  http://greenbook.treasury.gov.uk
- The Magenta Book: Guidance notes for Policy Evaluation and Analysis, Government Social Research
- National NDC evaluation: http://extra.shu.ac.uk/ndc/index.html
- ONS Case Studies
1.4 Examples of using neighbourhood-level data

1.4.1 There is clearly a very wide range of data available at neighbourhood-level, and a very wide range of possible uses to which the data could be put. In this report we work through some cases, with additional examples listed in the following table:

<table>
<thead>
<tr>
<th>Neighbourhood-level dataset</th>
<th>Example</th>
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<tbody>
<tr>
<td>DWP Benefits Datasets:</td>
<td>• In Darlington, the Neighbourhood Renewal strategy identified priority wards based on levels of JSA claimants, in order to target neighbourhood renewal programmes</td>
</tr>
<tr>
<td>• Jobseekers Allowance (JSA)</td>
<td>• Better targeting of worklessness initiatives in Liverpool and Manchester is using DWP claimant data on Incapacity Benefit claimants</td>
</tr>
<tr>
<td>• Incapacity Benefit (IB)</td>
<td>• Guidance from Communities and Local Government (2006) highlights using the WACG dataset as a proxy for worklessness at neighbourhood-level</td>
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<tr>
<td>• Working Age Client Group (WACG)</td>
<td>• Islington NDC (EC1 NDC) is monitoring change in the number of residents receiving Pensioner Credit, Attendance Allowance and Disability Living Allowance based DWP benefits data specific to its unit postcode boundary. This data is supplied to all NDCs as part of the ad hoc DWP benefits data specification</td>
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<tr>
<td>• Pension Credit, Disability Living Allowance Among Older Groups</td>
<td></td>
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<tr>
<td>Council Tax/Housing Benefits</td>
<td>• Leeds City Council uses the information routinely collected to pay local authority benefit, to develop detailed profiles of the most disadvantaged communities across the City. Direct mail shots offering help and support to people trying to get into work were targeted at those households with unemployed people. The approach was at the heart of a public / private sector partnership in one of the city’s most deprived wards, resulting in over 180 local people finding employment at a brand new superstore</td>
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<td></td>
<td>• (<a href="http://www.laria.gov.uk/content/features/66/feat10.htm">www.laria.gov.uk/content/features/66/feat10.htm</a>)</td>
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Note that we have not evaluated the use of neighbourhood-level data for the examples shown, or whether the conclusions drawn from the analysis were valid.
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<thead>
<tr>
<th>Neighbourhood-level dataset</th>
<th>Example</th>
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<tbody>
<tr>
<td>VAT registered Enterprises / Local Units</td>
<td>• Salford’s previous Local Area Agreement used measures based on VAT business stock levels in five priority wards to support the City Council’s Local Enterprise Growth Initiative outcome – “support the sustainable growth and reduce the unnecessary failure, of locally owned businesses in deprived areas”</td>
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<tr>
<td>Hospital Episode Statistics (HES)</td>
<td>• In Wirral, HES data is used to identify health inequities in relation to the prevention, diagnosis, treatment and palliative care of cancer. The PCT is using this information to prioritise investment in health improvement services to support people making lifestyle changes such as giving up smoking</td>
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<tr>
<td>Age standardised mortality rates for coronary heart disease and stroke and related conditions</td>
<td>• To help inform the development of their Service Level Agreement and Delivery Plan, Shoreditch Trust (the Hackney NDC) in conjunction with the East London Common Information Service for local Primary Care Trusts calculated estimates of directly standardised rates for all cancers, circulatory and coronary heart disease (all for people under 75). Due to the small numbers involved this involved aggregating four years worth of data for each time period. The process of bringing together this data also helped in developing a better understanding of the uncertainties relating to the data especially for monitoring purposes</td>
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<tr>
<td>Life Expectancy</td>
<td>• Life Expectancy data at ward level is used by Leicester Public Health Partnership to identify priority areas for additional programmes aimed at reducing mortality rates from cancer and heart disease</td>
</tr>
<tr>
<td>Low Birth Weight</td>
<td>• Low Birth Weight data at neighbourhood-level is used by Warrington PCT as part of their public health profiling work, helping to better focus programmes</td>
</tr>
<tr>
<td>Dwelling stock by tenure and condition in social, rented and private housing</td>
<td>• Preston District Council used their Housing stock condition survey as the basis for targeting Neighbourhood Renewal Fund housing programmes</td>
</tr>
<tr>
<td>Neighbourhood-level dataset</td>
<td>Example</td>
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<tr>
<td>Police Force Crime Data – notifiable offences</td>
<td>• In Somerset, sharing data on violent crime patterns is helping agencies dealing with crime to work more closely together to target delivery. Unexpected findings from the data are highlighted to delivery agencies and policy-makers – data on youth violence led to better support and new initiatives within the Children and Young People service, including aligning police services and youth services through ‘locality teams’</td>
</tr>
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</table>
| Best Value User Satisfaction and Quality of Life surveys | • Bristol City Council boosted their Quality of Life survey sample to 7,000 responses, particularly in priority neighbourhoods across the City, in order to reduce the margins of error on survey findings at neighbourhood-level  
• Analysis of the liveability data provided by the survey has helped small local projects across the city assess their impact in improving liveability scores, and in narrowing the inequalities gap between the priority neighbourhoods and the city as a whole |
<p>| Pupils eligible for Free School Meals               | • Torbay Local Education Authority is using the level of pupils eligible for Free School Meals to target funding for healthy school meals programme |
| Pupil attainment by pupil home residence            | • In order to identify deprived neighbourhoods more precisely, Rotherham developed its own Local Index of Multiple Deprivation using local indicators such as benefit claims, free schools meals, school attainment, crime, anti-social behaviour levels and health indicators. Rotherham’s local index provides data for Output Areas which had been used to identify target areas for Rotherham’s Neighbourhood Renewal Strategy, targeting the most deprived 25% of the Borough |
| Unauthorised pupil absence (number of school sessions missed), at school level | • Data on pupil absences is used by Leeds Education Authority as part of LPSA strand on ‘Behaviour and Attendance’, which targets the reduction in both permanent and fixed term exclusions and improvements in secondary attendance and unauthorised absence |</p>
<table>
<thead>
<tr>
<th>Neighbourhood-level dataset</th>
<th>Example</th>
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<tbody>
<tr>
<td>Conceptions to under 18 year olds</td>
<td>• Braunstone, the most deprived area in the East Midlands, has the highest rate of teenage conceptions in Leicester, with rates three times the national average. Braunstone NDC funds a scheme in which teenage mothers educate pupils in local schools about the realities of teenage parenthood. The scheme provides the mothers with training, work experience and a support network, and is helping to reduce pregnancies among school pupils</td>
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<tr>
<td>16–18 year olds Not in Education Employment or Training (NEET)</td>
<td>• NEET numbers at ward level are used by Suffolk County Council to assess how well they are meeting government targets to reduce NEET levels, and to pinpoint the specific issues for Suffolk young people, including identifying the NEET ‘hotspots’ across the County, and how local partners can work together in better ways to support young people</td>
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Section 2  Monitoring change and identifying programme effectiveness in a deprived neighbourhood: The elephant in the room

2.1 What is this practical guide about?

2.1.1 When we evaluate or assess the impact of programmes and projects we may try or be asked to link their effectiveness with changes in outcome and indicator data. We should not underestimate how complex and difficult this can be to do in practice, especially as the relationships between programme activity, specific outputs, general outcomes and other impacts may not be clear or readily quantifiable. This difficulty is often skated over by partners at all levels, hence the elephant of the title.

2.1.2 It is beyond the scope of this practical guide to cover all the various theoretical and methodological approaches to national and local evaluation, or related research techniques and data management and analysis issues. Although in Section 2.6 below we do provide some references and further sources of information.

2.1.3 In this first practical guide, we go through some of the issues local partners grapple with when trying to monitor change and measuring the impact due to local programmes. We discuss some of the issues when trying to answer the following questions:

- What data can we use to look at outcomes? Is it relevant to our programmes? Where can we get this data?
- We are targeting programmes at a priority area that doesn’t match standard administrative geographies. What can we do?
- Can we get better data by commissioning survey work?
- How can the effectiveness of programmes be linked to data on outcomes?
- What about programme outputs? How can we use these when trying to understand the effectiveness of programmes and in strengthening our analysis where outcome data is limited?
2.1.4 Where possible we highlight appropriate ways to approach or tackle the various issues, but also provide links and pointers to further useful sources – we do encourage users to follow-up on the suggestions for further reading.

2.1.5 We illustrate the issues using the example ‘PriorityNeighbourhood’ area, where the Local Authority is trying to monitor and understand the success of employment and worklessness programmes.

Who is this practical guide for?

2.1.6 This example is intended as a general introduction to the problems and issues faced by local partners trying to understand and evaluate the success of their programmes.

2.2 Our scenario: Understanding the success of employment and worklessness programmes in ‘PriorityNeighbourhood’

2.2.1 The deprived ‘PriorityNeighbourhood’ area has been the subject of various policy and funding initiatives over the years. Geographically ‘PriorityNeighbourhood’ cuts across parts of three wards and whose boundaries do not match (even closely) Lower Super Output Area boundaries.

2.2.2 ‘PriorityNeighbourhood’ is characterised by high levels of unemployment and economic inactivity, people with long term sickness and disability and low qualification and skill levels. Residents who are in full time education and looking after the home or family represent the largest of the working age economic inactivity group. Economic inactivity also includes adults in their forties and fifties who are out of work or classified as ‘early retired’.

2.2.3 ‘PriorityNeighbourhood’ also has high proportions of large adult households and lone parent families. There is concern about child poverty and ‘hidden worklessness’ in low income households with two adults where one adult is working but in a low pay job and the other adult is not working but would like to work.

2.2.4 The local authority has developed an employment and enterprise strategy aiming to increase employment and reduce worklessness. This includes elements with a District-wide focus as well as a number of specific interventions which have been focused specifically to benefit residents living in ‘PriorityNeighbourhood’. This has included the development of a one-stop resource centre for ‘PriorityNeighbourhood’ residents which has been supported by the local authority together with various agencies and partnership bodies.

2.2.5 The resource centre, through its various staff and out-reach workers, provides a number of services including benefits advice, helping residents
to overcome barriers to work through identifying training needs and other support, and helping residents into work, for example by providing business start up advice. The centre also includes support and advice in enabling people to move from low pay or low skill employment into better paid and more skilled employment.

2.2.6 The local interventions supported through the resource centre are available to all residents living in ‘PriorityNeighbourhood’ irrespective of age, gender, ethnicity, economic status and whether they are on benefit or not.

2.2.7 The Local Authority wants to understand the success of employment and worklessness programmes in ‘PriorityNeighbourhood’ – we cover some of the important issues to consider below.

2.3 What data can we use to look at outcomes? Is it relevant to our programmes? Where can we get this data?

2.3.1 Local Authority Anywhere wants to monitor how well its programmes in the locally defined deprived neighbourhood ‘PriorityNeighbourhood’ are working. In particular, the local authority and its partners are keen to see if it can get a measure of success or effectiveness of its employment and enterprise strategy and, especially the locally-targeted initiatives it has put in place to support and enable the area’s residents to move into work.

So where can we find out what datasets might be useful?

2.3.2 A good starting point, is the Supporting Evidence for Local Delivery (SELD)\(^4\) work, which has produced some good overviews of using data and analysis. Other possible suggestions are:

- Good Indicators, SELD www.data4nr.net/supporting
- Floor Targets Interactive www.fti.communities.gov.uk/fti/

Annual Population Survey data is of limited use in this context

2.3.3 The Annual Population Survey (APS) data is the national standard data source for measuring the level and rate of employment, ILO unemployment and

\(^4\) SELD outputs are available from: www.data4nr.net/supporting
economic inactivity. However, the dataset is not reliable or robust enough at sub-District level for accurate annual monitoring purposes. The small sample size means that the Confidence Intervals (discussed in a later practical guide) on the data are too wide for accurate and reliable annual monitoring and performance assessment purposes.

**DWP benefits data can be useful as an indicator of worklessness** ...

2.3.4 DWP benefits datasets – in particular Jobseekers Allowance, Incapacity Benefits and the Working Age Client Group datasets – can give a measure of ‘worklessness’. This data is available down to LSOA level, is updated regularly, and is provided quarterly from 1999.

... although the data misses those groups not receiving benefits ...

2.3.5 It is important to understand that ‘worklessness’ also does not equal ‘economic inactivity’ nor does it equal ‘not in employment’. This is a measurement based on a benefits-only count and does not take into account those people who are not on benefit but who might be regarded as ‘workless’.

2.3.6 Therefore, it is important to be cautious when using a ‘benefits only based’ indicator as the measure for performance assessment purposes. This is especially the case where policies and initiatives are targeted to people not on benefit. For example, the success of interventions to support this group into work (or to move closer to the employment market), will not be picked-up by benefit claimant trends.

... and the benefit datasets need reliable population denominators to monitor change

2.3.7 To monitor change (and compare between areas), we need to look at the proportion of people receiving benefit. Later in this report (the next practical guide), we see how important it is to use regularly updated population estimates rather than the Census data.

2.3.8 Using the regularly updated population data available from ONS at LSOA level could in theory provide an annual worklessness rate. However, latest population estimates currently lag up to two years behind the date of the benefits data. In practice, when calculating rates for the latest/current reporting cycle, they would then need to be updated in subsequent years (to match the date of the benefits data) when more recent population estimates

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5 There are also issues about reliability when using this data at District level for annual monitoring and performance assessment purposes and caution should be exercised if using this data as wide Confidence Intervals apply. See Practical guide number four for further details. Although APS data at parliamentary constituency level is available from NOMIS.

6 There is no standard or agreed definition of “worklessness”. In the absence of other reliable data sources at the neighbourhood level and for monitoring purposes worklessness has generally come to be "measured" on the basis of benefit take-up (although this measure may miss groups who are not eligible for benefit as not everyone who is out of work or workless will be on benefit). One of the benefits-only measures is based on those claiming either JSA and/or IB/SDA, for example in the administrative datasets provided to the New Deal for Communities and used in the Index of Multiple Deprivation. September 2006 Communities and Local Government guidance has widened this measure to include the eight benefits currently making up the DWP Working Age Client Group (WACG) datasets, which also includes some benefits that can be claimed whilst in work. In the absence of a standard definition of “worklessness” and how it is measured at different geographical levels, providers and users need to specify and be clear about how they are measuring worklessness in any particular instance.
are published by ONS. In the case of a rate which may later change because more recent population estimates become available, we recommend this is highlighted in appropriate analyses and documentation. Providers and users of the data can then be alerted to the possibility that a value of a measured target may change as a result of more relevant data becoming available. Population estimates provided by ONS at LSOA level enable rates to be calculated based on the working age population rather than an estimate of the economically active population.

And where do we get this data from?

