

Teenage pregnancy in the Lancashire sub-region: Risk factors appendix

May 2011

Intelligence for Healthy Lancashire (JSNA)

NHS Central Lancashire NHS East Lancashire NHS North Lancashire NHS Blackburn with Darwen NHS Blackpool



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Introduction and methodology

Introduction

This risk factors mapping exercise forms part of the larger teenage pregnancy needs assessment for Lancashire. The needs assessment was suggested as a priority area of work for the Intelligence for Healthy Lancashire (IHL) group in 2010. The Joint Strategic Needs Assessment team established a project group and led on the project following agreement with the IHL leadership group, which is composed of the three Lancashire Directors of Public Health and the Lancashire Directors of Adult and Children's Social Care. Although the Lancashire JSNA is provided for the County footprint, in line with the upper tier authority, the needs assessment was conducted in partnership with Blackburn with Darwen and Blackpool due to the efficiencies involved in completing the analysis.

Risk factors for teenage pregnancy are well recognised and provide a compelling case for targeted action on young people who are exposed to these risks. Young people experiencing risk factors for teenage pregnancy are highly concentrated within particular areas and among vulnerable groups. To target effectively those most at risk requires both a geographical focus on high rate neighbourhoods and the identification of vulnerable groups at high risk of teenage pregnancy.¹

This report includes district maps highlighting the prevalence of a number of risk factors that strongly correlate with teenage conceptions rates. These maps should enable the targeting of upstream interventions to prevent teenage pregnancy, but also to position sexual health services to prevent the rise of teenage conceptions in areas where they are currently not high. The maps are given here just to provide an up-to-date picture of the risk factors we identified in the main teenage pregnancy report and as such, teenage conceptions hotspots have been omitted.

Methodology

The risk factors for teenage pregnancy at an individual and population level are well known nationally. To understand the relevance in Lancashire, a simple exercise was conducted to correlate teenage conception rates against a number of other sets of data. The results are provided on page 4 of this report. The Pearson's correlation coefficient measures the degree of association between two variables. The value can range between zero and one and can be either positive or negative. The closer the value is to one, the greater the degree of association. A negative value indicates a negative relationship with teenage conceptions in that as the variable increases, teenage conceptions reduce. A positive value indicates that both the variable and teenage conception rates move together.

¹ Teenage pregnancy: accelerating the strategy to 2010

Data

The following data was used as part of the risk factors analysis:

- Index of Multiple Deprivation² score; 2007; The English Indices of Deprivation 2007, Department for Communities and Local Government
- Child Wellbeing Index³ average score; 2009; Local Index of Child Well-Being 2009, Department for Communities and Local Government
- Child Wellbeing Index material wellbeing average score; 2009; Local Index of Child Well-Being 2009, Department for Communities and Local Government
- Child Wellbeing Index children in need average score; 2009; Local Index of Child Well-Being 2009, Department for Communities and Local Government
- Child Wellbeing Index education average score; 2009; Local Index of Child Well-Being 2009, Department for Communities and Local Government
- Education: percentage of children not gaining 5 GCSEs at Grade C or above; 2009-10; MADE Lancashire
- Social services: total vulnerable adults rate per 1,000 population aged 18+; 2009-10; MADE Lancashire
- Police incidents: Antisocial behaviour rate per 1,000 population; 2009-10; MADE Lancashire
- Youth offending team individuals rate per 10,000 population aged 10-17; 2009-10; MADE Lancashire
- Unauthorised absences rate per 1,000 pupils; 2009-10; MADE Lancashire⁴
- Percentage of young people aged 16-18 not in education, employment or training (NEET); snapshot data provided by Lancashire Young People Service for Lancashire 12 and by CXL for the unitary authorities: Blackburn with Darwen and Blackpool. Snapshot data are from 31/01/2011 and 10/02/2011 respectively.

² For more details about the English Indices of Deprivation, please visit the Department for Communities and Local Government website: <http://www.communities.gov.uk/publications/communities/indiciesdeprivation07>

³ A full explanation of the Local Index of Child Well-Being and its domains can be found on the Department for Communities and Local Government website at: <http://www.communities.gov.uk/publications/communities/childwellbeing2009>

⁴ Unauthorised absence data was divided into equal quintiles for Lancashire 12 plus Blackburn with Darwen as no data was available for Blackpool.

Teenage pregnancy risk factors

We know from national sources that certain factors are linked with high rates of teenage conceptions. For the purposes of this analysis we looked at these, plus others suggested by the project group, to see if the correlations were reflected locally. It is important to note that this simple correlation does not provide any measure of causation. Further investigation was given to those variables with a correlation coefficient with teenage conception rates above 0.6⁵.

Table: Correlation of teenage conceptions with risk variables in Lancashire

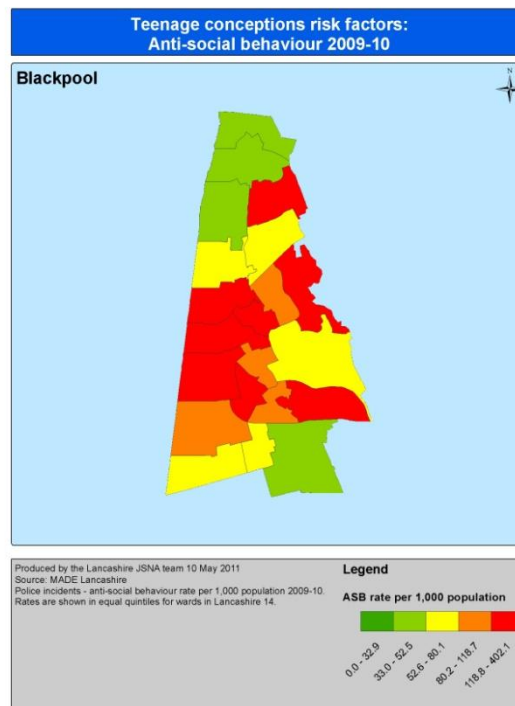
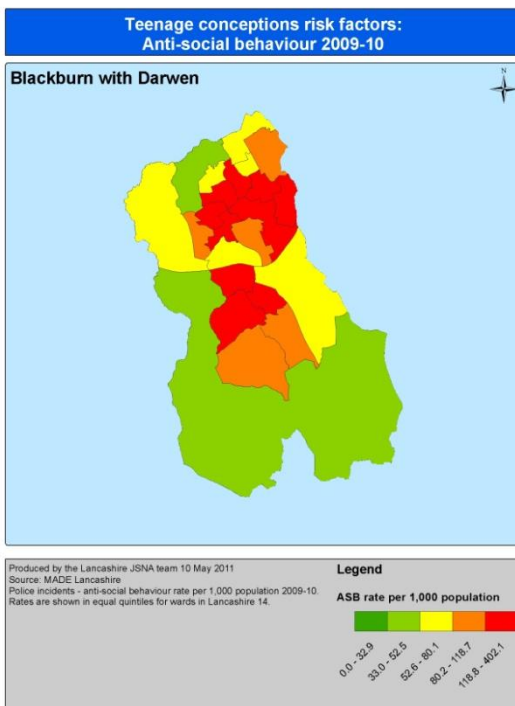
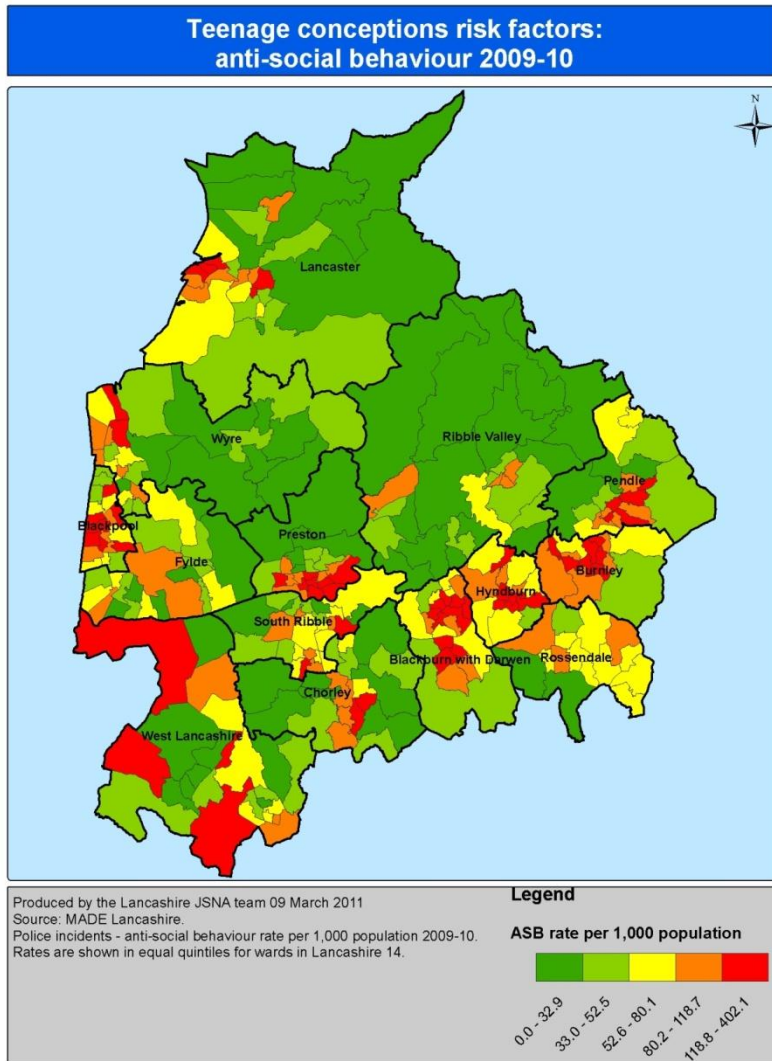
Variable	Pearson's r =
IMD Score 2007	0.7
CWI average score	0.7
CWI Material well-being average score	0.7
CWI Health and disability average score	0.5
CWI Education average score	0.8
CWI Crime average score	0.6
CWI Housing average score	0.5
CWI Environment average score	-0.2
CWI Children in need average score	0.8
YOT individuals rate per 1,000 people aged 10-17	0.7
Educ: KS3 % gaining L5 or above (English)	-0.6
Educ: KS3 % gaining L5 or above (Maths)	-0.6
Educ: KS3 % gaining L5 or above (Science)	-0.6
Educ: % gaining no GCSEs	0.4
% not gaining 5 at C or above	0.6
% Unauthorised Absences	0.6
Police: Rape rate per 1,000 pop	0.5
Social Services: Total Vulnerable Adults rate per 1,000 pop	0.6
Police: All Crime rate per 1,000 pop	0.5
Police Incidents: Anti-Social Behaviour Total rate per 1,000 pop	0.6
Police Incidents: Prostitution Related Activity rate per 1,000 pop	0.2
Christian	0.4
Buddhist	0.1
Hindu	0.1
Jewish	0.0
Muslim	0.1
Sikh	0.2
Other religion	0.4
No religion	0.5
Religion not stated	0.6
All NEET	0.7
L12 all NEET	0.5
L12 age 16 NEET	0.6
L12 age 17 NEET	0.6
L12 age 18 NEET	0.6
Children looked after by current residence	0.3
Children looked after by original residence	0.3
Child protection plans	0.3

