TEENAGE CONCEPTIONS IN SOUTHAMPTON CITY:

Comparative and Trend Analysis

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Introduction
In February 2006 provisional 2004 teenage conceptions data was released by the Office for National Statistics (ONS) and the Teenage Pregnancy Unit\(^1\). This briefing paper examines the data for Southampton City through comparison with other local authorities and analysis of trends.

The 2004 data that has been released is for the under 18 age group and consists of numbers of conceptions, conception rates and the proportion leading to abortion. This data is for top tier authorities only and is marked as ‘provisional’ with the finalised release scheduled for September 2006. This updated briefing note also includes a section on under 16 conception rates for which the most recent available data relates to 2003 and was released in November 2005.

Under 18 Conception Rates in 2004

Figure 1

![Under 18 Conception Data 2004: All South East Top-Tier Authorities](chart.png)

Rate per 1000 females aged 15-17

Source: Office of National Statistics and Teenage Pregnancy Unit, Crown Copyright. (February 2006 release)

N.B 2004 data is provisional.

\(^1\) All data, plus details of methodology, are available on the Teenage Pregnancy Unit website http://www.dfes.gov.uk/teenagepregnancy/
In 2004 there were 204 conceptions to under 18 year olds females in Southampton; this gives a rate of 56.1 per 1000 females aged 15-17 years which is higher than the national (41.5 per 1000) and regional (33.5 per 1000) averages. Figure 1 shows that Southampton has the second highest teenage conception rate in the South East with Reading having the highest rate (59.4 per 1000).

It is also useful to compare Southampton’s situation with the authorities across the whole Country that are considered ‘most similar’. The ONS\(^2\) has produced a classification of local authorities using data on socio-economic and demographic characteristics of the population from the 2001 Census. In Figure 2 under 18 conception rates in Southampton are compared to those top tier authorities in England that are considered ‘most similar’ according to this ONS Classification. Of these only Newcastle upon Tyne has a higher 2004 teenage conception rate but Sheffield and Portsmouth have similar rates to Southampton.

**Figure 2**

<table>
<thead>
<tr>
<th>Authority</th>
<th>Rate per 1000 females aged 15-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newcastle upon Tyne MCD</td>
<td>57.0</td>
</tr>
<tr>
<td>Southampton UA</td>
<td>55.0</td>
</tr>
<tr>
<td>Sheffield MCD</td>
<td>54.0</td>
</tr>
<tr>
<td>Portsmouth UA</td>
<td>54.0</td>
</tr>
<tr>
<td>Plymouth UA</td>
<td>49.0</td>
</tr>
<tr>
<td>Bristol UA</td>
<td>48.0</td>
</tr>
<tr>
<td>Leeds MCD</td>
<td>47.0</td>
</tr>
<tr>
<td>Brighton &amp; Hove UA</td>
<td>46.0</td>
</tr>
<tr>
<td>Liverpool MCD</td>
<td>44.0</td>
</tr>
<tr>
<td>Bournemouth UA</td>
<td>38.0</td>
</tr>
</tbody>
</table>

Source: National Statistics and Teenage Pregnancy Unit, Crown Copyright (February 2006 release).

N.B 2004 data is provisional.

\(^2\) Similar authorities according to the National Statistics 2001 Area Classification of Local Authorities

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\(^2\) Full details of the classification and how it is derived are available at [http://www.statistics.gov.uk/about/methodology_by_theme/area_classification/](http://www.statistics.gov.uk/about/methodology_by_theme/area_classification/)
**Under 16 Conception Rate**

In 2003 39 (18.4%) of the 212 conceptions to under 18 year olds in Southampton were to girls aged less than 16 years which is slightly lower than the England average of 19.1%.

The under 16 conception rate in Southampton in 2003 was 10.7 per 1000 females aged 13-15 years which is higher than the national average of 7.9.

Figure 3 shows the trend in under 16 conception rate over the past few years; because the Southampton rate is based on such a relatively small number of conceptions it has displays more year-on-year variability.

**Figure 3**

![Under 16 Conception Rates 1998-2003](image)

Southampton has the second highest under 16 conception rate amongst South East top-tier authorities as Figure 4 shows. It also has a high rate compared to most of the authorities classified as most similar\(^2\); for instance, the Portsmouth rate in 2003 was 9.1 per 1000 females aged 13-15. Of these similar authorities only Bristol with a rate of 12.1 was higher in 2003 than Southampton.
Figure 4

Under 16 Conception Data 2003:
All South East Top-Tier Authorities

Rate per 1000 females aged 13-15


Under 18 Conceptions leading to Abortion
In 2004 38.7% of under 18 conceptions in Southampton resulted in abortion. This is lower than the proportion nationally (46.0%) or regionally (48.7%). Across the South East region only the Medway Towns had a lower proportion leading to abortion than Southampton.