2.3.9 Some good starting points for the data include:

- Neighbourhood Statistics
  www.neighbourhood.statistics.gov.uk

- Annual Population Survey data is available from NOMIS Labour market statistics website
  www.nomisweb.co.uk

- DWP benefits datasets are available from Neighbourhood Statistics, and the DWP small area benefit statistics
  http://83.244.183.180/NESS/page1.htm

- ONS small area population estimates are available from Neighbourhood Statistics
  www.neighbourhood.statistics.gov.uk/dissemination/datasetList.do?JSAI
  lod=true&Function=&%24ph=60&CurrentPageld=60&step=1&CurrentTreeIndexed=-1&searchString=&datasetFamilyId=1818&Next.x=13&Next.y=11

- Floor Targets Interactive
  www.fti.communities.gov.uk/fti/

- Data for Neighbourhood Renewal (links to wide range of small area datasets)
  www.data4nr.net

2.4 We are targeting programmes at a priority area that doesn’t match standard administrative geographies. What can we do?

2.4.1 This problem is often encountered when setting up baselines and assessing change.

2.4.2 Some local partners have chosen to match their priority neighbourhoods to standard administrative boundaries such as LSOA – this means they can use nationally published data. However, LSOA boundaries might not always match locally defined boundaries.
2.4.3 Where your boundaries do not match standard administrative boundaries you have two main options:

1) Matching ‘best-fit’ or ‘pro-rata’ boundaries to your area

2.4.4 You may be able to decide on a ‘best-fit’ match between administrative boundaries and your neighbourhood. There are many ways to do this. For some cases, estimating ‘by eye’ from maps may be adequate to identify which LSOAs are mainly inside or mainly outside your area. A more accurate approach is to identify how many households within each administrative area lie within your area, although you would need to use GIS analysis for this. There will be some mismatch between the best-fit boundary and your exact areas – you will need to decide whether this is acceptable for your assessment of change over time. If there is quite a big mismatch, this will make it difficult to reliably and accurately monitor change over time.

2.4.5 There will be some mismatch between the best-fit boundary and your exact areas – you will need to decide whether this is acceptable for your assessment of change over time. If there is quite a big mismatch, this will make it difficult to reliably and accurately monitor change over time.

2.4.6 An alternative way is to ‘pro-rata’ data based on the proportions of each LSOA that fall within your neighbourhood boundary area. The known proportions can be calculated in different ways. One option is to use GIS analysis, as highlighted above, to identify how many households within each administrative area lie within your area. A simpler alternative is to establish which OAs of the LSOA fall within the area, and then use 2001 Census OA population data to calculate the proportion of the population at the time of the 2001 census living inside the ‘PriorityNeighbourhood’ boundary. There is SELD help on this technique in the useful resources below, but again you may be including areas into your analysis that hide or in some way influence any effect that your programmes are having.

2.4.7 Take care if using a population based approach that the variable of interest is population related. There may be no correlation between the distribution of the population and the variable. For example acquisition crimes are more likely to be concentrated in town centres, which is not related to the distribution of the resident population.

2.4.8 In general, matching best-fit or pro-rata data is likely to be better for contextual and profiling analysis, rather than for accurate and reliable monitoring and assessment of change.

2) Obtain data specifically for your area

2.4.9 The best approach is to obtain data specifically for your area – this may be possible for locally-held datasets such as pupil attainment from the LEA. Additionally, some agencies such as DWP provide data on request for specific boundaries. This is the approach adopted in providing NDCs with benefits data specific to each of their boundary areas which invariably cut across wards, LSOAs and even Census Output Areas.

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7 The Ordnance Survey household level Address-point dataset can be used in GIS software to identify which households are inside or outside particular boundaries. ONS used a similar approach to create the OA-NDC lookup tables, by using individual-level Census 2001 data to determine the proportion of the Census residential population for each OA in order to determine which OAs were inside or outside each NDC boundary.
2.4.10 We recommend that for monitoring and assessing change when your boundaries do not closely match standard administrative boundaries, and when there is only a limited range of data already available, that you try to obtain specific data for your area. Where you cannot get hold of data you may need to use best-fit or pro-rata data as described above.

2.4.11 Bear in mind that you will also need to obtain population estimates for your area in order to calculate rates such as the proportion of people receiving workless benefits. However, reliable population estimates for your area may not be available, for example in those instances where neighbourhood boundaries do not match LSOA boundaries. It is important when creating indicators that the numerator and denominator should both cover the same geographical area and ideally, for the same time-point.

Useful resources:

- Data not fitting to neighbourhoods, SELD www.data4nr.net/supporting
- DWP can provide data by special requests

2.5 Can we get better data by commissioning survey work?

So can survey data be used to measure changes in employment, unemployment and economic inactivity rates at neighbourhood-level?

2.5.1 Survey data can be useful for aiding understanding of the general context and prevailing conditions in an area. Survey data can also be used to explore links between different issues, for example is one particular group more or less likely to be satisfied with the local area?

2.5.2 However, as a general rule of thumb, it is unlikely that survey data will provide data that has sufficient precision for annual monitoring of change and for reliable performance assessment at neighbourhood-level. There are a number of reasons for this and we explain some of the main ones below.

2.5.3 Data obtained from random sample surveys have ‘margins of error’ or ‘Confidence Intervals’ which apply to any finding. This means that when sample sizes are too small, survey data can be ‘too insensitive’ for accurately and reliably measuring small changes of a few percentage points between survey periods or comparing between areas.

2.5.4 A good example to consider and learn from are the surveys which have been carried out in each of the New Deal for Communities areas as part of the national evaluation of the NDC programme, and from which data is provided
to each NDC for use in their Delivery Plans and for performance monitoring purposes.

2.5.5 The NDC surveys were based on data from 500 households randomly selected on a biannual basis. In 2002, a random sample of 500 residents aged 16 and over were surveyed in every NDC area\(^8\). In 2004, the 500 household sample included a longitudinal element (the inclusion of some of the same households sampled in 2002) along with a fresh sample of randomly selected households. The same was repeated in 2006 (although the sample size was reduced to 400).

2.5.6 Data from these surveys were used to inform the national evaluation of the NDC programme and provide the only source available to each NDC for measuring economic status rates – including employment rate, ILO unemployment rate and economic inactivity rates.

2.5.7 However, even with a carefully designed survey of this kind with adherence to quality control standards in terms of survey implementation, there were limitations to its ability to provide accurate and reliable enough data to support effective monitoring and assessment at the neighbourhood-level.

2.5.8 For example, Confidence Intervals of around ± 4% apply, and when comparing findings between two surveys (at different points in time) NDCs were advised that differences of at least 7–8% points had to be observed to be sure that any recorded change was a statistically significant change and was not just due to chance alone\(^9\).

2.5.9 To describe what this meant for annual reporting purposes, an NDC had to achieve a change in the employment rate of more than 7–8% points between survey periods to be able to claim with reasonable certainty that a change in the employment rate in the area had been achieved (there was also the complication that response rates could fall below 60%, and in some cases significantly sizeable numbers of survey respondents had refused to answer the economic status and income questions).

2.5.10 It could reasonably be argued that to achieve a change of this scale may well be regarded as unrealistic in both programme management and economic terms – annual change in regional employment rates may only be within 1 or 2% points. This relationship varies by regions and in London, for example, Communities and Local Government has estimated that there needs to be a reduction of 2 percentage points in benefit claimants to achieve an expected increase of 1 percentage point in the employment rate.

2.5.11 So even a survey of this status and size and cost, purposefully designed to feed into the national evaluation of the NDC programme and to provide data to individual NDCs, was too insensitive to record the potentially more realistic

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\(^8\) NDCs generally cover non standard areas with boundaries cutting across wards, LSOAs and even Output Areas. Boundaries can also go down the middle of roads or include parts of one end of a road but not another.

\(^9\) The Confidence Intervals can be reduced by increasing the sample size, e.g. a random survey of 2000 people would have smaller CI of about ±2% points. However, carrying out surveys of this scale on an annual basis may be unrealistic.
changes of around 1% or 2% or even 3% point change per annum which may be taking place in an area.

2.5.12 Where survey data is unlikely to provide reliable data, users should consider a range of evidence from a number of different sources where available and employ a variety of techniques to examine change. The quality, relevance and robustness of the different data sources would need to be taken into account when making judgements or assessments.

2.6 Can the effectiveness of programmes be linked to data on outcomes?

2.6.1 The simple answer is that we may not be able to accurately and reliably link our programme effectiveness to data on outcomes. For a wide variety of reasons it can be difficult to attribute change (and the scale of change) in outcome indicators to the effects and impact of our programme.

2.6.2 National evaluations for the NDC, Sure Start and National Strategy for Neighbourhood Renewal are lengthy and very detailed multi-million pound research projects. A range of individual level datasets have been used for these evaluation projects, as well as commissioning household surveys. Even so, it can be difficult to attribute change (or the amount of change) in outcome indicator data to a specific programme or policy initiative especially in those areas which may be subject to a number of initiatives operating directly and indirectly in the area and whose effect may operate over a number of years. Also, as discussed above, outcome indicator data may not be ‘sensitive’ enough to accurately and reliably record important and significant changes that may be taking place. Alternatively changes that may be taking place that are directly related to programme effects may be masked or counter-acted by other effects that may be occurring.

2.6.3 The Treasury highlights that “the thoroughness of an evaluation should depend upon the scale of the impact of a policy, programme or project”. Partners at all levels should recognise that this limits what we can sensibly do for evaluating smaller programmes or projects. There may be a number of factors or criteria which influence a local organisation’s approach to evaluation or in choosing which project or initiative to evaluate – and how. Some evaluations including programme evaluations can be technically and methodologically demanding and may well require following government guidance on assessing the impacts. Below we discuss some of the issues relating to availability and quality of data when trying to make sound assessments.

Some practical issues which arise when trying to link programme effectiveness to outcome data

2.6.4 There are important reasons why we may not be able to link effectiveness to outcomes and some of the key issues are listed here:
Available outcomes data may not exactly match our programme: for example, projects supporting people not receiving benefits may not have any impact on reducing benefit levels. Indeed programmes may have the effect of moving previously economically inactive people into benefits, so actually increasing benefit numbers. For example, people may start claiming Jobseekers Allowance who were previously categorised within one of the economically inactive groups such as ‘full-time education’ or ‘looking after the home or family and not seeking work’. Alternatively someone with mental health problems who is out of work, may take up their IB entitlement. Similarly, a lone parent may learn that they are entitled to IB or JSA depending on their circumstances.

Many effects may take time to show up, for example health interventions can take many years to affect mortality rates.

There are likely to be a number of projects up and running at any one time, which may also impact on worklessness or other outcomes – it will be difficult to ‘attribute’ the extent of the impact of our programme – or of previous policies or programme interventions whose effects and impacts may continue over time.

If we are using area-based information – e.g. the proportion of people in ‘PriorityNeighbourhood’ receiving workless benefits – then people moving in and out of the area will affect our results. This ‘population churn’ can be relatively large in some areas – work from ONS uses new data at MSOA level to explore population turnover levels for different types of areas.

Other externalities may be impacting on the outcomes e.g. the closure of a major employer in the local area may lead to an increase in JSA claimants.

Prevailing local, regional, national and international economic effects may be impacting on local outcomes.

2.6.5 The National Evaluation for NDC programme highlights that identifying whether NDC programmes have had an effect requires “…detailed analysis at individual level, comparing a range of outcomes across similar groups differing only in whether or not they are in an NDC area programme”.

2.6.6 Monitoring programmes over time and benchmarking against similar areas can help us. However, we may not have access to the kind of data or expertise needed to accurately and reliably evaluate our programmes according to agreed and achievable objectives and to an appropriate methodology.

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So what can we do, where can I find out more about evaluating the effectiveness and impact of our programme?

2.6.7 Covering all these issues and approaches to evaluation and according to differing objectives and contexts are beyond the scope of this Practical Guide. However, we can point to some of the relevant literature and advice which cover a range of theoretical and practical approaches according to different contexts and circumstances (see below).

2.6.8 In the next section we highlight the important role that project-based data ‘outputs’ can play in helping to assess programme effectiveness and the impact of local interventions. We also emphasise the importance of drawing on a wide range of evidence when making critical and informed assessments. Clearly when doing this, it is important to have an informed understanding of the quality of evidence that is used when assessing performance. Some of these issues, including how to assess the quality and the ‘uncertainty’ of data, are discussed further in “Are my datasets fit for purpose” Practical Guide.

2.6.9 There is a wide range of literature, journals and websites covering evaluation. Relevant examples of further reading and guidance on evaluation approaches include:

**Useful resources**

- Attributing Success After the Event and Foundations for Attributing Success, SELD
  www.data4nr.net/supporting
  www.communities.gov.uk/archived/publications/corporate/assessingimpacts
- How to plan and manage an evaluation: Toolkit
  www.data4nr.net/supporting
- Various reports on the National Evaluation of NDCs see http://ndcevaluation.ac.shu.uk
- The UK Evaluation Society website www.evaluation.org.uk provides good practice guidelines and on-line resource material
2.7 What about programme outputs? How can we use these to strengthen our analysis where outcome data is limited?

2.7.1 Project-based data ‘outputs’ can play an important role in helping to assess the impact of local interventions. Good quality project data should not be undervalued – especially in those cases where standard survey and administrative data sources have limitations in providing an accurate, reliable or adequate measure of outcome and indicator data for annual monitoring and performance assessment purposes.

2.7.2 The Treasury highlights:

“Outcomes are the eventual benefits to society that proposals are intended to achieve. Often, objectives will be expressed in terms of the outcomes that are desired. But outcomes sometimes cannot be directly measured, in which case it will often be appropriate to specify outputs, as intermediate steps along the way. Outputs are the results of activities that can be clearly stated or measured and which relate in some way to the outcomes desired.” HM Treasury Green Book\(^\text{12}\)

So how can we use our programme output data?

2.7.3 The following works through an example of what you could do:

- You identify that the 2004 working-age population of ‘PriorityNeighbourhood’ is roughly 5,000\(^\text{13}\)
- From your project data for 2005/6 you know that 55 people were placed into work, of which 5 were already in work and 50 were either unemployed or economically inactive

2.7.4 Therefore 50 residents moved from ‘out of employment’ into employment. If everything else stayed the same, this is equivalent to a 1 percentage point increase in the employment rate for that year across ‘PriorityNeighbourhood’.

2.7.5 Of course everything does not remain the same: people within the various categories of economic status move into and out of the area and people within the area move between economic status groups e.g. from ‘in work’ to ‘out of work’ and so on. Unfortunately we are unlikely to have the data for accurately and reliably monitoring all these shifts at the neighbourhood-level.

2.7.6 However, the above use of project data does enable you to quantify what potential impact your project could in theory have on the employment rate. It also provides you with a means for quantifying targets when looking at target-setting.

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\(^{13}\) You need to establish the approximate size of the working age population in ‘PriorityNeighbourhood’. The reference for the ONS small-area estimates is provided at the end of this report.
2.7.7 If you have comprehensive and accurate project data you can also begin to quantify the profile of the population moving out of work and into employment as a result of benefiting from your project(s). For example, you can measure the numbers based on whether or not they are on benefit, by BME, mentally ill, lone parents, over 50s, low qualifications etc.