⁵ For CWI crime average score, we elected just to map the antisocial behaviour rate; for the individual subject GCSE results we simply mapped overall GCSE attainment as they all correlated; for NEET by single year of age we mapped only the total 16-18 NEET rate for the same reason; and "religion not stated" was not considered useful.

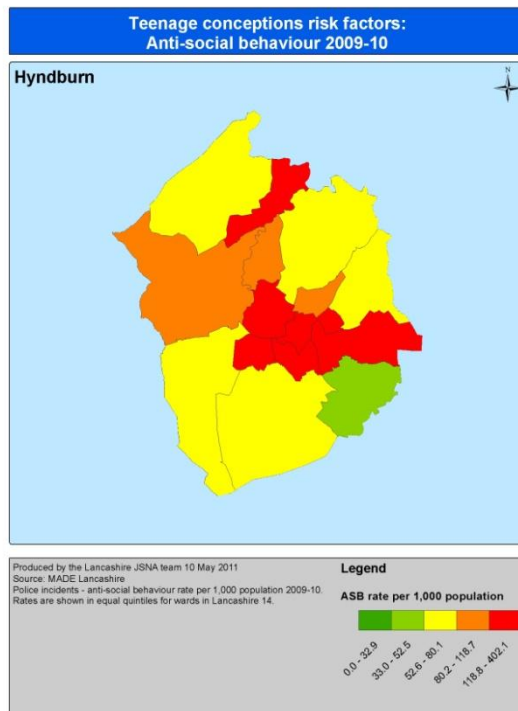
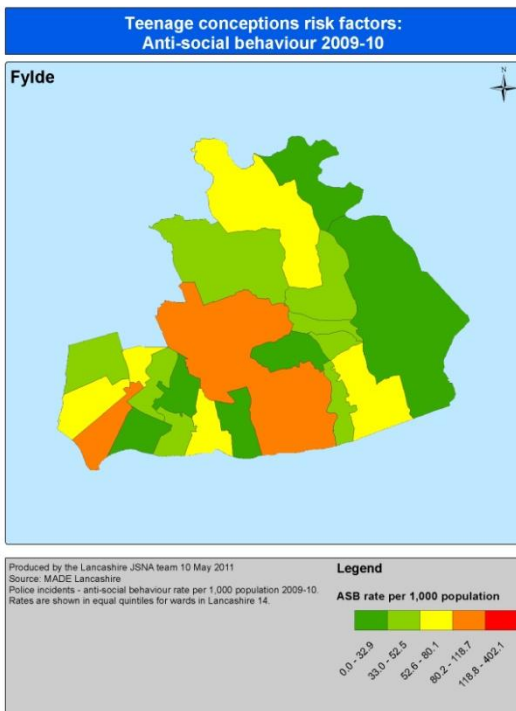
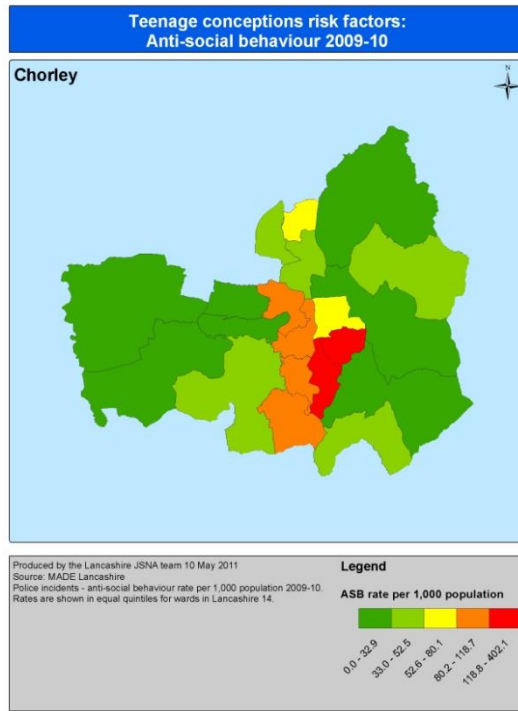
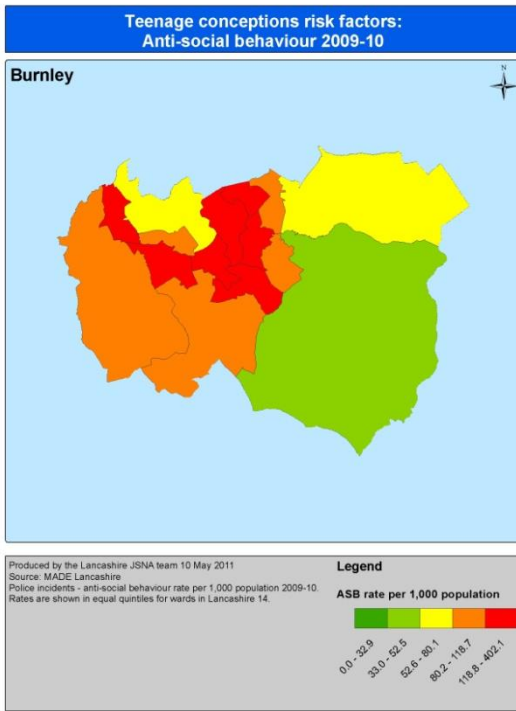
Current risk

This section contains maps of the correlating risk factors based upon the most recent data available.