Figure 5 shows how the proportion in Southampton compares with the most similar top tier authorities. Bristol and Newcastle upon Tyne had lower proportions of teenage conceptions leading to abortion than Southampton but a further three of the authorities had quite similar levels. Noticeably higher proportions were observed in Bournemouth and Brighton & Hove.
**Figure 5**

![Proportion of Under 18 Conceptions Leading to Abortion in 2004: Similar Top-Tier Authorities](image)

Source: National Statistics & Teenage Pregnancy Unit, Crown Copyright (February 2006 release).

N.B 2004 data is provisional.

$ Similar authorities according to the National Statistics 2001 Area Classification of Local Authorities

**Past Trends in Under 18 Conceptions**

Figure 6 shows the trend in under 18 conception rates between 1998 and 2004 for Southampton City, the South East region and England. Teenage conception rates in Southampton increased between 2000 and 2002 but declined in 2003 and 2004. Over the whole period 1998-2004 under 18 conceptions rates fell in the City by 7.8%. Nationally and regionally there has been a gradual decline over time.
The Teenage Pregnancy Unit has produced a new ‘traffic light’ system to indicate progress in reducing teenage conception rates between 1998 and 2004. The criteria used for the traffic lights are shown in Figure 7.

Southampton is amber/red according to these criteria. Figure 8 shows how the change in rate over the 1998-2004 period in Southampton compares to the other top tier authorities in the South East region. The traffic light system, however, can be misleading; for instance, Slough has a ‘green’ traffic light due to a large decrease in teenage conceptions over the 1998-2004 period yet further investigation of the data reveals that the 1998 rate was considerably higher than other years and if the change was analysed over the 1999-2004 period instead an increase in rates and a red traffic light would be seen.
Figure 8

Figure 9 shows how the proportion of under 18 conceptions leading to abortion has gradually increased locally, regionally and nationally since 1998; although there was a decline in Southampton in 2002 and 2003.
Figure 9

Proportion of Under 18 Conceptions leading to Abortion 1998-2004

Source: Office of National Statistics and Teenage Pregnancy Unit, Crown Copyright. (February 2006 release)
N.B. 2004 data is provisional.

Future Trends
The Department of Health and the Department of Education & Skills have a joint
Public Service Agreement target to reduce the national under 18 conception rate by
50% between 1998 and 2010. A further target is to reduce the gap between the worst
fifth of wards and the average. Therefore the target reduction for Southampton City by
2010 is 55% less than the 1998 rate.

Figure 10 shows the observed trend to 2004 and the trajectory that would need to be
achieved from 2005 onwards in order to reach the 2005 target. In Southampton this
means a downward slope from 56.1 in 2004 to 27.4 in 2010.
This analysis has been taken one stage further by forecasting future teenage conception rates on the basis of past trends. The rates observed over the 1992-2004 period have been used to predict future values using linear regression techniques.

Figure 11 shows how under 18 conception rates nationally have changed over the 1992-2004 period. A linear trend line (dotted line on chart) has been drawn through these points and then extended forward to 2010 to show how rates would be expected to change on the basis of past trends alone. This forecast is for a very little change in rates over the period which would not, therefore, be sufficient to meet the target reduction by 2010.

Figure 12 shows the 1992-2004 data for Southampton City with the trend line added and extended to 2010. This shows that forecasts on the basis of past trends alone predict an increase in teenage conception rates in the future. Therefore, using this method, the projection for 2010 is considerably higher than the 2010 target.

Obviously linear projections on the basis of past trends will only serve as a predictor of future values if future trend determinants are the same as historical determinants. This method clearly does not take into account the impact on teenage conception rates of local and national interventions, programmes and policies.
Figure 11

England’s Teenage Conception Rate Trajectory:
Forecasting future rates on the basis of past trends

Source: Office of National Statistics and Teenage Pregnancy Unit, Crown Copyright. (February 2006 release)
Notes: 2004 data is provisional. Rates for years 1992-1997 have been calculated using population denominators that were not revised in light of the results of the 2001 Census.
Points show the observed annual rates 1992-2004. The dotted line shows the linear trend (line of best fit) for the 1992-2004 period and extends this forward to 2010.
The 2010 target is a 50% reduction on the 1998 rate.
Figure 12

Southampton’s Teenage Conception Rate Trajectory:
Forecasting future rates on the basis of past trends

1998 Baseline

2010 Target

Source: Office of National Statistics and Teenage Pregnancy Unit, Crown Copyright. (February 2006 release)

Notes: 2004 data is provisional. Rates for years 1992-1997 have been calculated using population denominators that were not revised in light of the results of the 2001 Census.

Points show the observed annual rates 1992-2004. The dotted line shows the linear trend (line of best fit) for the 1992-2004 period and extends this forward to 2010.

The 2010 target is a 55% reduction on the 1998 rate.