2.7.8 You should also keep a record on which beneficiaries are either on benefit or not on benefit, as this will then help you form an assessment on how comprehensive the DWP benefits based datasets are in capturing the throughput of residents on your various projects and initiatives.

2.7.9 For sustained outcomes such as ‘do people remain in work after a set period of time’, you would need to track individual-level data. This would need to be built into your project-based system and requires a degree of resourcing and possible specialist research.

**Qualitative research can add to the picture**

2.7.10 In addition to establishing and analysing good quality project data you may also want to undertake some qualitative research with beneficiaries to learn about their experiences and with regard to different people’s differing outcomes and to see what lessons could be learnt about what works for who and why and under what circumstances.

2.7.11 Qualitative research can also be very important in identifying a wider range of impacts – intended and unintended – and different people’s experience and perception of these impacts. Qualitative data can be very important in giving meaning and insight to findings or unanswered questions from your quantitative research and analysis.

**It can be useful to compare your output data with outcome data**

2.7.12 Full analysis of the impact of your project should also try to identify whether changes in outcome data is consistent with your output data. This may help in quantifying the impact of local projects on more broad brush outcome data.

**Useful resources**

- Soft Indicators, SELD  
  www.data4nr.net/supporting
- ONS small-area population estimates  
  www.data4nr.net/resources/population/527/
- Many of the useful resources highlighted under section 2.6 above are relevant here

**Making use of a range of evidence**

2.7.13 However, when trying to assess performance and effectiveness it is important to consider a range of data, indicators and evidence, backed up by plausible
theories of change as well as taking account of data uncertainties and the robustness and relevance of the different data sources used.

2.8 Summary

2.8.1 We’ve covered a lot of ground in this practical guide, going over the process by which you might start to assess the effectiveness of your local area programmes. It is a complex subject, and this example can only really begin to highlight some of the main practical issues.

2.8.2 We saw that outcome-data sources can be useful for contextual analysis, but often have real limitations in being able to accurately and reliably monitor change especially on an annual basis and at neighbourhood-level. This also has implications for evaluating the impact of your programmes and can compromise effective monitoring and evaluation activities.

2.8.3 However, good quality project-based output data along with sound and relevant qualitative research can provide a rich source of information for quantifying ‘target beneficiaries’ of particular initiatives and for obtaining insight into who is benefiting from which projects and why – under which circumstances and in which localities at a point in time. By tracking project-based data, this can give vital information about individual outcomes which can provide valuable insights into understanding what impacts may be taking place at the local level and especially in those cases where survey and standard administrative data sources may have limitations in being able to pick up or adequately measure change in neighbourhood-level outcomes.

2.8.4 Therefore, good quality project data should not be undervalued, and your programme outputs can play an important role in helping to assess the impact of local interventions.

2.9 Lessons for data users

- Do acknowledge and commit to good quality local project data – this can be invaluable in helping to understand and measure who is benefiting from particular initiatives and it may also help in quantifying the impact of local projects on more broad brush outcome data
- All users of data, across and between all partnership bodies and agencies need to be aware of the limitations of data and data sources, especially in the context of target-setting and performance assessment
- Do be aware that local survey data can provide useful contextual data but does have limitations for annual monitoring and performance assessment purposes. Confidence Intervals (or margins of error) apply to survey findings and these can severely compromise effective target monitoring, evaluation and performance assessment activities
• Do be aware that when assessing and understanding performance it is important to consider a range of data, indicators and evidence, backed up by plausible theories of change, as well as taking account of data uncertainties.

Further reading

2.9.1 All the references/sources from this section are provided in Appendix A.
Section 3 Use updated population estimates rather than Census data when looking at trends

3.1 What is this practical guide about?

3.1.1 When we look at change over time, or compare between areas, we often want to look at the proportion of people affected rather than the number of people. For example, we might want to know what proportion of people live on a low income or are affected by poor health. And importantly, we often want to track change over time in this proportion.

3.1.2 This practical guide highlights how important it is to use up-to-date and regularly updated population denominators when assessing trends over time.

3.1.3 As an example, we look at a London Borough with a fast growing population – Greenwich. We look at how the numbers and proportions of working-age people receiving DWP benefits are changing over time. We use the recently published ONS small area population estimates to look at trends over time in Greenwich, and compare with using data from the 2001 Census.

3.1.4 We see that using Census data for examining trends can give us a false impression of what is happening: the lesson from this practical guide is that when we are looking at trends over time – for example, in assessing whether targets are being reached – it is important to use population data that is up-to-date and regularly updated.

3.1.5 The mid-year population data used throughout the report are population estimates produced by the Office for National Statistics. Mid-year resident population estimates are based on applying a ‘Ratio Change’ method to the previous year’s population estimates using a combination of patient registers, Child Benefit and Older Persons Dataset. More information on the methodology of calculating population estimates can be found at: www.statistics.gov.uk/CCI/article.asp?ID=1665&Pos=1&ColRank=1&Rank=160

Who is this practical guide for?

3.1.6 This example is intended for anyone looking at comparisons over time or between areas, such as when tracking change over time in the level of worklessness in their priority areas.
### 3.2 How many people live in my area?

**There is no single ‘right‘ answer and different population estimates are available**

#### 3.2.1 To work out the population rate for a particular issue, we need to know both the number of people affected (for example how many people live on a low income or are affected by poor health) and the total number of people at risk, i.e. the relevant population that could be affected by the issue.  

#### 3.2.2 The problem is that there are many different sources for where to find out the total number of people, and they can all give different answers. There is no single overall population count which is accurate and regularly updated.

#### 3.2.3 The Census 2001 is probably as close as we can get to a ‘right‘ answer for 29th April 2001, but this is now several years out-of-date. Additionally, it is recognised that there was an undercount in some areas and for some groups – adjustments were made to the Census and Mid-Year Estimates following more detailed analysis of this undercount. And the Census is only updated every ten years so is less useful for examining trends over shorter periods.

#### 3.2.4 ONS produce an annual ‘Mid-Year Estimate‘ (MYE) of the population at District level broken down by 5-year age band and gender – this is based on the Census data, with adjustments for births, deaths, and internal and international migration.

#### 3.2.5 ONS publish small area population estimates based on the MYE. These are currently available annually for 2001 to 2005 for Lower Layer Super Output Areas (with plans for further updates), and are consistent with the overall District estimates.

#### 3.3 Why should we use regularly updated population datasets?

**Population numbers are changing …**

#### 3.3.1 Population numbers are changing, and in some areas they are changing dramatically:

- 301 of the 354 Local Authorities (LAs) in England experienced a growth in population between the 2001 and 2005 Mid-Year Estimates.

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14 Of course many issues are not based on the number of people affected but on some other count, for example the numbers of burglaries is usually compared to the number of households.


16 The migration element of the MYE is the most difficult part to estimate, and is based on a variety of population datasets such as GP registers. For full details see: www.statistics.gov.uk/StatBase/Product.asp?vlnk=575

17 ONS intends that more timely annual small area population estimates will be published in the future, following shortly after the publication of the District level MYEs.

18 Although a number of local authorities produce their own local population estimates. For example the GLA produces borough and ward level population projections for London.
• 38 LAs saw population increases of more than 5%, and 129 LAs more than 2.5% – the biggest growth was seen in Westminster with an additional 41,000 people, a 20% increase

• 49 LAs experienced a fall in population between 2001 and 2005 – the biggest fall was seen in Lewisham, with 6,800 fewer people (a 3% fall)

3.3.2 We need to take these changes into account when looking at population rates, and trends over time. For example, an increase in the numbers of people receiving workless benefits may simply be a reflection of an increase in the population as a whole, and the proportion of people receiving workless benefits may be constant or even falling. Using fixed data such as Census to produce rates for these regularly updated datasets may be misleading.

... and some groups are growing faster than others

3.3.3 Changes in the sizes of particular groups can be more extreme than those of the population as a whole – this has implications where we are looking at issues for a particular population group, for example the proportion of children living in low income households, ethnic groups, economic activity/inactivity or teenage pregnancy rates.

3.3.4 As a striking example, between 2001 and 2005 more than 40% of all LAs in England saw increases of over 5% in the population of people aged 65 and over. The biggest change was seen in Yorkshire’s East Riding, with an estimated additional 5,100 people aged 65 and over in the authority.

3.3.5 In other words, it may be even more important to use regularly updated population datasets when we are looking at particular groups rather than the whole population.

3.4 Taking account of population change in Greenwich

3.4.1 To see how population change can affect indicator rates, we look at working-age people receiving DWP benefits across Greenwich – this is the Working Age Client Group (WACG) dataset recently published by DWP, and available quarterly at LSOA level from August 1999.

3.4.2 The population in Greenwich increased from 212,200 in 1999 to 228,100 in 2005 – an increase of 7.5% over the period. A bigger increase of 8.8% was seen in the working age population, from 132,700 to 150,700. For comparison, the Census 2001 population for Greenwich was 214,400, and the working age Census population was 135,619.

3.4.3 Over the same 1999 to 2005 period (taking the August time-points), the number of people receiving working-age benefits in Greenwich dropped from a high of 27,810 down to 25,800 in 2001, then increased back to 27,610 by August 2005. The table below summarises:
3.4.4 The graph shows the proportion of working age benefits (‘the WACG rate’) over time, calculated using both the Census 2001 (the dotted dark blue line), and annually updated MYE working-age populations (the solid red line). We have also plotted the ‘Confidence Intervals’, or error bars (in a later practical guide we show why they are important, and how to estimate them).

3.4.5 Both rates show a decrease from 1999 to 2001, but show different behaviour over the period 2001 to 2005. The rate based on the Census data shows what appears to be an upward trend in the proportion of working-age people receiving DWP benefits. But the more accurate analysis based on the annually updated Mid-Year Estimate in contrast shows a small downward trend (in a later practical guide we look at assessing whether changes are significant or not).
3.4.6 **To summarise:** the trend analysis using the Census 2001 population denominator appears to show an increasing proportion of benefit claimants from 2001 to 2005, but this is simply a factor of not taking into account the growth in the overall population. Accounting for this population increase using the MYE datasets shows a small fall in the claim rates, although this may be too small to be statistically significant.

3.5 **Looking at small area trends**

3.5.1 The above analysis looked at using the District level MYE data, and saw that there were real differences when looking at trends between the MYE and Census data for Greenwich as a whole. But does the same problem apply at small area level?

3.5.2 The simple answer is yes! When looking at trends at small area level we again should use regularly updated data where available. Now that there are annually updated small area population estimates, we should be using them. To illustrate the problems of using Census data for the population denominator we again look at Greenwich.

3.5.3 In August 2004, the Lower layer Super Output Area with the highest proportion of people claiming DWP benefits in Greenwich was Greenwich 004A in Woolwich Riverside ward (based on using the Census 2001 working-age population denominator). Based on the Census data, it appears as if the proportion of people in the SOA claiming working-age benefits had increased from 35.7% in 2001, to 44.0% in 2004. This was based on an increase in the number of people claiming from 345 in August 2001 to 425 in August 2004 – an increase of 23%.

3.5.4 However, looking at the small area population estimates highlights that this SOA has undergone a very fast population growth, from a working age population of 990 in 2001, to 1,242 in 2004 – an increase of 25%. Using these population estimates to examine the trend over time for the proportion of people receiving working-age benefits gives a very different picture to the Census data.

3.5.5 The graph below again shows the trends over time based on the Census and updated population denominators:
3.5.6 As with the picture for Greenwich as a whole, the claimant rate based on the Census data shows what appears to be an upward trend in the proportion of working-age people receiving DWP benefits. But the more accurate analysis based on the annually updated Mid-Year Estimate shows that the rates fluctuate around 34% – the size of the error bars show that this change is not likely to be statistically significant.

3.5.7 **To summarise**: Using Census 2001 data as a population denominator when looking at trends can seriously damage your analysis. Also, when calculating rates it is important to state clearly the population source and date of data you have used as the denominator for calculating the rates.

3.6 It’s also important to use up-to-date population data when comparing between areas

3.6.1 In the examples above we have looked at the problems with using Census population denominators when looking at change over time. However, it’s also important to use the most appropriate population data when comparing between areas.
The figure above shows the difference between using 2001 Census and Mid-Term Estimates (data averaged over 2001, 2002 and 2003) as population denominators for the 2001–3 under-18 conception rate for the 20 wards across Wolverhampton. Although many wards show small differences, one ward has a difference of more than 10%, with two additional wards showing differences of more than 5%.

In other words, comparing between small areas using Census population denominator data may give different results to comparisons made using MYE population denominators – this is due to the population of small areas changing over time at different rates. As with the trend data it is important that the population denominator is used from the right time periods where available.

**What if I don’t have population data for the right time-point?**

Use the closest data you have. For example, the ONS small-area population datasets are only currently available for 2001 to 2005, but other datasets such as DWP benefits datasets are available beyond 2005. Using the 2005 data as population denominators for the 2006 benefits data is likely to be more accurate than using 2001 data, and you can update your analysis once later population data is available. We advise that it probably best to highlight

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19 The Mid-Term Estimate data is provided by the Teenage Pregnancy Unit, from ONS MYE population estimates.
20 Thanks to Gillian Hartland, Wolverhampton PCT, for this example.
where population rates may change in this way especially where figures are being used for annual monitoring and performance assessment purposes.

**I need to use a particular age range, such as 18–24 year-olds, which is not available**

3.7.2 With some age ranges you can combine together the different age ranges from the available MYE small-area data – for example, for working age you would add together the ‘16–29’, ‘30–44’ and ‘45–64 Males, 45–59 Females’ groups. However, some age ranges don’t match those available in the small area estimates, such as 18 to 24 year-olds. You will need to estimate these groups, for example by assuming the 16–29 age group is equally split by year, or using some other dataset to split the 16–29 year group such as Census data by individual years.

3.7.3 ONS are soon to publish the relevant age bands for the WACG dataset, so this should hopefully not be a problem in future. ONS can make specific age ranges available on request, if important (although the smaller the age group, the less reliable the estimate).

**I need population estimates for BME groups – what can I do?**

3.7.4 There is no national source which provides up-dated ethnicity population estimates below District level. At District level, ONS produce annual estimates for ethnic group counts (currently available 2001 to 2005 at District level on Neighbourhood Statistics), which are more accurate than the Annual Population Survey datasets: if you are looking at trends over time for ethnic groups you should probably use this dataset unless your Authority has better estimates (for example, the GLA produce ethnicity estimates at London Borough level).

3.7.5 The Census is the only dataset currently available that provides full population data for ethnic groups below District level – if you need population counts for different groups at small area level this is probably the most useful starting point. If you need updated information at sub-District level, you will be dependent upon any local data source such as a local household survey or any specially commissioned research. This will also apply if you need to know the size of any population group that does not match one of the census categories, for example Turkish or Somali, which may be assigned to more than one Census category.