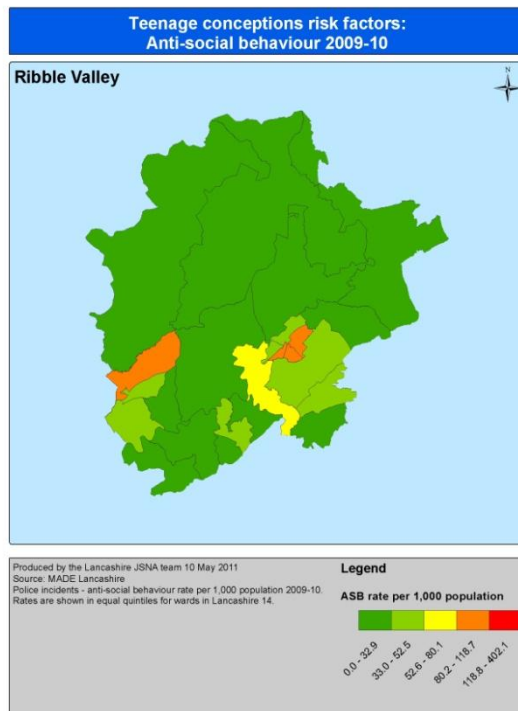
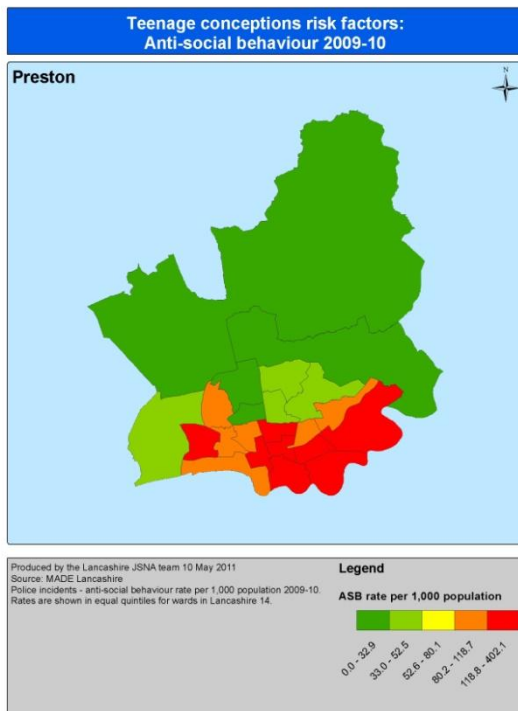
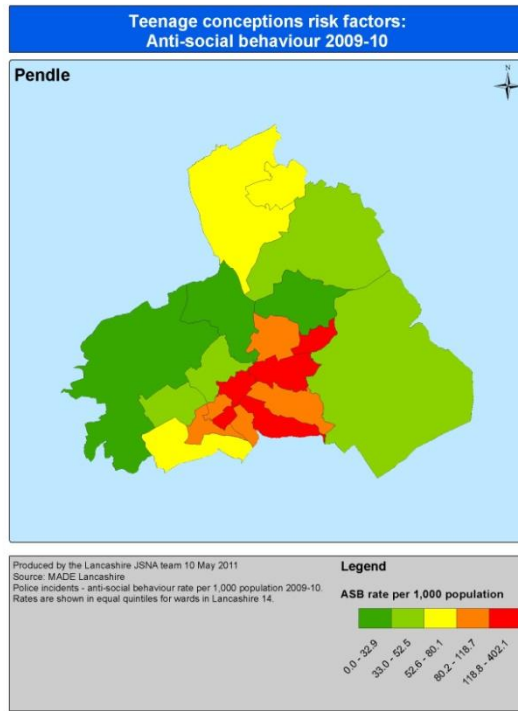
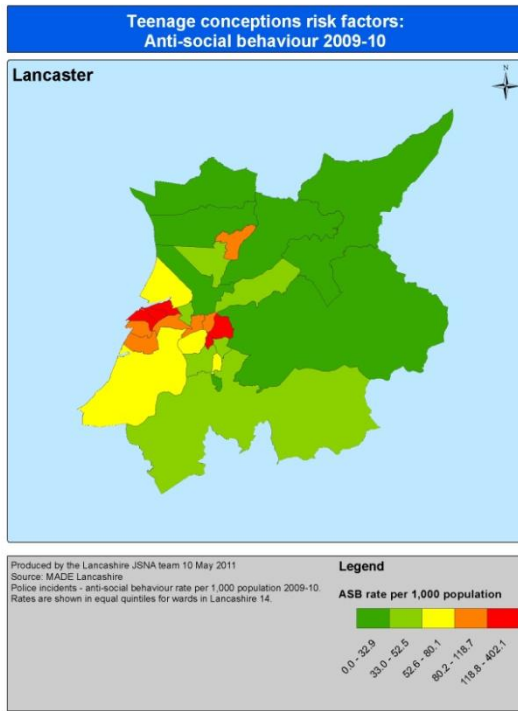
Anti-social behaviour



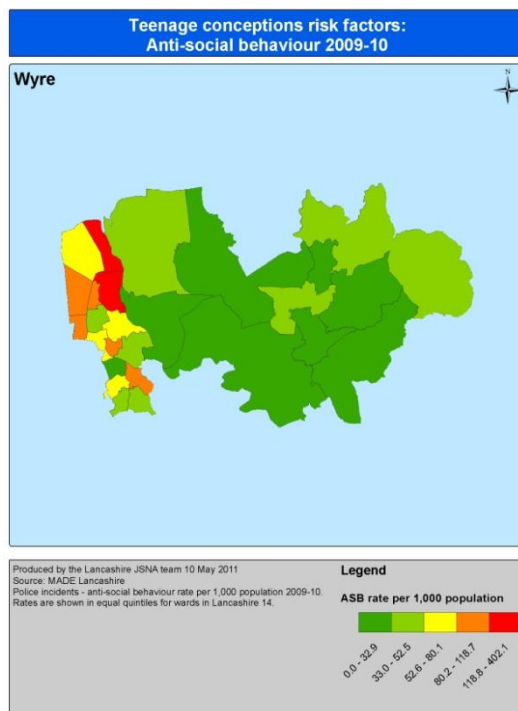
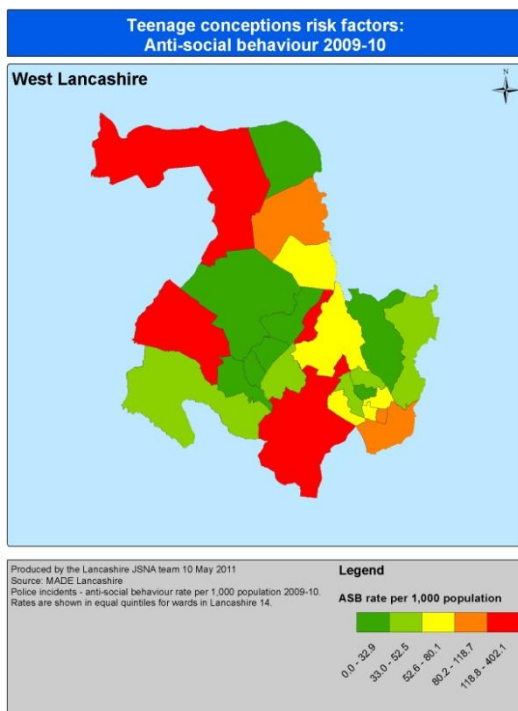
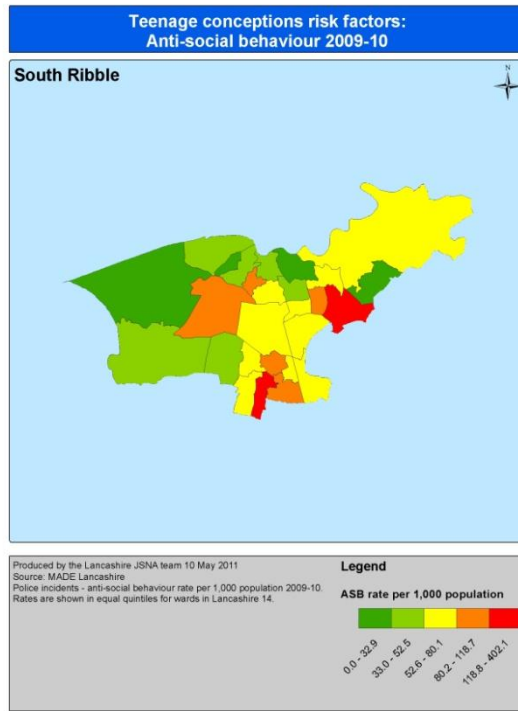
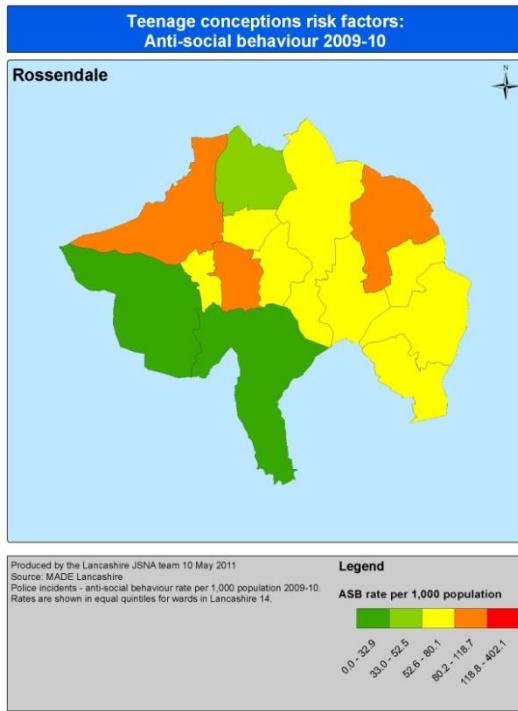
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



Do we not need to spell out what the maps mean?

I.e. where they correlate with areas of high teenage pregnancy rates it's not clear

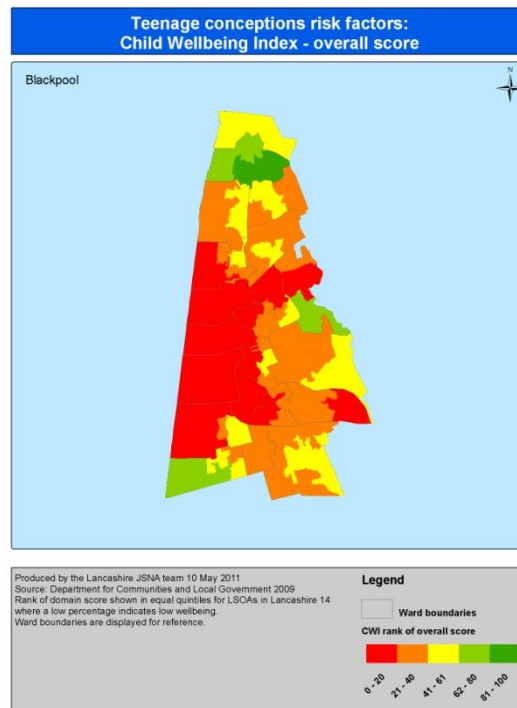
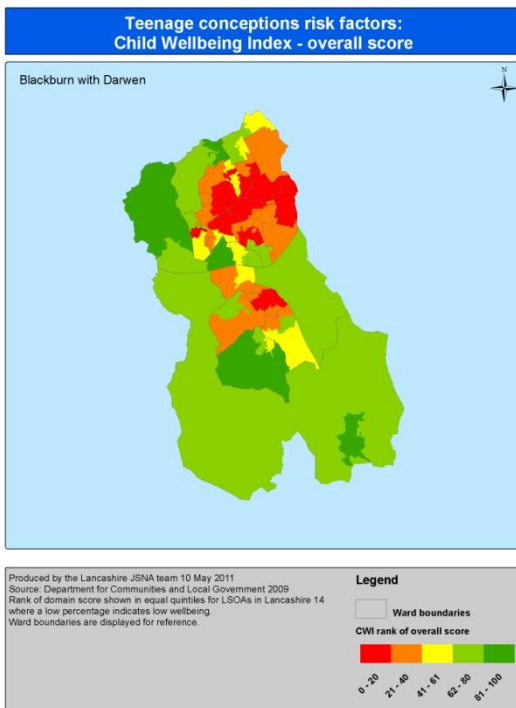
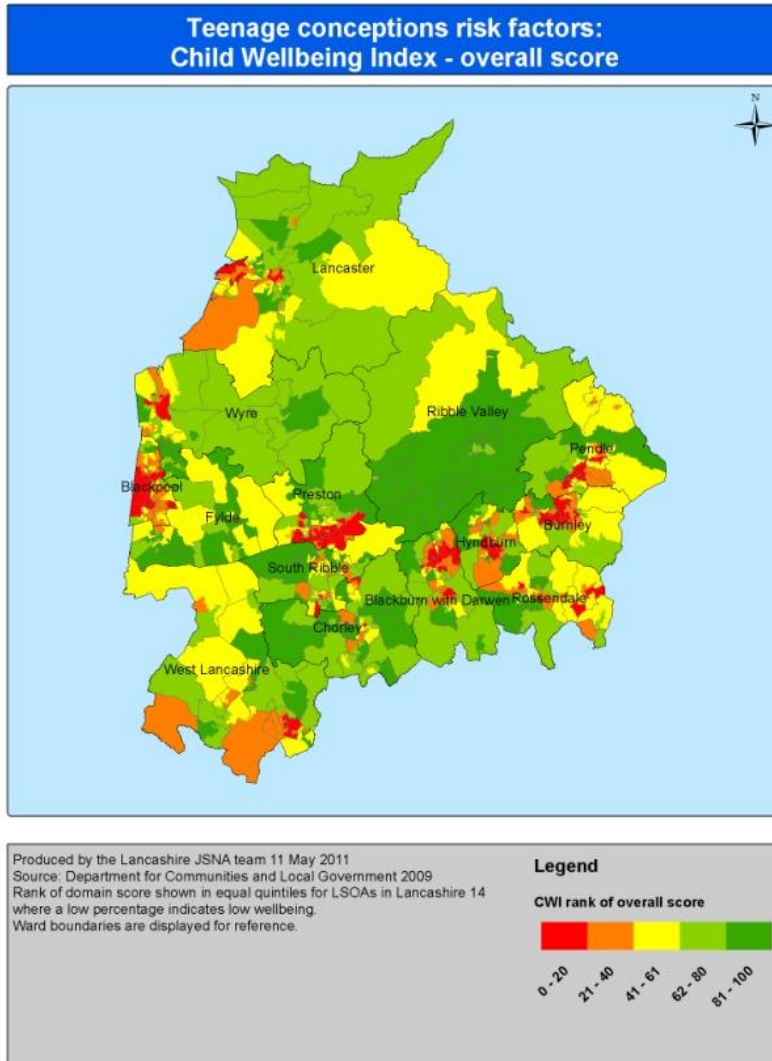
Child Wellbeing Index

This an index of child well-being rather than an index of deprivation, mainly because it contains variables that are not strictly related to deprivation. Child well-being is generally represented by how children are doing in a number of different domains of their life. The domains which were found to correlate with teenage conceptions locally were:

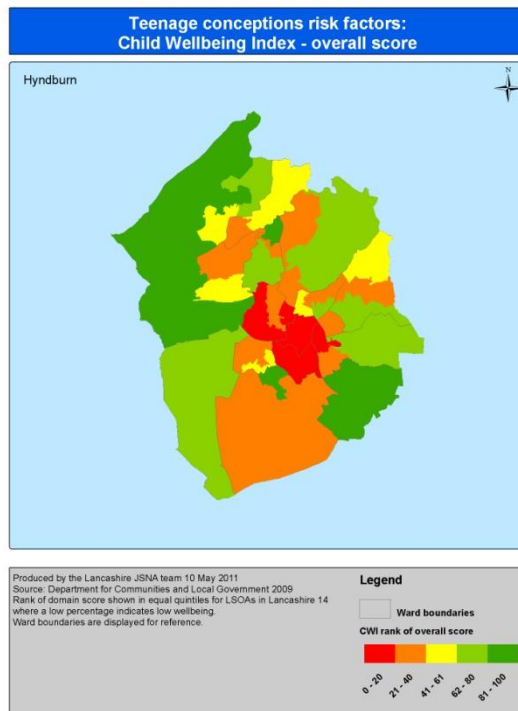
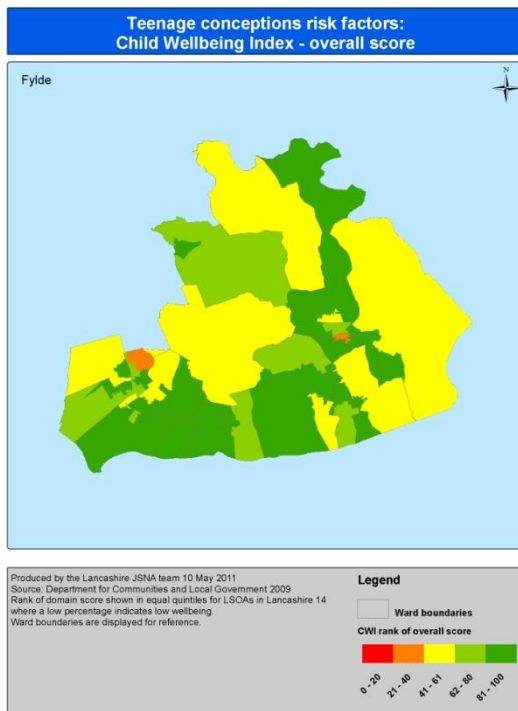
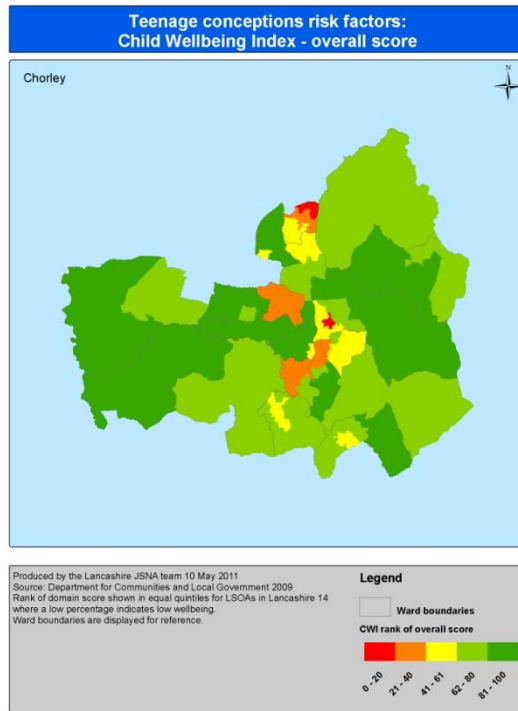
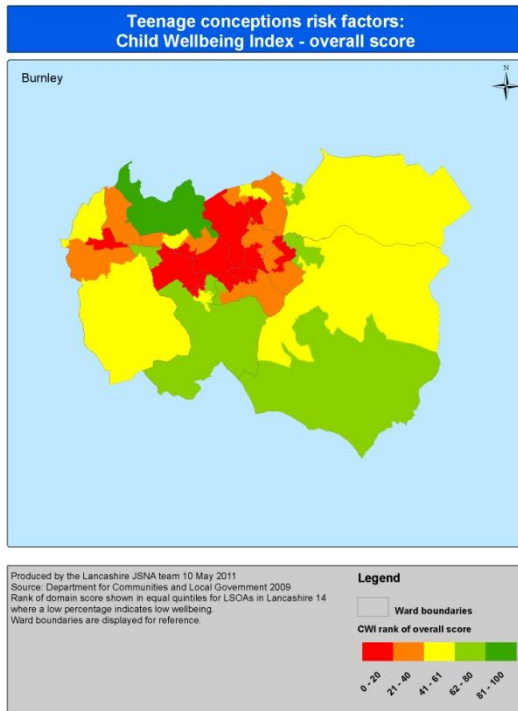
- Overall score – the amalgamated score for all domains of child wellbeing
- Children (at risk of being) in need -

Child Wellbeing Index – overall score

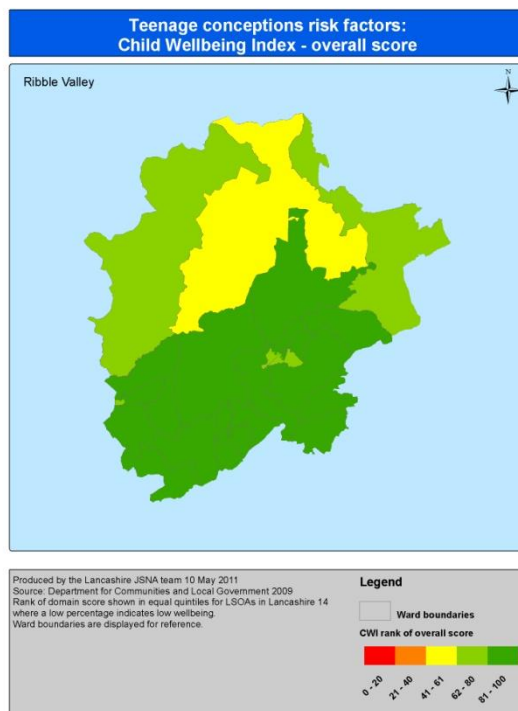
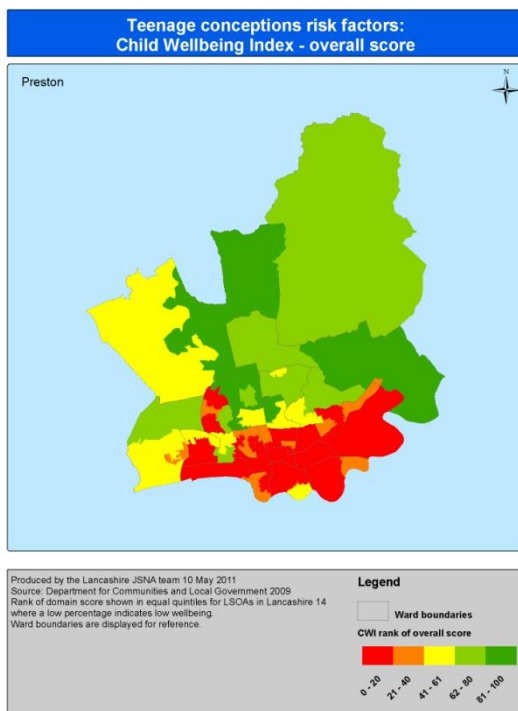
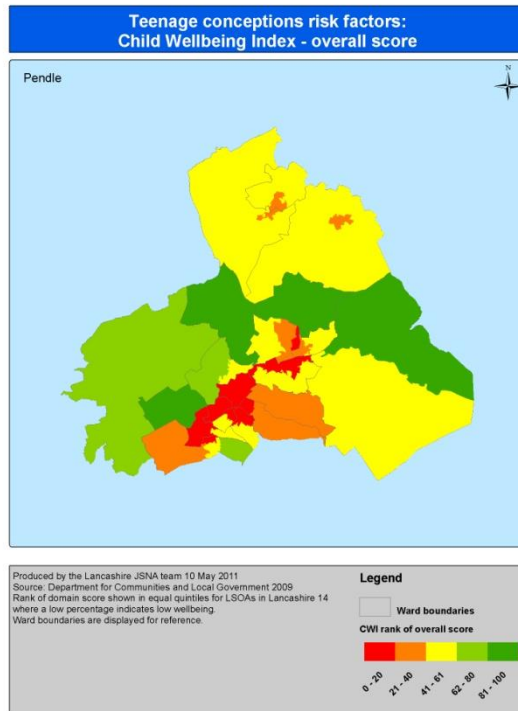
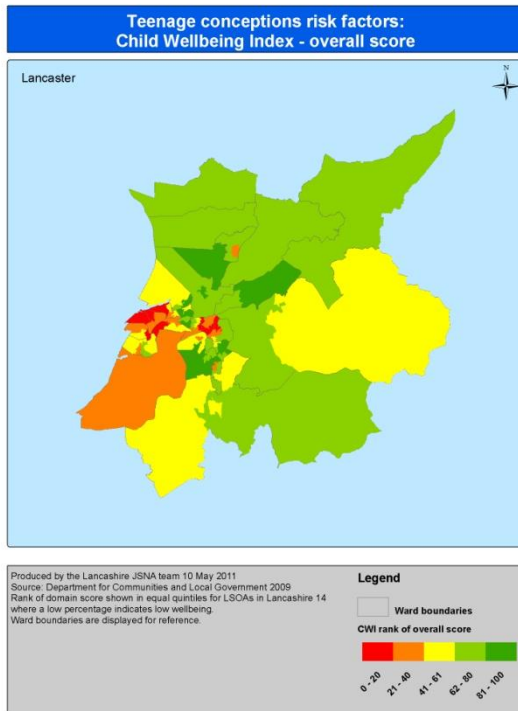
This is the overall score for all the domains of the Child Wellbeing Index and as such gives an indication of overall child wellbeing.