3.7.6 An additional approach might be to use data from the Pupil Annual School Level Census (PLASC). This provides information on ethnicity for all pupils in maintained schools. However, caution is needed for a number of reasons:

- The dataset covers pupils rather than population as a whole – the ethnic profile of school-aged children in the area may not be a reliable proxy for the ethnic profile of all people
- The PLASC data only includes pupils in maintained schools, and will therefore be less reliable for those areas with a high proportion of pupils educated outside the maintained sector
• The dataset available to LEAs at present only covers pupils attending schools in that LEA. In areas where there is significant movement of pupils across LEA borders, for example London Boroughs, the dataset may be less reliable as a measure of the ethnic profile of school-age residents.

**3.7.7 Some indicators, for example the level of burglaries in an area, are usually calculated as a rate per household rather than rate per person. Unfortunately there is no nationally published data on household numbers at small area level. However, the number of households tends to change less rapidly than the number of people, so it might be reasonable in some cases to use the Census data for households. However, where there have been notable changes to housing stock it is probably preferable to use more up-to-date measures – your authority may have accurate information based on Council Tax records, and including house building and demolition.**

**3.7.8 Another source to consider is the Postcode Address File, which is a record of current postal address and is updated on a continuous basis (however this gives details of addresses rather than households). Local survey data and other data sources may be useful in helping to identify or estimate vacancy and occupancy rates when trying to estimate total household numbers. Where a number of different sources exist it is best to undertake your own assessment of the strengths and weaknesses of each dataset.**

**I need to look at people working in an area, not just residents. How can I do that?**

**3.7.9 You might need to compare some datasets against the population, but the resident population might not be appropriate. For example some crime types should probably be compared against a combination of the working and resident population. We can use the resident population from the ONS small-area estimates, but work-place population is only reliably available from the Census. It is also possible to request specially commissioned data from ONS from the IDBR where you can obtain employment levels associated with VAT registered business units.**

**We have our own small area population estimates, should we use these or the ONS small-area estimates?**

**3.7.10 For example, the GLA and other local authorities have for many years produced small-area population estimates. These small-area population estimates do not always match small-area population estimates from ONS, due to differences in methodology and data sources.**

**3.7.11 Within the scope of this research, we cannot give a definitive answer on which estimates are more appropriate. We would support assessing each situation on a case-by-case basis to take account of potential differences in methodology and data sources, as well as assessment of what difference in practice this makes to population counts, and identification of which**
particular estimates are more appropriate in particular circumstances (and why).

3.7.12 However, the important things to remember are that the population estimates are updated over time so can be used for examining trends, that you use a consistent source throughout the analysis, and that you report which sources you have used.

3.8 Where can I get the data, and find out more?

3.8.1 The ONS small area population estimates are based on the MYE, and are currently available annually for 2001 to 2005 for Super Output Areas (Middle and Lower layer), broken down into broad age bands.

3.8.2 You can download the datasets from Neighbourhood Statistics via www.neighbourhood.statistics.gov.uk


3.8.3 For further information see the full list of useful sources and datasets in Appendix A.

3.9 Lessons for data users

- Do use regularly updated population estimates, such as ONS Lower Super Output Area estimates to calculate rates, rather than 2001 Census data – especially for areas experiencing notable population change since 2001
- Do quote the population source and date of data, in all documentation, where rates have been calculated
- Do be aware that ONS produce annual estimates (2001 to 2005) of ethnic population groups (based on Census categories) at District level. Generally speaking we are still dependent on 2001 Census data for sub-District ethnicity measures
- Do be aware that if you produce more up-to-date ethnicity estimates at sub-District level based on local survey data that observed findings may be subject to wide Confidence Intervals (or margins of error)
Section 4 Health outcomes at neighbourhood-level

4.1 What is this practical guide about?

4.1.1 Reducing health inequalities in priority neighbourhoods can be a concern for local partners.

4.1.2 This example briefly outlines relevant key sources, and looks at monitoring progress at neighbourhood-level for three different health areas – people out-of-work for ill health reasons, teenage conceptions, and mental health issues.

4.1.3 A short overview such as this clearly cannot do justice to the full range of data and analysis possible, so in each case we provide pointers to more in-depth relevant material.

Who is this practical guide for?

4.1.4 Although many case studies look at the range of worklessness data, relatively few explore the wide range of Health data sources relevant to tackling neighbourhood renewal and social exclusion issues. This example is intended for local partners looking at ways of monitoring progress at neighbourhood-level for health programmes.

4.2 Neighbourhood renewal and health outcomes

4.2.1 Poor health and health inequalities are widely recognised as both a symptom and a cause of exclusion and deprivation. Many people have highlighted that it is very difficult to affect mortality rates in the short-term. Recognising this, one approach can be to reduce health inequalities between the most deprived neighbourhoods and the District average, using indicators that are chosen that match those factors contributing to a reduction in inequalities in premature mortality rates.

4.2.2 Local partners can use neighbourhood-level health indicators that are known to be strongly associated with health inequalities, for example:

- People out-of-work for ill health reasons
- Teenage conceptions
- Mental health issues
- Low birth-weight babies
- Smoking, poor diet, and other health-related behaviours
4.2.3 In this practical guide we give a short overview of the first three areas above – people out-of-work for ill health reasons, teenage conceptions, and mental health issues. We use Wolverhampton as an example area, but the lessons are generally applicable.

4.3 People out-of-work for ill health reasons

What’s the issue?

4.3.1 Of the 5.36 million working-age people receiving DWP benefits, by far the largest group is those receiving ‘incapacity benefits’, with 2.7 million receiving Incapacity Benefit or Severe Disablement Allowance in May 2006\(^1\). The number of people out of work for ill-health reasons is nearly three times the numbers of people receiving Jobseekers Allowance.

4.3.2 Given the size of the workless population receiving incapacity benefits, it is clear that programmes aiming at increasing employment rates need to think hard about how to engage with people out-of-work for ill-health reasons. National and local programmes such as the ‘Pathways to work’ scheme are doing exactly this, providing a range of different support to help people back into work.

What data can we use to monitor the issue?

4.3.3 One way to look at those people out-of-work for ill-health reasons is using the DWP incapacity benefits datasets. Census data on limiting long-term illness is less useful as no trend analysis is possible, although it may well be helpful for initial contextual analysis. Local surveys may provide additional and more up-to-date contextual information, but sample sizes are often too small to provide reliable data to neighbourhood-level.

4.3.4 Incapacity Benefit (IB) and Severe Disablement Allowance (SDA) are benefits paid to people who are assessed as being incapable of work and who meet certain contribution conditions. From April 2001, there have been no new claims to SDA, so SDA statistics are usually combined with IB statistics. Data is now published by DWP on the number of claimants down to Super Output Area level, including the reason for claim. This data is available quarterly from August 1999, so allows evaluation of trends.

4.3.5 Given the relatively large size of the IB population, it might be appropriate to set neighbourhood-level targets here, (noting that IB data forms part of the DWP WACG data used as a proxy measure for worklessness or employment targets). Our assessment of the robustness of this dataset suggests that neighbourhood-level target-setting would be reliable using this dataset.

4.3.6 Other DWP health benefits are also of use in highlighting poor health issues – the Indices of Deprivation 2007 and 2004 developed a ‘Comparative Illness

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\(^1\) DWP Tabulation tool (May 2006), available at: [www.dwp.gov.uk/asd/tabtool.asp](http://www.dwp.gov.uk/asd/tabtool.asp)
and Disability’ indicator based on IB and SDA, as well as Disability Living Allowance, Attendance Allowance, and the disability premium of income support. This dataset is age-standardised, and has been updated by DWP since the Indices. However, it may not be updated regularly, so might be less useful for trend analysis and target-setting.

What’s happening in Wolverhampton?

4.3.7 The table below shows the number and proportion of Incapacity Benefit/Severe Disablement Allowance (IBSDA) claimants for the period 1999 to 2005, showing how the rate is significantly higher in the most deprived areas than across Wolverhampton as a whole.

<table>
<thead>
<tr>
<th>IBSDA claimants</th>
<th>Wolverhampton</th>
<th>Most deprived 20% of areas</th>
<th>Gap</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>August 1999</td>
<td>13,935</td>
<td>9.7</td>
<td>4,025</td>
</tr>
<tr>
<td>August 2000</td>
<td>14,075</td>
<td>9.8</td>
<td>4,120</td>
</tr>
<tr>
<td>August 2001</td>
<td>14,585</td>
<td>10.2</td>
<td>4,205</td>
</tr>
<tr>
<td>August 2002</td>
<td>14,745</td>
<td>10.2</td>
<td>4,270</td>
</tr>
<tr>
<td>August 2003</td>
<td>14,495</td>
<td>10.0</td>
<td>4,130</td>
</tr>
<tr>
<td>August 2004</td>
<td>14,545</td>
<td>10.0</td>
<td>4,100</td>
</tr>
<tr>
<td>August 2005</td>
<td>14,210</td>
<td>9.7</td>
<td>4,020</td>
</tr>
</tbody>
</table>

4.3.8 The trend in claimant rates follows a similar pattern across Wolverhampton and priority areas (defined as the most deprived 20% of areas across Wolverhampton on the IMD 2004) alike with a rise between 1999 and 2001 stabilising between 2001 and 2002 and falling between 2002 and 2005.

4.3.9 Analysis of the difference between the proportion of IBSDA claimants in priority areas and in Wolverhampton appear to show that priority areas have somewhat closed the gap with Wolverhampton. The gap reduced from 4.8% in 1999 to 4.4% in 2005.

4.3.10 However, it is important to recognise that this data is subject to variation (see the practical guide on assessing datasets for further explanation of this), particularly at neighbourhood-level where the numbers of people being measured may be small. As a result, the change over time for the priority areas may not be statistically significant.

4.3.11 Comparing the level of uncertainty on the priority area data (again see the practical guide on assessing datasets) suggests that changes of less than 0.5% may not be statistically significant. Given the observed change of 0.4% points in the above example it is not clear whether or not the change is

22 Mid-Year Estimate working-age populations have been used to calculate the rates – for the most deprived areas the ONS small area population estimates have been used (with data for 2001 used for 2000 and 1999; and data for 2004 used for 2005).
significant – we would really need to assess this over a longer time period to pick out whether this is a ‘real’ change.

4.3.12 ONS are developing a case study showing ways of identifying whether the most deprived areas in an LA are ‘closing the gap’ when compared with the LA as a whole. We recommend that the methodology in the ONS case study be used for this kind of analysis.

4.3.13 The chart below shows the same trend data over the time period, along with the Confidence Intervals highlighting the size of the uncertainty in the rate.

Where can I get the data, and find out more?

- Incapacity benefits data with breakdowns at LSOA level is available from the DWP website: http://193.115.152.21/NESS/BEN/ibsda.htm
- Comparative Illness and Disability Ratio indicator www.neighbourhood.statistics.gov.uk/dissemination/datasetList.do?datasetFamilyId=1018

4.3.14 For further information see the full list of useful sources and datasets in Appendix A.
4.4 Teenage conceptions

What’s the issue?

4.4.1 Rates of teenage births (the number of births per 1,000 women aged 15–19) in the UK are five times those in the Netherlands, three times those in France, and twice those in Germany. Young women from unskilled manual backgrounds (social class V) are more than ten times as likely to become teenage mothers as those from professional backgrounds (social class I). Those living in areas with higher levels of social deprivation are also much more likely to conceive earlier, as well as being much less likely to opt for abortion.

4.4.2 The Teenage Pregnancy Strategy highlights a range of poorer outcomes that teenage parents experience in comparison to older mothers, including:

- **Poor child health outcomes**: Children born to teenage mothers have 60% higher rates of infant mortality and are at increased risk of low birth-weight which impacts on the child’s long-term health

- **Poor emotional health and well-being experienced by teenage mothers**: Teenage mothers are 3 times more likely to suffer from post-natal depression and experience poor mental health for up to 3 years after the birth

- **Teenage parents’ poor economic well-being**: Teenage parents and their children are at increased risk of living in poverty

What data can we use to monitor the issue and where can we find it?

4.4.3 Data on teenage conceptions is available from ONS and the Teenage Pregnancy Unit (TPU) website: www.everychildmatters.gov.uk/teenagepregnancy/. Local authority level data is also added to Floor Targets Interactive website but FTI may not have the latest data as there can be a time lag in adding the data. Local authority and ward level data is available via local Teenage Pregnancy Co-ordinators (TPCs) who are either based within the local authority or PCT. Local TPCs will hold the latest under 18 and under 16 conception data at district level.

4.4.4 At ward level, ONS provide under-18 conception numbers by ward to the TPU, and under-18 ward conception rates, including 95% confidence intervals, are calculated by the TPU using ONS ward level experimental data. TPU disseminate ward level numbers and rates to all local TPCs. ONS have published ward-level maps based on teenage conception data (but not the data), mapped data and analyses are also available via local TPCs.

4.4.5 However, ONS suppress data at ward level where the numbers are small. Whilst in general it maybe that wards with a high number of conceptions are of interest, the issue of small numbers and suppression of ward based data may limit or prevent analysis of data when wanting to look at areas which...
are based on an aggregation of wards which include one or more wards where data are suppressed. For example, where data for three separate wards are suppressed it is currently not possible to have data based on the aggregate of whole area, even if the count falls outside of confidentiality rules. Also because data is only available at ward level this is less useful for those neighbourhood areas which do not match or closely match ward boundaries.

4.4.6 Ward level data is produced 6 months after local authority figures are published. Ward level figures are based on final figures for the year whereas local authority figures are initially published as provisional figures in February, with final data published around November each year. There is a time-lag relating to the release of teenage conceptions data (full details for this along with the data are available on the TPU website) which in practice means that ‘up-to-date’ data is not available for annual monitoring purposes.

Can we use the data for monitoring targets at neighbourhood-level?

4.4.7 In practice, there can be real difficulties in accurately and reliably assessing year on year change in levels of teenage pregnancies. At neighbourhood-level, the number of teenage conceptions is relatively small. This means that caution should be used when setting targets at the neighbourhood-level.

4.4.8 In England there are somewhat over 40,000 teenage conceptions per year, or just over 100 on average per Local Authority District (although of course many LAs have significantly larger numbers than this). Data is often aggregated over 3 years to avoid small number issues and to produce a more reliable measure of change over time.

4.4.9 Although the ‘small numbers’ mean ward level conception data are subject to random fluctuation and sometimes are suppressed, the data itself is very robust as it is compiled by combining birth registrations with abortion notifications, both of which are statutory data returns.

4.4.10 Additionally many practitioners highlight that evaluating success in this area requires more than simply an examination of teenage pregnancy rates, but also demands an assessment of a range of related issues. A case study from SELD North-West examines the following issues:

- Age and Ethnicity of Teenage Mothers
- Low birth-weight babies
- Smoking status of mother at booking and delivery
- Method of feed

4.4.11 For further details on the more comprehensive range of risk factors, readers can refer to the Department for Children, Schools and Families Teenage Pregnancy: Next Steps guidance and Teenage Pregnancy: Accelerating

24 SELD North-West. Adopting evidence-based approach to neighbourhood renewal: Linking issues to interventions. Case Study: Tackling teenage pregnancy. This is available on www.data4nr.net/supporting
the Strategy to 2010 document (available on the Teenage Pregnancy Unit website, see below for details).