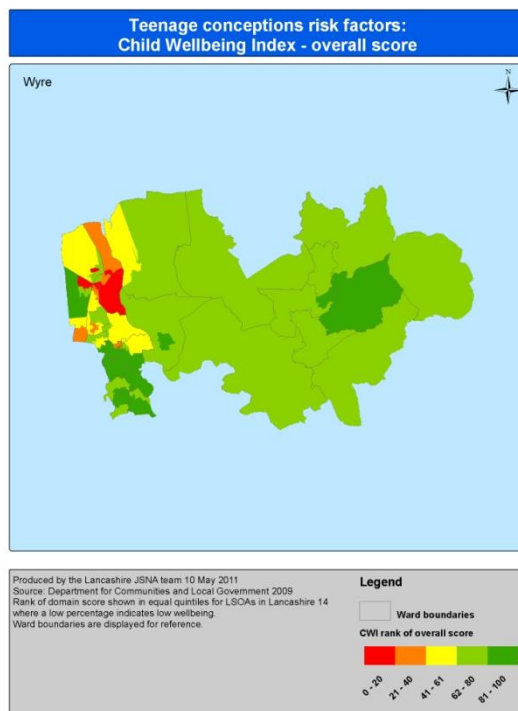
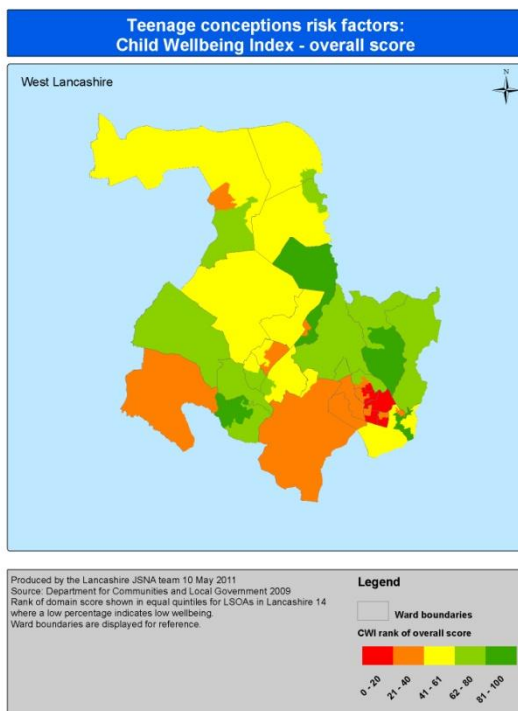
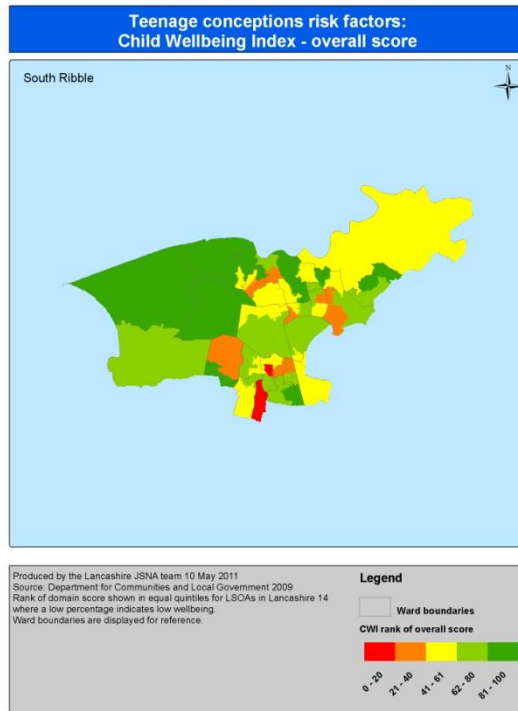
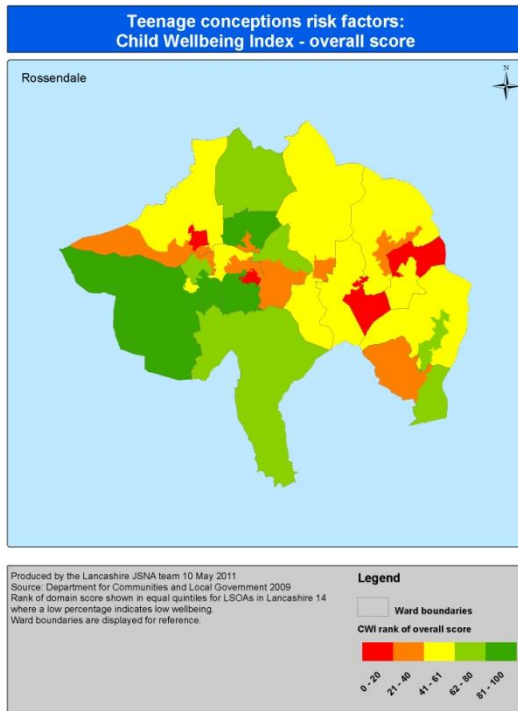
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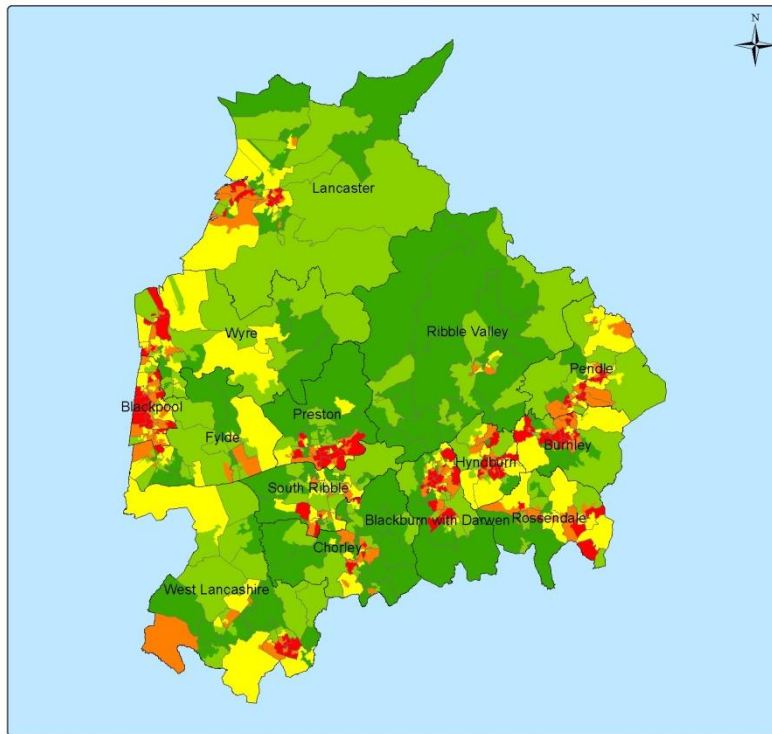
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



Child Wellbeing Index – children (at risk of being) in need

This domain is about children who are in various kinds of need. The Children in Need Survey (2005) (CiN), from the Department for Children, Schools and Families, provides information on all the children served by local authorities in a given week.

**Teenage conceptions risk factors:
Child Wellbeing Index - children in need**



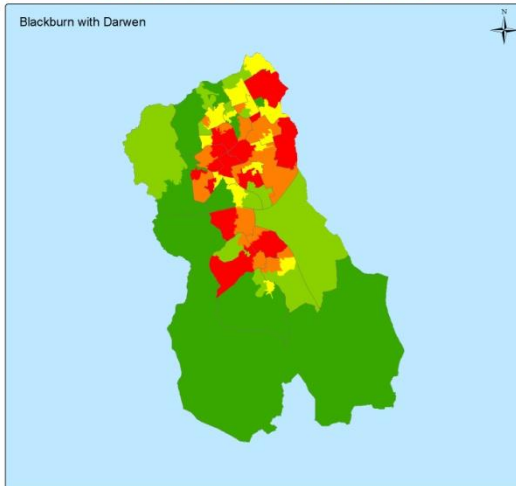
Produced by the Lancashire JSNA team 11 May 2011
 Source: Department for Communities and Local Government 2009
 Rank of domain score shown in equal quintiles for LSOAs in Lancashire 14 where a low percentage indicates low wellbeing.
 Ward boundaries are displayed for reference.