Where can I find out more?

- The Teenage Pregnancy Unit also has related guidance including Teenage Pregnancy: Next Steps; Teenage Pregnancy: Accelerating the Strategy and Teenage Pregnancy Good Practice and Self Assessment toolkit: www.everychildmatters.gov.uk/teenagepregnancy/
- Local Teenage Pregnancy Co-ordinators either based within the local authority or PCT will hold the latest under 18 and under 16 conception data at district level. TPCs also hold the under 18 ward level conception data. TPCs may also produce maps showing local ‘hotspots’ and can provide analyses of trends
- Teenage Pregnancy LA, regional and national datasets www.neighbourhood.statistics.gov.uk/dissemination/datasetList.do?datasetFamilyId=1340
- Teenage Pregnancy Unit. Overview of the research evidence www.dfes.gov.uk/teenagepregnancy/dsp_showDoc.cfm?FileName=ACFA6C6%2Epd
- SELD North-West. Adopting evidence-based approach to neighbourhood renewal: Linking issues to interventions. Case Study: Tackling teenage pregnancy
- East Midlands Public Health Observatory also holds latest teenage conception data and the TPU’s 'LA analysis' toolkit www.empho.org.uk/Themes/teenagepregnancy/teenagepregnancy.aspx

4.4.12 For further information see the full list of useful sources and datasets in Appendix A.
4.5 Mental health

What’s the issue?

4.5.1 We saw above that those people out-of-work for ill health reasons by far outweigh the number of people on JSA. ‘Mental and Behavioural Disorders’ are the biggest reason for claiming incapacity benefits – accounting for 1.1 million of the 2.7 million receiving incapacity benefits across England in May 2006\(^\text{25}\). In other words, more people are receiving incapacity benefits for mental health reasons than are receiving Jobseekers Allowance. People may also be suffering from mental ill health but not claiming benefits.

What data can we use to monitor the issue?

4.5.2 There is little data on mental health issues in the general population, however data on those receiving incapacity benefit for mental and behavioural disorders is published by the DWP. As with the out-of-work analysis above, this is one way to look at mental health issues at neighbourhood-level. However, it is clear that in some areas there may be significant numbers of people experiencing mental health problems who are not receiving such benefits – in these areas, measuring change on a benefits only basis will not necessarily be a true reflection of the success of local initiatives.

4.5.3 Our discussions with local partners identified this as one of the issues they were concerned about when monitoring change and assessing performance. One of the consultee Authorities has high levels of mental ill health, and wanted to set an employment based target relating to people with mental ill health, they were aware however, that any interventions would also need to consider those who were not necessarily receiving IB. Because of the difficulty of obtaining relevant data as well as having a benefits only based measure which would not fully capture the extent of programme activity, there was concern that this would severely compromise their ability to monitor change for performance assessment purposes.

4.5.4 Local surveys may provide additional contextual information, however due to sample sizes it is less likely that these will provide sufficiently reliable and accurate enough data for target-setting and performance monitoring purposes at neighbourhood-level.

4.5.5 Data is now published by DWP (and on Neighbourhood Statistics) on the number of claimants down to Super Output Area level, including the reason for claim. This data is available quarterly from August 1999, so allows measurement and assessment of trends.

What’s happening in Wolverhampton?

4.5.6 We saw above that the number of people receiving IB across Wolverhampton was fairly constant over the period for which data is available. However the reasons for claiming have changed dramatically. The chart shows

\(^{25}\text{DWP Tabulation tool (May 2006), available at: www.dwp.gov.uk/asd/tabtool.asp}\)
the increases in those claiming IB for mental health reasons across Wolverhampton over the period August 1999 to November 2005.

4.5.7 The solid red line shows the proportion of those people receiving IB, who are claiming for mental health or behavioural disorder reasons. This proportion consistently increases from 26% in August 1999 to 37% of all claimants in November 2005 – to be the largest component of IB claims across Wolverhampton. By contrast, the proportion of IB claimants for musculoskeletal reasons reduces from 27% to 23% over the same period.

4.5.8 We are not aware of administrative reasons for this shift in the reasons for claiming Incapacity Benefit, however this may reflect a greater willingness by GPs to diagnose mental health issues. It is worth making the general point that changes in benefits administration (as with any administrative dataset) can affect the composition of the population on benefit and their characteristics, with a knock-on effect for time series analysis and year-on-year reporting.

4.5.9 We should also point out that a similar increase in the proportion of incapacity benefit claims for mental health reasons is seen in many other Districts – Wolverhampton is by no means alone in this. However, this still highlights the importance of tackling mental health issues across Wolverhampton – employment programmes will likely need to focus particular attention to this group.

4.5.10 The data is also available at Lower layer Super Output Area, so can be used to target those areas with the highest levels, or identify the change over time in Wolverhampton’s priority neighbourhoods. Given the relatively large size of the IB population, it might be appropriate to set neighbourhood-level targets here – our analysis of the robustness of this dataset suggests that this is indeed the case.
Where can I get the data, and find out more?

4.5.11 You can download the datasets from Neighbourhood Statistics:

- Incapacity benefits data with breakdowns at LSOA level is available from the DWP website http://83.244.183.180/NESS/BEN/ibsda.htm
- Social Exclusion Unit. Mental health and social exclusion http://archive.cabinetoffice.gov.uk/seu/page5717.html

4.5.12 For further information see the full list of useful sources and datasets in Appendix A.

4.6 Lessons for data users

- Do be aware that DWP publish a range of datasets at neighbourhood-level useful for health work, including the number of people receiving Attendance Allowance, Disability Living Allowance, and Incapacity Benefit (including the number of people receiving Incapacity Benefit by main cause – mental health, respiratory or circulatory and musco-skeletal). These datasets can be very useful in comparing between areas and monitoring change over time
- Do be aware that it is generally difficult to accurately and reliably measure many standard health indicators at neighbourhood-level on an annual basis because of the issue of statistically ‘small numbers’
- Do be aware that health measures derived from local survey data, such as % of the population smoking, may be subject to wide Confidence Intervals especially at the neighbourhood-level. It therefore may be difficult to accurately and reliably measure change over time for sound performance monitoring purposes
Section 5 Are my datasets ‘fit for purpose’?

5.1 What is this practical guide about?

5.1.1 When setting targets and monitoring performance, we need to take into account the quality and reliability of the datasets we are using, or their ‘fitness for purpose’. This is particularly important where users are assessing annual change and/or making judgements about performance.

5.1.2 In this practical guide we highlight some of the ways that datasets are assessed, focusing on how to identify whether datasets can accurately identify changes over time at Local Authority and neighbourhood-level. Given that many users may not be entirely familiar with the issues covered here, we have provided a fair amount of background information.

5.1.3 As an example, we look at change over time for worklessness data covering Coventry, and the Coventry Partnership’s priority neighbourhoods. We highlight how we can identify appropriate data for neighbourhood-level target-setting.

Who is this practical guide for?

5.1.4 This practical guide has implications for all users of data and those involved in presenting, using and analysing data for performance assessment purposes. It is more technical than the previous examples, and is intended for users with more statistical experience or understanding who are looking to:

- Identify what datasets might be appropriate for target-setting
- Identify when changes over time or differences between areas are significant

5.1.5 Our emphasis here is on highlighting standard ‘rule of thumb’ methods that can be used by local partners without in-depth statistical knowledge – we acknowledge that there are much more detailed ways of looking at uncertainty in data such as Bayesian methods.

5.1.6 We also flag-up that further case studies in development from ONS will provide additional support for local partners struggling with these issues.

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26 This practical guide presents a basic methodology for assessing indicators – much more detailed analysis is clearly possible. We have also skipped over some of the more technical aspects, including detailed explanation of uncertainty in complete datasets. For further details on this topic, see the accompanying report from this project: Assessing Neighbourhood-Level Data for Target Setting, Communities and Local Government (2008).
5.2 Worklessness targets in Coventry

5.2.1 Coventry was one of the first pilot areas to set up a Local Area Agreement. Many of the LAA outcomes and targets were set at neighbourhood-level, emphasising Coventry Partnership’s commitment to progress in priority neighbourhoods.

5.2.2 One of the key worklessness outcomes was “more people from disadvantaged groups are in paid work”, with a target covering the priority neighbourhoods to reduce levels of worklessness in the priority neighbourhoods.

So how can we reliably measure this target?

5.2.3 Below we follow through the steps that might be taken to assess which indicators are right for the job.

5.3 How can we assess whether indicators are ‘fit for purpose’?

5.3.1 Assessing the quality of data is not an exact science. However, there is a broad consensus on the sort of methodology that needs to be used.

5.3.2 The process of assessment usually takes a checklist approach, working through a set of key criteria or ‘quality dimensions’. Although the criteria are closely targeted to the context in which the indicators are to be used, there is also a degree of commonality across different organisations on the features or dimensions that need to be assessed.

5.3.3 For example, the following criteria might be used to assess the suitability of indicators for monitoring outcomes at neighbourhood-level:
<table>
<thead>
<tr>
<th>Criteria</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance</td>
<td>• Does the dataset measure what it is intended to measure?</td>
</tr>
<tr>
<td></td>
<td>• Is there any systematic bias in the dataset?</td>
</tr>
<tr>
<td></td>
<td>• Are some groups undercounted?</td>
</tr>
<tr>
<td></td>
<td>• Is the dataset likely to provide perverse incentives where an improved score on the dataset may not improve the situation for the neighbourhood in question?</td>
</tr>
<tr>
<td></td>
<td>• Could the indicator hide progress towards the outcome?</td>
</tr>
<tr>
<td>Geographical scale</td>
<td>• At what geographical levels is the dataset available at? (Lower Super Output Area, ward, Local Authority etc)?</td>
</tr>
<tr>
<td></td>
<td>• Is the dataset published at neighbourhood-level?</td>
</tr>
<tr>
<td></td>
<td>• If not, is it possible to obtain neighbourhood-level data for this indicator locally? Is this consistent / comparable to higher level data?</td>
</tr>
<tr>
<td>Time-scale</td>
<td>• What time points is the latest data available at?</td>
</tr>
<tr>
<td></td>
<td>• Is the indicator sufficiently up to date to be useful?</td>
</tr>
<tr>
<td></td>
<td>• How regularly is the indicator updated?</td>
</tr>
<tr>
<td></td>
<td>• Is there potential for the dataset to be updated (e.g. is the underlying data used to construct the indicator recorded and held on a regular basis)?</td>
</tr>
<tr>
<td>Availability</td>
<td>• Where is the data obtainable from?</td>
</tr>
<tr>
<td></td>
<td>• Is it publicly available?</td>
</tr>
<tr>
<td></td>
<td>• If not publicly available is it potentially available from local sources?</td>
</tr>
<tr>
<td>Group breakdowns</td>
<td>• Does the dataset provide breakdowns by age, gender, ethnicity?</td>
</tr>
<tr>
<td></td>
<td>• Are other breakdowns provided, such as for lone parents, disabled groups etc.</td>
</tr>
<tr>
<td>Denominator</td>
<td>• Is the denominator provided with the indicator?</td>
</tr>
<tr>
<td></td>
<td>• Are there any problems with denominator provided?</td>
</tr>
<tr>
<td></td>
<td>• Are there potentially better denominators to use?</td>
</tr>
<tr>
<td>Statistical validity</td>
<td>• Are there issues with data suppression which may distort results? For example, suppression of small numbers, or rounding of counts</td>
</tr>
<tr>
<td></td>
<td>• What level of uncertainty should be reported alongside the data? Does data have sufficient precision to measure likely changes over time or between areas?</td>
</tr>
</tbody>
</table>
So how might we assess possible indicators for Coventry’s worklessness outcome?

5.3.4 One option might be to use unemployment data from the Annual Population Survey (APS). Another option might be to use DWP data on people receiving Jobseekers Allowance or Incapacity Benefits/Severe Disablement Allowance. However, the APS is not available below District level so is less useful when looking at Coventry’s priority neighbourhoods.

5.3.5 The North-East Supporting Evidence for Local Delivery pilot project put together a presentation which might be useful in identifying other datasets useful for assessing worklessness outcomes. But whatever data you use, you should carry out an assessment of the robustness of the data.

5.3.6 The table below highlights how we might qualitatively assess the DWP benefit dataset in the context of assessing worklessness trends over time.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>DWP Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relevance</td>
<td>• Currently there is no data source for providing an accurate and reliable count of employment and unemployment at the neighbourhood-level.</td>
</tr>
<tr>
<td></td>
<td>• DWP data provides a measure of the number of people claiming one or more benefits including JSA and IB/SDA.</td>
</tr>
<tr>
<td></td>
<td>• There is a difference between ILO unemployment definitions and benefits eligibility – many people who consider themselves unemployed may not be eligible for JSA and some people claiming JSA may not be ILO unemployed</td>
</tr>
<tr>
<td></td>
<td>• There is no standard definition of ‘worklessness’, although it is generally measured on the basis of benefit levels. Users should specify what definition they are using.</td>
</tr>
<tr>
<td></td>
<td>• There is currently some confusion about which benefits represent ‘worklessness’ benefits. For example, the WACG dataset includes benefits that can be claimed whilst in work e.g. DLA. Also the WACG data does not take into account ineligible groups including sick, disabled and students</td>
</tr>
<tr>
<td></td>
<td>• Changes may reflect changes in eligibility criterion rather than changes in employment rates</td>
</tr>
<tr>
<td></td>
<td>• Some potential for perverse incentives, e.g. changing eligibility criterion in order to improve the employment statistics</td>
</tr>
</tbody>
</table>

continued

27 www.data4nr.net/supporting
### Criteria | DWP Benefits
---|---
Geographical scale | • Counts are provided at LSOA, Ward and local authority level.  
• On an ad hoc basis, DWP data can be requested at OA level although particular counts of benefits may need to be aggregated to avoid data disclosure. This information is not routinely made available  
• There is also potential for the mapping of individual/household level data by the GIS available at some Job Centre Plus offices but due to data disclosure reasons data is only available for JCP staff
Time-scale | • Available from 1999 at quarterly intervals
Availability | • Data down to LSOA level is publicly available from the DWP and Neighbourhood Statistics websites
Group breakdowns | • Age, Gender
Denominator | • Denominator should be ‘all working age people’, with the date and geographic coverage of this data matching the corresponding benefits data wherever possible  
• Recommend the use of ONS small area population estimates, or MYE data
Statistical validity | • ‘National Statistics’, so reliable methodology  
• Known issues of undercount/failure to claim with particular areas and groups, for example rural areas and older people  
• Data publicly released is rounded to the nearest five claimants which may produce distortions at sub-District level  
• Confidence intervals may be important at neighbourhood-level – we explore this issue below

5.3.7 However, we have not fully assessed the ‘statistical validity’ of the datasets – we don’t yet know that the benefits datasets have ‘sufficient precision’ (we explain more on this below) to measure likely changes over time or between areas. To get a better understanding of this, we need to look at the uncertainty on the datasets, for example using Confidence Intervals. We explain more in the following section.
5.4 Why it is important to be uncertain

We need to consider levels of uncertainty when using data for target-setting or additional local contextual analysis

5.4.1 Data values are not ‘certain’, and there is (almost always) some associated degree of uncertainty. As a consequence, differences over time or between areas should be treated with some caution, and an assessment made of how likely these differences are to be significant. The Royal Statistical Society has made specific recommendations that reporting of Performance Management data should always include measures of uncertainty. However, in practice this does not always occur.