Legend

CWI rank of children in need score

0 - 22	23 - 41	42 - 62	63 - 80	81 - 100
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**Teenage conceptions risk factors:
Child Wellbeing Index - children in need**



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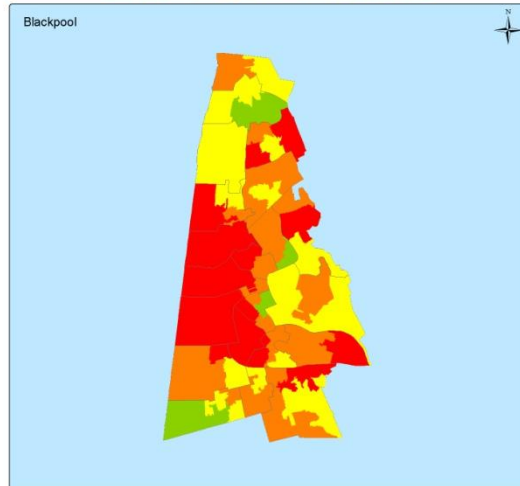
Legend

Ward boundaries

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Child Wellbeing Index - children in need**



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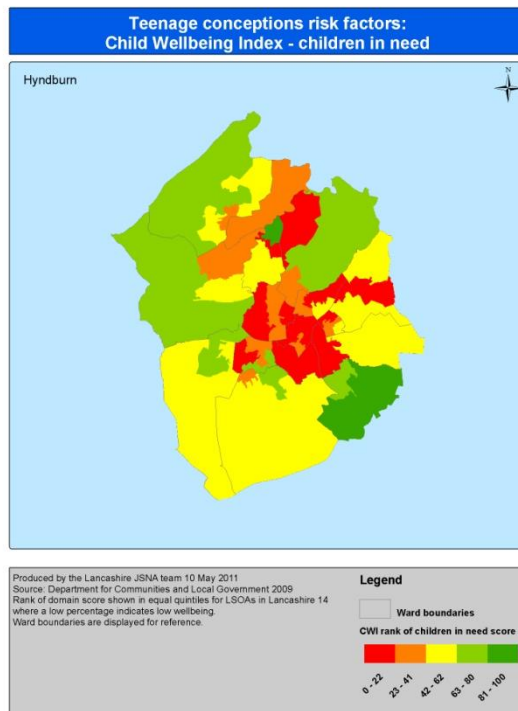
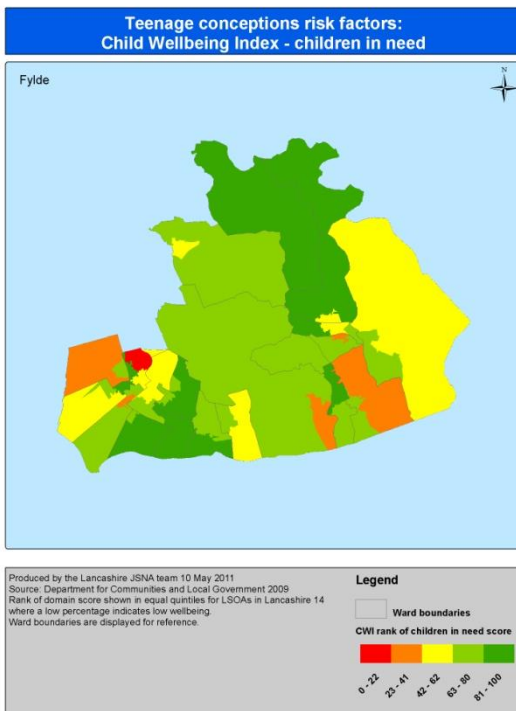
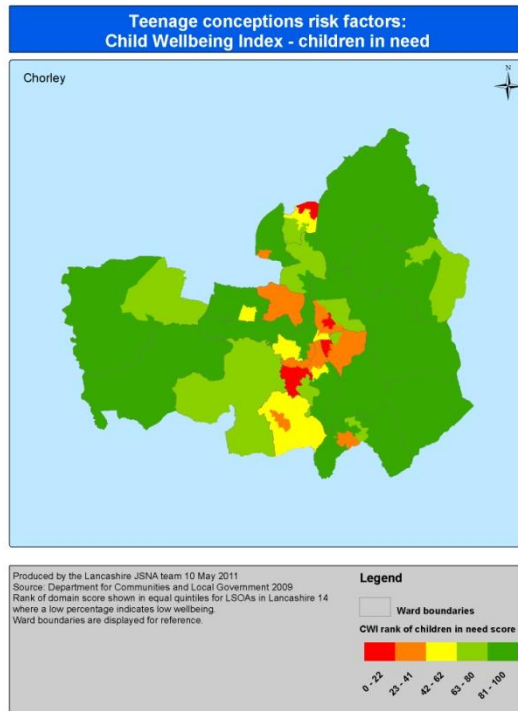
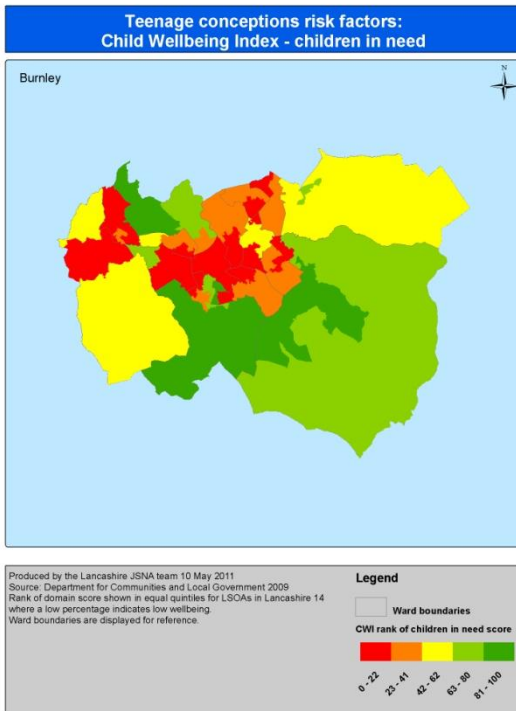
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Ward boundaries

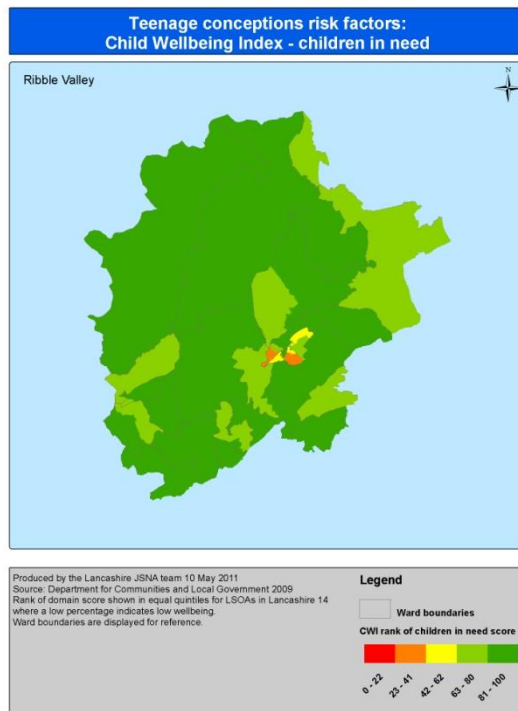
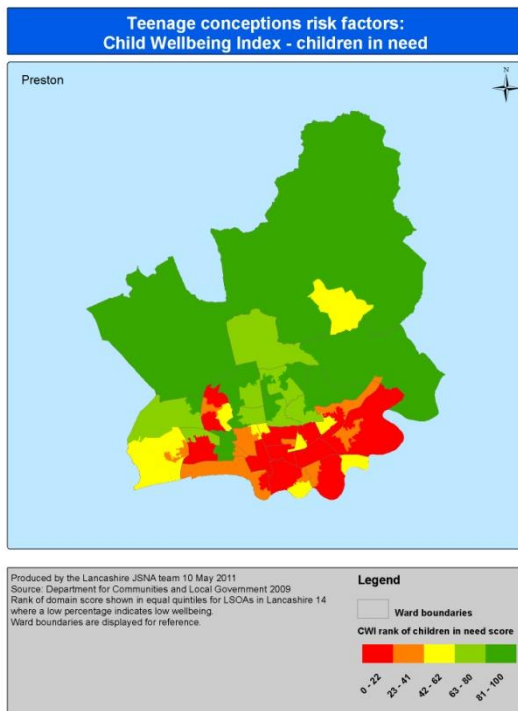
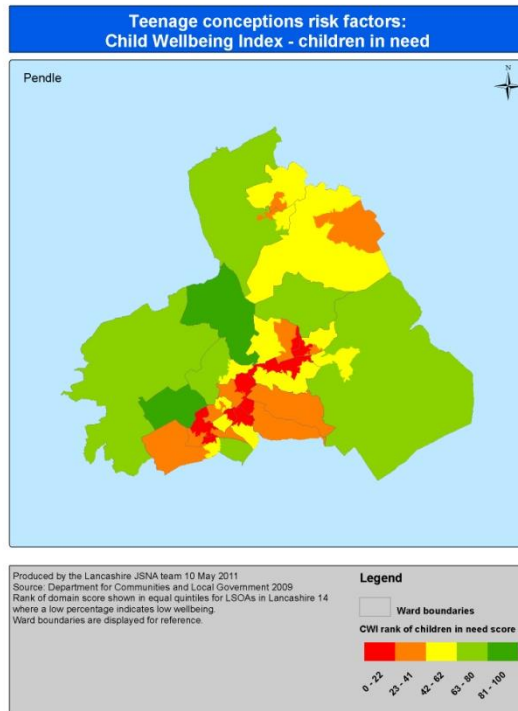
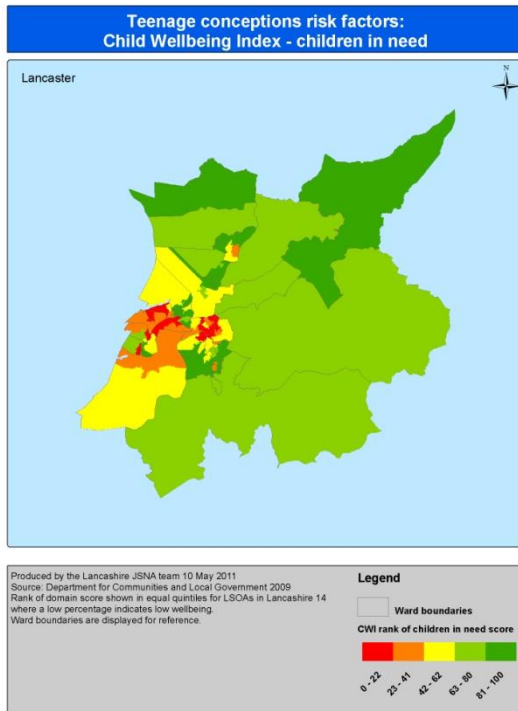
CWI rank of children in need score