5.4.2 Where we are using indicators to assess our performance against targets, it is important to take into account the uncertainty and variation in the indicators – data with a large degree of uncertainty on the ‘real’ value may not have sufficient precision to accurately and reliably track small changes over time. It may be that small differences over time seen by users are simply fluctuations that we might expect from the data, but where the underlying ‘risk’ has not changed.

5.4.3 As well as when setting targets, it is also important to consider levels of uncertainty where we are using indicators for additional local contextual analysis. More weight in decision-making may be given to indicators that are known to be more reliable, with less weight given to less reliable indicators.

Uncertainty for indicators based on survey data arises when we draw conclusions about the whole population

5.4.4 When we are using indicators based on survey data, we typically want to use the survey to draw conclusions about the population as a whole, rather than just the surveyed group. For example, if 75% of BVPI respondents were satisfied with the performance of the local council, we would probably like to make a similar claim about all people in the area. It is when we generalise in this way that uncertainty arises:

- Indicators based on survey data identify precisely how respondents answering that particular question responded
- But these indicators are only an estimate of how the whole population might have responded

5.4.5 In other words, results from our survey may not be identical (or in some cases may even be wildly different) to the results found if we had sampled the whole population – our survey is only an estimate of how the whole population might respond. As our sample may not reflect or exactly reflect the whole population, we would therefore need to take into account the possibility of sampling error, levels of non response and other survey design effects.

5.4.6 We strongly recommend that users report levels of uncertainty on survey data, for example using the size of the Confidence Intervals provided with the survey.

**Uncertainty for indicators based on ‘complete’ data arises when we draw conclusions about the underlying issues**

5.4.7 We might think that this uncertainty applies only to indicators based on survey data, however it is also important to consider uncertainty when indicators are based on ‘complete’ data from 100% samples. This is conceptually trickier to grasp than when using survey data, but is based on a similar idea – uncertainty arises when we want to draw conclusions about the underlying issues or process.

5.4.8 For example, we might have data on all deaths in an area over time – from this we can calculate mortality rate and life expectancy indicators. These indicators would tell us about the situation in that area for that particular time period, however we would typically like to draw more general conclusions about the underlying ‘risk’ (in this case, risk of premature mortality). As with survey data, it is when we want to generalise in this way that uncertainty arises:

- Indicators based on 100% sample data identify precisely what happened with a particular group
- But these indicators are only an estimate of what might happen with a different group given the same underlying ‘risk’

**Why the superpopulation principle is useful**

5.4.9 It might be thought that when we have taken a ‘census’ (i.e. measured all members) of the population, that uncertainty and statistical tests are neither needed nor appropriate. This view is correct if our interest really is restricted to the individuals in the area at the time of the area. However, it is not correct in those cases where we are really interested in an underlying process, for example, where we are interested in school effectiveness rather than the exact number of pupils receiving 5 or more GCSEs at A*–C grade.

5.4.10 In this situation, statisticians like to think of the 100% dataset as a sample from a (theoretical and infinite-sized) ‘superpopulation’. The actual population is:

“only one of the many possible populations that might have resulted from the same underlying system of social and economic causes ... [and] any generalizations that are not restricted to a particular date and place must recognize that some other population might have resulted, and must in fact be expected to arise in the future from the same underlying causes”

5.4.11 Another more specific example would be where we are interested in school effectiveness rather than the exact number of pupils receiving 5 or more GCSEs at A*–C grade:

“It is worth emphasising that we are regarding the set of students taking an examination as if they were a sample from a superpopulation since we wish to make inferences about the general ‘effects’ of institutions for any group of students in the future.”


5.4.12 The importance of the superpopulation principle is that it provides a way for us to estimate the level of uncertainty for specific indicators, or to assess whether differences over time or between areas are significant, even where these indicators are based on a 100% sample.

What does all this have to do with neighbourhood renewal and regeneration?

5.4.13 To summarise the above discussion: when we want to draw more general conclusions from the data, we need to take uncertainty into account in our analysis – this is the case when using data from 100% samples, as well as when using data from surveys.

5.4.14 Where we are using indicators to assess our performance against targets, it is important to take into account the uncertainty and variation in the indicators – data with a large degree of uncertainty on the ‘real’ value may not have sufficient precision to accurately and reliably track small changes over time or between areas. It may be that small differences over time seen by users are simply fluctuations that we might expect from the data, but where the underlying ‘risk’ has not changed.

5.4.15 The table below highlights three neighbourhood renewal and regeneration examples where users should look at reporting measures of uncertainty alongside the ‘actual’ data values.
<table>
<thead>
<tr>
<th>Neighbourhood renewal and regeneration issue</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the level of 'worklessness' decreasing across our Local Authority?</td>
<td>Local partners often use indicators from the 100% DWP benefits databases on the proportion of people receiving Jobseekers Allowance or Incapacity Benefits. JSA and IB indicators are being used as a proxy measure for the risk of worklessness. In this instance, we are interested in what they tell us about worklessness in the local area, rather than the actual benefit counts per se. As we are using the complete dataset to draw more general conclusions on the underlying risk of worklessness, we therefore should take into account measures of uncertainty (in the datasets) when identifying whether change over time or between areas is significant.</td>
</tr>
<tr>
<td>Are our programmes making priority neighbourhoods 'safer'?</td>
<td>Local partners often use indicators based on recorded offence datasets held by the Police. Recorded offences are being used as a proxy measure for the risk of crime. In this instance, we are interested in what they tell us about crime in the local area, rather than the actual offence counts per se. As we are using the complete dataset to draw more general conclusions on the underlying risk of crime, we therefore should take into account measures of uncertainty (in the datasets) when identifying whether change over time or between areas is significant.</td>
</tr>
<tr>
<td>Are we raising secondary education standards?</td>
<td>We might use the proportion of pupils receiving 5 or more GCSEs at A*-C grade, or a value-added indicator based on pupil progress. The proportion of pupils receiving 5 or more GCSEs at A*-C grade is being used as a proxy measure of school effectiveness. In this instance, we are interested in what this tells us about secondary school quality, rather than the actual pupil passes per se. As we are using the complete dataset to draw more general conclusions on the underlying school effectiveness, we therefore should take into account measures of uncertainty (in the dataset) when identifying whether change over time or between areas/schools is significant.</td>
</tr>
</tbody>
</table>

There is no uncertainty if we don’t need to draw conclusions about underlying issues

5.4.16 Finally, we should highlight that where we are interested solely in the actual group for which we have data, there is no need to consider uncertainty. This
would be the case where we are using the data for *enumeration* purposes – for example using claimant count data to allocate the right number of benefits advice workers at a particular point in time.

5.5 Can we estimate levels of uncertainty?

**Uncertainty can be presented in the form of Confidence Intervals – larger Confidence Intervals represent a greater level of uncertainty on the ‘real’ value**

5.5.1 One standard way of presenting uncertainty, or lack of precision, is using Confidence Intervals. These show the range in which we are fairly sure the ‘real’ indicator value lies. For example, the employment rate for the population based on survey data might be reported as 75% ± 3%, highlighting that there is a range from 72% to 78% in which the employment rate is most likely to be.

5.5.2 For many datasets, Confidence Intervals have already been calculated and provided. This is typically the case for national survey data such as the Annual Population Survey employment indicators. For example, APS data for Coventry over the period January 2005–December 2005 available from NOMIS shows:

- Coventry APS employment rate: 70.9 ± 2.6%
- Coventry APS unemployment rate: 6.4 ± 1.6%

5.5.3 In other words, the ‘real’ employment rate is likely to lie in the range 68.3–73.5%, and the ‘real’ unemployment rate in the range 4.8–8%. Small changes from year-to-year of the order of 1% may be well within these ranges, and may not be due to any real change in the rates – the implication is that it may be difficult to identify whether or not real change has taken place year on year as changes in observed rates may simply be due to sampling error.

**Where Confidence Intervals are not provided, there are reasonably straightforward ways to estimate Confidence Intervals for survey data**

5.5.4 Based on a number of simplifying assumptions, statisticians have developed reasonably straightforward ways to estimate Confidence Intervals for indicators based on survey data (remember from above that this uncertainty arises when we want to generalise the survey results to the full population):

\[
CI = 1.96 \times \sqrt{\frac{P \times (100 - P)}{N}}
\]

31 Typically the 95% Confidence Interval limits are shown, in other words 95% of samples taken will show an employment rate between 72% and 78%.
32 We are ignoring finite population corrections. Following the same arguments as for using the superpopulation principle above, these corrections should not be applied where we are using the survey as a measure of some underlying issue.
5.5.5 Where CI is the 95% Confidence Interval, P is the percentage of people affected – for example, the employment rate as a value from 0 to 100%, and N is the number of people who were measured. So if we measured employment at 70% based on a survey of 500 people, we have:

\[
CI = 1.96 \times \sqrt{\frac{70 \times (100 - 70)}{500}} = 4.0
\]

5.5.6 In other words, our Confidence Interval or uncertainty on the measurement is 4%, and we should report the employment rate as 70% ± 4%. If we increased the sample size, we would get a smaller uncertainty, for example a survey of 2,000 people would produce an employment rate of 70% ± 2% (if the average rate was again 70%).

The superpopulation principle identifies that the same methodology can be used to estimate Confidence Intervals for indicators based on 100% samples.

5.5.7 The superpopulation principle discussed above identifies that the same approach can be taken to estimate the level of uncertainty on indicators derived from 100% samples. The same equation can be used for estimating the Confidence Intervals (where N is this time the size of the population rather than the size of the sample):

\[
CI = 1.96 \times \sqrt{\frac{P \times (100 - P)}{N}}
\]

5.5.8 For example, in Coventry in August 2005, 23,100 people were receiving worklessness benefits (Jobseekers Allowance or Incapacity Benefits), out of a total working age population of 191,000. In the city’s Priority Neighbourhoods, 14,600 people were receiving worklessness benefits out of a total working age population of 83,900.

5.5.9 Using this data in the equation above to estimate the Confidence Intervals identifies:

- Coventry worklessness benefits rate: 12.1% ± 0.15%
- Priority Neighbourhoods worklessness benefits rate: 17.4% ± 0.26%

---

33 Confidence Intervals for national surveys may be calculated as slightly different than this due to “clustering” and other sampling techniques, however the method here is a good rule of thumb. Usually the Confidence Intervals are published along with the survey data – this is the case for the APS datasets available on NOMIS.

34 This provides the sensible result that indicators based on 100% samples are no more accurate than survey datasets based on the same number of people (again ignoring finite population corrections).

35 The Priority Neighbourhoods are defined as those areas across Coventry that lie in the 20% most deprived areas in England, based on the IMD 2004.
Confidence Intervals are larger for smaller samples, hence data for smaller areas usually has less precision than data for larger areas

5.5.10 The level of uncertainty is related to the number of people that have been sampled or measured. The more people that are sampled, the smaller the uncertainty in the results. For example, indicators based on sampling or measuring 100,000 people are likely to have more precision (with smaller Confidence Intervals) than those based on 500 people.

5.5.11 As a consequence, there is often more uncertainty on results for smaller geographical areas, due to the smaller number of people being sampled. For example a large survey run across the country might have 100,000 respondents, producing a high degree of precision at national level. However, when using data from the same survey at local level we might only have data for a few hundred people or less, so our local results would have less precision (i.e. be more uncertain).

5.5.12 We saw this above, where the Confidence Intervals on the worklessness benefits rate are bigger for the priority neighbourhoods than for Coventry as a whole. This is due to the smaller numbers of people living in these areas than across Coventry.

5.5.13 Similarly, data for specific population groups is likely to be more uncertain than for the population as a whole. Using the same example of 100,000 people surveyed across the country we might only have data from 500 Bangladeshis, so results for this group would have much less precision.

Are there any ways of increasing precision?

5.5.14 One way of increasing precision for indicators is by aggregating data together from different years – combining 4 years of data together will roughly halve the size of the Confidence Intervals. This is why datasets with small numbers such as teenage pregnancy and other health datasets are often combined together over several years.

5.5.15 However there is a drawback – any change over time may be obscured by the inclusion of data from earlier years, so this method reduces precision when trying to assess annual change for performance monitoring purposes.

5.5.16 Another way is to use indicators based on datasets that are more common, in other words indicators with higher counts. For example, indicators based on vehicle crimes are more likely to have greater precision than indicators based on (a much smaller number of) murders.

36 Large surveys often try to minimise this issue by over-sampling from relevant groups.
5.6  Can my data identify a ‘real’ change of X% per year? Are differences between areas significant?

5.6.1  There are many possible ways of identifying whether or not change between time-points or between areas is significant. Below we use methods that directly compare the size of the change against the size of the Confidence Intervals, however other tests can be used.

5.6.2  ONS are developing a case study showing ways of identifying whether the most deprived areas in an LA are ‘closing the gap’ when compared with the LA as a whole.

Comparing change against the Confidence Intervals allows us to identify whether differences are likely to be due to ‘real’ change

5.6.3  The chart below shows the annual workless benefit rate for Coventry and the Priority Neighbourhoods over the period 1999–2005. For Coventry as a whole the number of people receiving workless benefits fell from 24,275 in August 1999 (13.0% of the Mid-Year Estimate working-age population) to 23,080 in August 2005 (12.1% of the working age population). Similarly, the number of people receiving workless benefits in the priority neighbourhoods fell from 15,155 (18.8% of the ONS small-area estimate population) in August 1999 to 14,625 (17.4%) in August 2005.

5.6.4  Alongside the benefit rate, we have plotted the Confidence Intervals as vertical bars (these were estimated using the equations in the previous Section. We have not included analysis of uncertainty in the population denominator), highlighting the size of the uncertainty in measurement. We can see that the size of the decrease over the period appears considerably larger than the error bars. From this we are pretty confident in saying that there has been a real change in the workless benefit rates.

5.6.5  To be absolutely sure, we need to check whether the observed change is bigger than twice the Confidence Intervals (i.e. so the two Confidence Intervals do not overlap on the graph):

- The proportion of working-age people receiving workless benefits in Coventry showed a decrease of 0.9% over the period 1999 to 2005 (as we saw above, the Confidence Intervals here are 0.15%)

- The proportion of working-age people receiving workless benefits in the Priority Neighbourhoods showed a decrease of 1.3% over the period 1999 to 2005 (as we saw above, the Confidence Intervals here are 0.26%)

5.6.6  So the observed change for both Coventry and the Priority Neighbourhoods over the period is bigger than twice the Confidence Intervals. In other words, it looks like there has been real change in the proportion of people receiving worklessness benefits when comparing 2005 with 1999. However, if we were looking at data over a 2-year baseline, rather than the 6 years we have available here, we may not have been able to say whether or not there was
a real change as observed annual changes tend to fall within the Confidence Intervals.

5.6.7 We cannot easily say whether or not this change is due to workless programmes being run across Coventry (relating this kind of change to programme effectiveness is the subject of the first practical guide in this report). However, we can be fairly confident that there is a real change in the workless rates, over and above the uncertainty on the worklessness measurement.

The same type of analysis should also be used to identify whether differences between areas are significant

5.6.8 Just as we need to consider uncertainty when looking at change over time, we should also consider uncertainty when comparing between areas. Although the data values may indicate that one area has higher unemployment rates than another area, this difference may not be significant once the uncertainty on the rates is taken into account.

5.6.9 For example, this issue has been highlighted by many researchers as critical when looking at school ‘league tables’ based on ranking of performance measures such as pupil attainment\(^\text{37}\). Differences between schools may not be significant once uncertainty is taken into account, so league tables can give a misleading picture of school effectiveness.

5.7 Where can I get the data, and find out more?

5.7.1 The Working-Age Client Group datasets are available through Neighbourhood Statistics and the DWP website:

- Working-Age Client Group data: http://83.244.183.180/NESS/page1.htm

5.7.2 For further information see the full list of useful sources and datasets in Appendix A.

5.8 Lessons for data users

- Do carry out your own assessment of the strengths and weaknesses of datasets. Where indicator rates are being used, you should also think about the strengths and weaknesses of the population denominator used to calculate the rates.

- Do be aware that survey-based indicators are subject to uncertainty, and always report Confidence Intervals alongside the actual data values for survey data.

- Although administrative datasets are generally more reliable data sources for annual monitoring purposes than survey data, do be aware that administrative datasets are a by-product of the system from which they are derived and may therefore only be a proxy for the outcome or concept you are interested in. These indicators may also be subject to uncertainty, and Confidence Intervals may need to be taken into account.

- Do be aware of the implications that the level of uncertainty on data has for accurate and reliable target-setting and monitoring.

- Do look at ways of identifying whether differences between areas and over time are significant, for example forthcoming ONS work on ‘closing the gap’ between the most deprived areas in an LA and the LA as a whole.
Section 6 Using crime data at neighbourhood-level to target programmes

6.1 What is this practical guide about?

6.1.1 Crime, anti-social behaviour and fear of victimisation regularly feature among the top concerns voiced by the public. In recent years there has been an increased emphasis placed on multi-agency partnership working as a means to tackle the causes of crime and to increase people’s feelings of safety. There are a considerable number of national targets set by government and these are supplemented by a multitude of local targets and objectives. Coupled with the need to adopt an evidence-led approach, this has generated a growing requirement for data with which to target, implement and evaluate interventions.

6.1.2 The causes of crime can be complex and thus interventions to tackle these causes often require a co-ordinated response from different agencies. Whereas historically it was uncommon for organisations to share ‘their’ data with other organisations, the introduction of the Crime and Disorder Act 1998 led to the creation of local Crime and Disorder Reduction Partnerships (CDRPs) and gave partner agencies the power to share information for the purposes of tackling crime and disorder. Whilst this Act both encouraged and facilitated the sharing of information between agencies, there nevertheless remained significant barriers to successful data sharing in some areas. The Police and Justice Act 2006 introduced some important changes including placing a duty on partner agencies to share depersonalised information in order to address some of these barriers.

Who is this practical guide for?

6.1.3 This practical guide outlines key issues and data sources, with particular emphasis on identifying and overcoming barriers to establishing successful evidence-based interventions. Examples are used to demonstrate good practice at local level.

6.1.4 This is aimed at all individuals and agencies involved in crime reduction activities. It will be of particular interest to those parties tasked with designing, implementing and evaluating interventions.
6.2 Partnership working and data sharing

Engaging partner agencies is the key to developing a robust evidence base

6.2.1 The Crime and Disorder Act 1998 (amended by the Police Reform Act 2002 and the Clean Neighbourhoods and Environment Act 2005) placed statutory and non-statutory responsibilities on a variety of agencies and organisations to work together to tackle crime and disorder at local level. These partnership working arrangements were formalised at local authority level via Crime and Disorder Reduction Partnerships (CDRP). Each CDRP was legally required to produce a three-yearly crime and disorder audit and subsequently a three-yearly strategy to tackle those problems identified through the audit. Whilst the requirement to produce regular audits and strategies was repealed in the Police and Justice Act 2006 (with the change taking effect from the summer of 2007), this by no means lessened the emphasis placed on partnership working.

6.2.2 The Wigan and Leigh Community Safety Partnership was an early pioneer of effective partnership working and data sharing. Its partnership approach to crime prevention started in 1990 and was already well established by the time the Crime and Disorder Act 1998 came into force. The partnership adopted a Risk Management approach to tackling local crime problems, which involved the police and local authority working together and strategically with other partner agencies to address priorities in a multi-agency way. The partnership now consists of almost thirty local agencies and organisations which have responsibilities for crime reduction and community safety.

Data exchange contracts can facilitate the sharing of important sensitive datasets

6.2.3 The Wigan and Leigh Community Safety Team, based within the local authority, has developed an extensive data depository by sourcing key datasets from relevant partners. Some datasets, such as individual level recorded crime data from the police, required data exchange contracts to be negotiated and signed off whilst other less sensitive datasets were obtained without the need for contractual agreements, such as information on void properties from the council’s Housing Department. The wide variety of datasets amassed by the team was thus available for cross reference providing the opportunity for holistic analyses of local problems.

38 See www.homeoffice.gov.uk/rds/prgpdfs/fcdps70.pdf for further details of early partnership work in Wigan and Leigh
39 For further information on data sharing in Wigan and Leigh see: www.renewal.net/Documents/RNET/Case%20Study/Wiganleighcommunity.doc and for lessons on data sharing more broadly see www.neighbourhood.gov.uk/displaypagedoc.asp?id=1604.
Getting ‘buy-in’ from local residents can help to raise the partnership’s profile and make a real contribution to crime reduction efforts

6.2.4 There are other good examples of effective partnership working. For example, the Bradford New Deal for Communities (NDC) Partnership has established an Anti-Crime Partnership group which enables local residents and businesses to contribute to decision making. The Hackney NDC Crime Task Group is a similar forum. Both initiatives are multi-agency approaches that offer the public the opportunity to voice concerns on key community safety issues and be kept informed of current local initiatives. By engaging the public in decision making, these two NDC partnerships have been able to demonstrate the complexities and difficulties inherent in formulating and implementing crime reduction interventions within limited financial resources.

6.2.5 As discussed above, engaging local agencies, organisations, residents and businesses can generate a substantial body of data with which to target, implement and evaluate crime reduction interventions. The Table below offers ten examples of possible data sources and provides a brief description of each source against a selection of important criteria.

<table>
<thead>
<tr>
<th>Data Owner</th>
<th>Dataset name</th>
<th>Area or individual level data</th>
<th>Geographic identifier attached (where known)</th>
<th>Data sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Police</td>
<td>Recorded crime data</td>
<td>Individual crime level</td>
<td>Postcode and/or grid reference</td>
<td>High</td>
</tr>
<tr>
<td>Police</td>
<td>Incident data on disturbances</td>
<td>Individual incident level</td>
<td>Varies by police force</td>
<td>High</td>
</tr>
<tr>
<td>Fire and Rescue</td>
<td>Malicious and Deliberate Fires</td>
<td>Individual incident level</td>
<td>Varies by Brigade</td>
<td>Medium</td>
</tr>
<tr>
<td>Ambulance Service</td>
<td>Incidents of violence</td>
<td>Individual incident level</td>
<td>Postcode and/or grid reference</td>
<td>Medium – High</td>
</tr>
<tr>
<td>Youth Offending Team</td>
<td>YOIS (Youth Offending Information System)</td>
<td>Individual person level</td>
<td>Home address</td>
<td>High</td>
</tr>
<tr>
<td>Probation Service</td>
<td>OASys (Offender Assessment System)</td>
<td>Individual person level</td>
<td>Home Address</td>
<td>High</td>
</tr>
<tr>
<td>Victim Support</td>
<td>Victimisation information</td>
<td>Individual person level</td>
<td>Home address</td>
<td>High</td>
</tr>
<tr>
<td>Neighbourhood Wardens</td>
<td>Incidents of disorder (including physical / environmental problems)</td>
<td>Individual incident level data</td>
<td>Postcode and/or grid reference</td>
<td>Low – Medium</td>
</tr>
<tr>
<td>Drug Action Team</td>
<td>Drug and alcohol client base</td>
<td>Individual person level</td>
<td>Home person</td>
<td>High</td>
</tr>
<tr>
<td>Housing Department</td>
<td>Void properties</td>
<td>Individual property level</td>
<td>Postcode and/or grid reference</td>
<td>Low</td>
</tr>
</tbody>
</table>

40 See [www.bradfordtrident.co.uk/crimred.htm](http://www.bradfordtrident.co.uk/crimred.htm) for further information on the Bradford NDC partnership.
41 See [www.shoreditchtrust.org.uk/liveability.asp](http://www.shoreditchtrust.org.uk/liveability.asp) for further details of the Hackney NDC partnership.
Aggregating data to neighbourhood boundaries requires appropriate resources and effective liaison between partners

6.2.6 It is possible to aggregate statistics to any particular local boundary from the unit postcode or grid reference. These boundaries may be standard geographies such as wards, LSOAs, police beats or non-standard geographies such as New Deal for Community or Priority Neighbourhood boundaries which do not necessarily fit standard Census or administrative boundaries. Aggregating from individual person, household or event level to neighbourhood-level is usually done using a Geographic Information System (GIS). Such systems enable datasets to be displayed cartographically, often with multiple datasets displayed simultaneously. The Home Office recently published a short report on the use of GIS in crime analysis.42

6.2.7 However, undertaking data aggregation by the data owning organisation requires time and resource investment. Producing statistics relating to particular locally specified boundaries, for particular time periods and for particular crimes may require significant input and it is possible that the necessary level of resource within the organisation may not be readily available. Specifying local data requirements will require liaison between the relevant partnership agencies to ensure that the correct statistics are specified to the relevant boundary areas and in a timely fashion to meet reporting cycles. It is important that partnership agencies liaise carefully over data specification issues in order to help understand and overcome particular issues which may compromise the ability to produce accurate and timely local data to particular specifications.

6.3 Identifying appropriate local priorities

Identifying local priorities underpins the success of CDRP programmes

6.3.1 The three-yearly crime and disorder audits undertaken by CDRPs in 1999, 2002 and 2005 were key mechanisms for identifying local problems which could then be tackled through local interventions. Whilst the associated crime and disorder strategies set the broad priorities for the following three-year period, the changing nature of local problems meant that constant monitoring and refinement of objectives was often needed. Despite the requirements on CDRPs for three-yearly audits and strategies being repealed through the Police and Justice Act 2006, the need for local problem identification and priority setting is no less crucial. Each partner organisation will also have a variety of operational priorities which requires ongoing monitoring. The ability to accurately identify key local priorities is therefore paramount to the success of the partnership and the partner organisations.

Data analysis and consultation are key to highlighting local priorities

6.3.2 Detailed analysis of the available data sources, coupled with consultation with local residents and business representatives, can highlight potential

42 See www.homeoffice.gov.uk/rds/pdfs07/rdsolr0307.pdf for review of GIS uses.
issues for local interventions to target. In some instances, findings from the analysis and the consultation may not be mutually supportive; in these cases it is important to unpick the reasons for these discrepancies, which may include a lack of appropriate data in the scan or a misconception by the consultees on the scale of a perceived problem in the local area.

6.3.3 Anti-social behaviour is a good example of an issue where public perception may not necessarily mirror evidence from other data sources. Such discrepancies may be due to the fact that different people have different views on what constitutes anti-social behaviour. For example, some people may regard a congregation of youths to be anti-social but the youths themselves may regard this as being a very sociable act. As anti-social behaviour encompasses many different issues, it is particularly difficult to define and measure, thus further increasing the likelihood that survey responses may not mirror other data sources. The government’s Respect agenda offers guidance on identifying and tackling anti-social behaviour in the local community.43

Local problems can be defined in different ways

6.3.4 As discussed in Section 2 of this report, local problems may be defined on a variety of bases. A selection of methods suitable for use in identifying local crime and disorder priorities include:

- Absolute level (i.e. high incidence compared to other problems)
- Relative level (i.e. high incidence compared to other geographical areas)
- Concentration (i.e. high incidence in particular hot spots, at particular times or involving repeat victimisation)
- Trends (i.e. increasing from a low base or further increasing from a high base)
- Links to other problems (i.e. precursor to more serious, more intensive problems or more difficult to tackle problems)
- Cost (i.e. financial impact of problem)
- Severity (i.e. strength and longevity of impact caused by problem)

6.3.5 A reference that may be useful for helping to identify local problems is the manual for crime analysts produced by the Jill Dando Institute of Crime Science. Although aimed primarily at crime analysts, it contains helpful guidance on local problem identification.44

Presenting data visually can help to highlight important patterns and trends

6.3.6 The evaluation and strategy team of the New Cross Gate NDC Partnership in Lewisham, cross-referenced the volume of particular criminal offences with

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43 See the Respect website www.respect.gov.uk for further information. See also www.together.gov.uk/category.asp?c=32 for local case studies on tackling antisocial behaviour.

44 The Crime Manual can be downloaded from the JDI website: www.jdi.ucl.ac.uk/publications/other_publications/55steps
the temporal change in offending levels in order to effectively distinguish between problems with different dynamics. The Figure below presents a summary of the information collated. Visually presenting data in this way enabled the NDC team to quickly and easily identify key trends, such as highlighting which of the presently high volume crimes were beginning to decline and which were continuing to rise. It also reveals that while Burglary Other is currently relatively low volume in New Cross Gate NDC, the incidence of this crime is rising and therefore perhaps implementing a pro-active intervention at an early stage might prevent this crime becoming high volume in the future. It is also interesting to note that Burglary Other and Burglary Dwelling are at opposite corners of the chart: further analysis may be needed to explore whether interventions to reduce domestic burglary have caused offenders to instead target non-domestic properties.

6.3.7 As discussed above, there are of course many different ways to define ‘high’ and ‘low volume’, ‘increasing’ and ‘decreasing’. For instance, a high volume crime type may be one which is high compared to the parent local authority rate or alternatively one that is high compared to other crime types in the local area. A crime type that is regarded as increasing may be one that is becoming more prevalent in the target area in absolute terms or even one which is perhaps decreasing slightly in the target area whereas in the parent local authority the rate is falling much faster. Such definitional decisions should be taken on a case-by-case basis by the local partnership.
6.3.8 In summary, when identifying a local problem it is important to explicitly state on what basis the issue is deemed to be a problem. The reasoning behind this is to guide the targets for improvement that are drawn up and the forms of intervention that are put in place.

6.4 Effective target-setting

**Effective target-setting must take account of data availability**

6.4.1 Once local priorities are identified, it is necessary to construct targets through which to focus local interventions. The Home Office recommends targets should be SMART. i.e. Specific; Measurable; Achievable; Realistic; and Timely and Timescaled.\(^{45}\)

6.4.2 Effective target-setting must therefore take account of what data is available to evidence the success or otherwise of the particular intervention or suite of interventions to be implemented. There is little point in establishing a target that cannot be confidently measured using an appropriate and robust measure.

6.4.3 For example, a hypothetical target to ‘reduce fear of crime by 20%’ is flawed on a number of levels: (i) fear of crime is multi-faceted with people typically being more fearful of some types of crime than others; (ii) there is no specification of whether the target is aimed at particular population groups or people living in particular neighbourhoods; (iii) there is no timescale attached to the target; and (iv) fear of crime can only be measured through a survey, and at present no national crime surveys are statistically robust at local authority level while local surveys are typically expensive yet still have relatively large Confidence Intervals around indicator values.

6.4.4 The NDC programme offers the opportunity to monitor trends in fear of crime at local level for the 39 partnership areas through the large household survey undertaken at two-yearly intervals beginning in 2002. On this basis NDC partnerships have set targets around this issue. Analysis of NDC delivery plans undertaken in May 2005 showed a total of 32 outcome targets aimed at reducing fear of crime or increasing feelings of personal safety were in operation across the 39 partnerships.

6.4.5 However, it is important to note that accurate measuring of these targets may not always be possible. Although area specific surveys of 500 households have been carried out in each NDC partnership, Confidence Intervals still apply to survey findings. What this means in practice is that differences of at least 7–8% points have to be observed between survey periods to be sure that any recorded change was statistically significant and not just due to chance alone. So for example, if a partnership observes that between two surveys the percentage of respondents feeling unsafe when walking alone in the area after dark fell by 4 percentage points, this would not be a large enough fall to claim with confidence that feeling unsafe

\(^{45}\) For further details see www.crimereduction.gov.uk/toolkits/an0502-table1.htm
had definitely fallen (as it is within the 7–8% points confidence interval). Therefore, when reporting change over time for annual monitoring and performance measurement purposes, when data is based on survey findings, the confidence interval should always be reported as well. Other practical guides also explore the limitations of survey data for performance monitoring purposes and reporting of Confidence Intervals.

6.5 Developing and implementing appropriate interventions

**Interventions can target particular areas, groups, times or crime types**

6.5.1 Depending on the nature of the problem to be addressed, interventions may need to be targeted at particular neighbourhoods, population groups, times of the day, crime types etc. It is important when formulating interventions to bear in mind what data is available to help ensure resources are invested in the most effective way. For instance, many partnerships across England highlight domestic violence as a key priority. It is known, however, that particularly low reporting rates are associated with this type of crime. Simply using police recorded crime data to identify geographical areas to target may not be the most effective approach as the data may not accurately represent reality. In cases such as this, involving voluntary groups in partnership working may well generate invaluable data with which to inform the development and delivery of interventions. For instance, utilising sensitive data held by voluntary organisations on domestic violence victims may offer an opportunity to target particular interventions aimed at reducing risk and encouraging the victims to report the crimes to the police.

6.5.2 In Liverpool, a detailed examination of the information on *modus operandi* of residential burglaries contained within police crime records revealed that the majority of offences were committed by offenders entering and leaving through the rear of the properties which were accessed via alleyways. A form of target hardening intervention known as ‘allygating’ was implemented to tackle this particular problem which contributed to a reduction in burglary offences. Other target hardening interventions that may help to reduce burglary include such things as installing door and window locks to high risk properties. This is a further example of how effective data analysis can help to guide the implementation of an intervention to tackle a locally identified crime problem.

**Changing attitudes can be an effective way to reduce crime and disorder**

6.5.3 The complex nature of crime and its causes often necessitates complex interventions to tackle identified problems. For instance, there is some

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47 See also www.crimereduction.gov.uk/learningzone/scptechniques.htm for discussion of target hardening and other situational crime prevention approaches.
evidence from the NDC programme that interventions aimed at tackling youth crime may lead to subsequent reductions in people’s fear of crime at local level. In the Rochdale NDC area, ‘youth tolerance zones’ were established where young people were able to congregate and socialise. The scheme aimed to change the attitudes of young people and older people alike to make each group more understanding and tolerant of the other.68

6.5.4 Effective data analysis is central to successfully engineering schemes like the youth tolerance zones, as information from different sources (which may include police data on crimes and anti-social behaviour, local surveys of residents’ perceptions, and focus groups with children) needs to be considered holistically to ensure that an appropriate intervention is implemented in a suitable location with an achievable target outcome.

Early intervention can reduce the likelihood of future offending behaviour

6.5.5 The Youth Inclusion Support Panel in Wigan and Leigh seeks to prevent offending and anti-social behaviour by offering voluntary support services to high-risk 8–13 year olds and their families. Effective partnership working and data sharing is a crucial factor in enabling the Panel to identify high risk children. The main emphasis of the project is to ensure that children and their families receive, at the earliest opportunity, mainstream public services, together with complementary interventions from voluntary and community groups. Without the different agencies contributing their respective data and allowing an overall appraisal of the various risk factors through intensive data analysis such early intervention projects would not identify and reach those individuals most at risk of offending or re-offending.

6.6 Monitoring and evaluating success

6.6.1 Here we highlight a selection of key issues to do with monitoring and evaluating crime interventions, with particular focus on the importance of robust data analysis for drawing conclusions on the effectiveness of the initiatives. It is beyond the scope of this example to cover all the approaches to monitoring and evaluating the success of particular programmes, however the practical guide on monitoring change and identifying programme effectiveness provides more information, and gives pointers to more in-depth material.

Select the most appropriate outcome measure for the purpose

6.6.2 An effective target, as discussed in Section 6.4 above, will provide the key outcome measure with which to evaluate the success of the intervention. However, it may also be necessary to identify specific sub-categories of the main indicator or alternatively identify associated measures with which to give more detail about the form of outcome change achieved.

68 For further details of the Rochdale scheme and other similar interventions see www.data4nr.net/supporting
6.6.3 All outcome measures must be derived in the context of both data availability and the forms of analysis that can be employed in the particular instance. For example, while an overall objective may relate to tackling burglary in a neighbourhood it may be worthwhile identifying component outcome measures such as change in domestic burglaries and change in non-domestic burglaries. Disaggregating the overall outcome measure can help evaluators to explain whether particular dynamics are driving changes observed in the main outcome. However, as discussed in Section 5 of this report, when the number of observations fall, caution should be exercised due to ‘small number’ issues.

**How do changes in outcome measures relate to activity on the ground?**

6.6.4 The practical guide on monitoring change and identifying programme effectiveness (Section 2) goes into detail on how to relate inputs and outputs to observed changes in outcome measures when evaluating the success of interventions. While some interventions will have very clearly defined inputs and outputs in relation to reducing crime and disorder (such as a short-term high visibility police presence), those of other interventions may be somewhat less clear (such as the various methods of helping ex-offenders to find employment and accommodation).

6.6.5 When assessing the links between interventions and outcomes, evaluators should consider the details of interventions. For example, incorporating information on the exact form of the intervention, along with its timeline of implementation and level of resourcing. This should be accompanied by an estimate of achievable outcome, which can help evaluators make a judgement as to whether any observed changes in outcome may indeed be related to the initiative. It is important to remember that the availability of reliable input and output data and the analysis of these sources are as central to evaluating intervention success as robust outcome information.

**Is the effect of the intervention sustainable?**

6.6.6 It is important to continue to monitor changes in the chosen outcome measures for a period after the completion of the intervention to assess whether any apparent success is sustained. For example, the use of a mobile CCTV facility in an area of high disorder in the evenings/night time may have the desired effect of reducing the scale of the problem in the short-term but there is the distinct possibility that once the facility is transferred to another hotspot elsewhere in the local authority then the disorder will return. A similar situation may be observed where a high profile police presence is established for a short period of time. Again, the increased presence may reduce the levels of crime and disorder while the officers are present but when the initiative ends the problems may return. Evaluators should therefore plan to continue to collate data on the selected outcomes for some time after the termination of an initiative, and undertake regular analyses of associated changes to assess the sustainability of any impact.
The impact of changes to reporting and recording

6.6.7 Community safety strategies often have the twin aims of reducing recorded crime and increasing reporting to the police. Analyses of changing crime rates must take account of the interaction between these factors as success in reducing crime may be masked by increased reporting to the police. Similarly, changes to the way the police and other agencies record their data may complicate or even invalidate analyses of trends over time.

6.6.8 For example, the introduction of the National Crime Recording Standard in the lead up to April 2002 resulted in a change to the way crimes were recorded and thus generated artificial changes to crime rates. The Home Office has undertaken some work to quantify the effects of these changes but other agencies may not have the resources to do likewise with their data.

6.6.9 It is crucial therefore that data analysts are closely aligned with the relevant individuals in partner agencies in order to keep abreast of developments in key data sources. In many cases this can be achieved through the partnership working arrangements discussed in this report.

It is important to monitor not only the intended effects but also any unintended consequences of an intervention

6.6.10 An intervention to tackle an identified crime or disorder problem may have both intended and unintended effects. While the primary focus is on measuring and evaluating the intended effects, it is also important to assess where possible the impact of any unintended consequences of the intervention.

6.6.11 A key form of unintended consequence often associated with successful crime reduction interventions is crime displacement. Crime can be displaced from one area to another, or from one crime type to another, due to the operation of an intervention. For example, a successful burglary reduction intervention in a priority neighbourhood may appear to cause the burglary rate in the surrounding localities to increase, as offenders focus their criminal behaviour on areas not subject to the intervention.

6.6.12 An alternative to displacement is diffusion of benefit. This may occur when surrounding neighbourhoods benefit from the activities operating in the target neighbourhood. For instance, if an intervention helps to tackle the root causes of crime then this is likely to lead to a reduction in offending both within the boundaries and in the surrounding localities.

6.6.13 There is a relatively small but growing body of literature on displacement and diffusion in the context of crime and disorder. Early results from Phase 1 of the NDC evaluation suggested that diffusion was perhaps more likely than displacement, although the authors concluded that further analysis was required before this could be concluded with confidence. The authors are currently engaged in developing this work to provide a more detailed and statistically robust analysis of displacement/diffusion.

49 See the Home Office’s Reducing Burglary Initiative evaluation report.
50 See the forthcoming New Deal for Communities evaluation report.
6.7 Where can I get the data, and find out more?

- National NDC evaluation: http://extra.shu.ac.uk/ndc/index.html
- Crime Reduction website: www.crimereduction.gov.uk
- Respect: www.respect.gov.uk
- Partnerships and places library: www.idea.gov.uk/idk/laa/home.do

6.8 Lessons for data users

6.1.1 The focus of this section was to highlight some of the key issues facing people responsible for targeting, implementing and evaluating crime reduction interventions. It is impossible to cover everything of relevance in a short summary such as this but it is hoped that the practical examples will enable interested parties to pursue further information on the key themes.

- Do engage with a wide variety of partner agencies, including voluntary organisations, and use all available data when identifying local problems
- Do set targets against which progress can be monitored and evaluated
- Do give careful consideration to the issues around evaluating success of interventions, including being mindful of potential unintended consequences
- Do respect legal requirements on data protection, and adhere to sound procedures for managing and using data. But be clear on the circumstances where data can legitimately be shared between partners. Data exchange protocols can provide a legal gateway to facilitate access
- Don’t simply restrict interventions only to those with an obvious causal link to reducing a particular crime rate – innovative approaches to intervening early to tackle problems before they arise can have major effects in the short, medium and long term
- Don’t use data for targeting, implementing and evaluating interventions without first considering its strengths and weaknesses – where possible compare more than one related data source to assess whether trends are consistent between sources
Appendix A Where to find further information

A.1.1 All resources are free and publicly available.

Key sources for practical guides
- Partnerships and places library: www.idea.gov.uk/idk/laa/home.do
- SELD general data and evidence resources and SELD Frequently Answered Questions
  www.data4nr.net/supporting
- ONS Neighbourhood Statistics Analysis Toolkit
- National NDC evaluation
  http://extra.shu.ac.uk/ndc/index.html
- ONS Case Studies

Other useful guides
  www.data4nr.net/supporting
- How to plan and manage an evaluation Toolkit
  www.data4nr.net/supporting
- Neighbourhood Statistics case study: Confidence intervals in the context of the ONS income estimates
- Neighbourhood Statistics Indicator Catalogue. Updated regularly and available from
  www.neighbourhood.statistics.gov.uk/HTMLDocs/downloads/ENeSSI.xls
Practical Guides for Using Neighbourhood-Level Data

- NHS Teenage Pregnancy Unit. Overview of the research evidence
  www.data4nr.net/supporting

  www.data4nr.net/supporting

- Undertaking local evaluation Good Practice Note. ODPM (2004)

- SELD: Foundations for Attributing Success
  www.data4nr.net/supporting


  www.socialexclusionunit.gov.uk/downloaddoc.asp?id=69

- Mental health and social exclusion, Social Exclusion Unit (2004)
  www.socialexclusionunit.gov.uk/page.asp?id=257

Where to find and download relevant datasets


- Neighbourhood Statistics
  www.neighbourhood.statistics.gov.uk

- Floor Targets Interactive
  www.fti.communities.gov.uk/fti/

- NOMIS Labour market statistics (including Annual Population Survey data)
  www.nomisweb.co.uk

- Comparative Illness and Disability Ratio indicator
  www.neighbourhood.statistics.gov.uk/dissemination/datasetList.do?datasetFamilyId=1018

- Council Tax Band data
  www.data4nr.net/resources/housing/53/

- DWP benefits datasets are available from Neighbourhood Statistics, and the DWP small area benefit statistics
  http://83.244.183.180/NESS/WACG/wacg.htm

- Healthy Lifestyle Behaviours

- Incapacity benefits data with breakdowns at LSOA level is available from the DWP website
  http://83.244.183.180/NESS/BEN/ibsda.htm
- Low Birth Weight Babies
  lod=true&Function=&%24ph=60&CurrentPageId=60&step=1&CurrentTr
eelIndex=-1&searchString=&datasetFamilyId=1154&Next.x=20&Next.y=6

- Mid Year Estimates (MYE) data for local authorities
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eelIndex=-1&searchString=&datasetFamilyId=1813&Next.x=9&Next.y=6

- Small area population estimates
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  rrentTreeIndex=-1&searchString=&datasetFamilyId=1818&Next.x=4&Next.
y=17

- Teenage Pregnancy LA, regional and national datasets
  lod=true&Function=&%24ph=60_61_60_61_60&CurrentPageId=60&st
  ep=1&CurrentTreeIndex=-1&searchString=&datasetFamilyId=1340&Next.
x=12&Next.y=8

- Working-Age Client Group data
  http://83.244.183.180/NESS/WACG/wacg.htm
Appendix B  Acknowledgements

B.1.1  We gratefully acknowledge the help provided to this study:

<table>
<thead>
<tr>
<th>Organisation</th>
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<tr>
<td>Adrian Laughton</td>
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<td>Communities and Local Government</td>
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<td>Aleksandra Pacek</td>
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