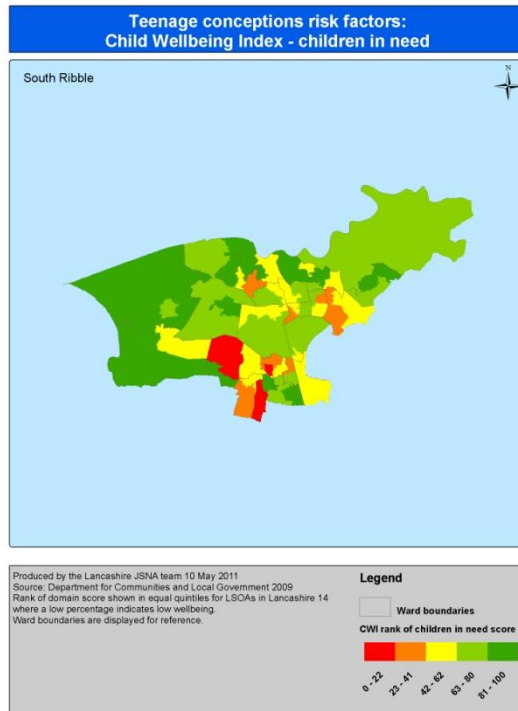
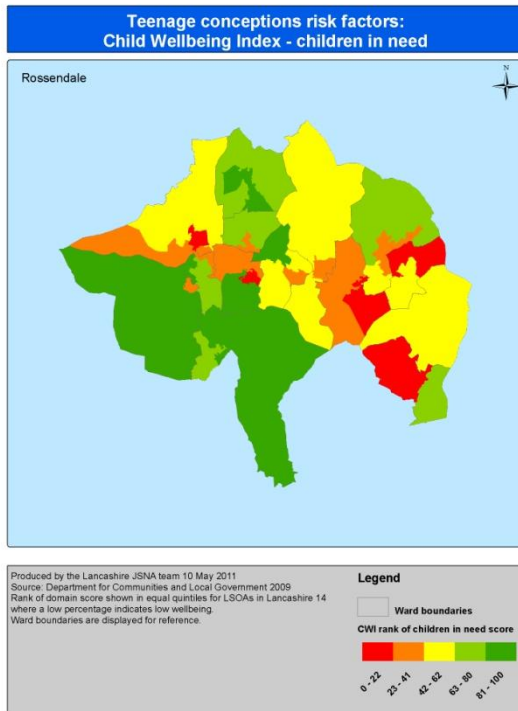
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Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



Teenage pregnancy in the Lancashire sub-region: Risk factors analysis

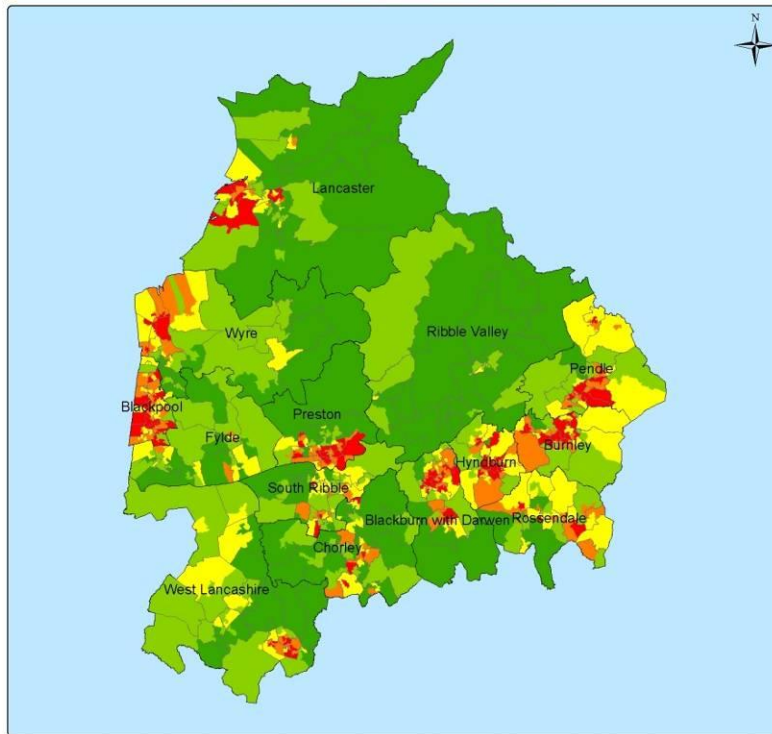




Child Wellbeing Index – education

The Education Domain includes a variety of education outcomes including attainment, school attendance and destinations at age 16.

**Teenage conceptions risk factors:
Child Wellbeing Index - education**



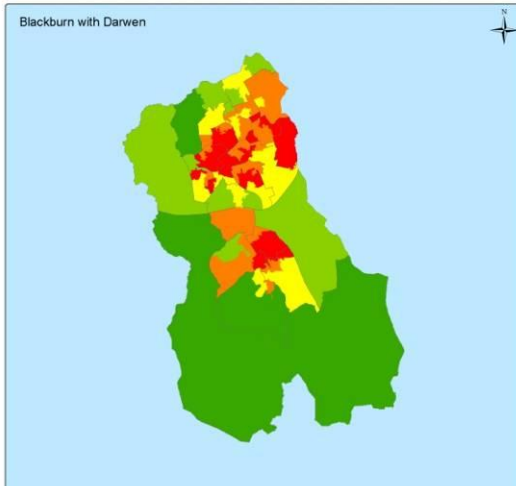
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 Source: Department for Communities and Local Government 2009
 Rank of domain score shown in equal quintiles for LSOAs in Lancashire 14 where a low percentage indicates low wellbeing.
 Ward boundaries are displayed for reference.

Legend

CWI rank of education score

1 - 18	19 - 35	36 - 57	58 - 79	80 - 100

**Teenage conceptions risk factors:
Child Wellbeing Index - education**



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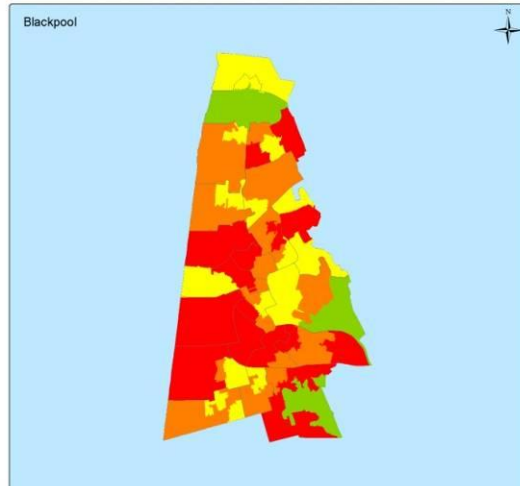
Legend

Ward boundaries

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**Teenage conceptions risk factors:
Child Wellbeing Index - education**



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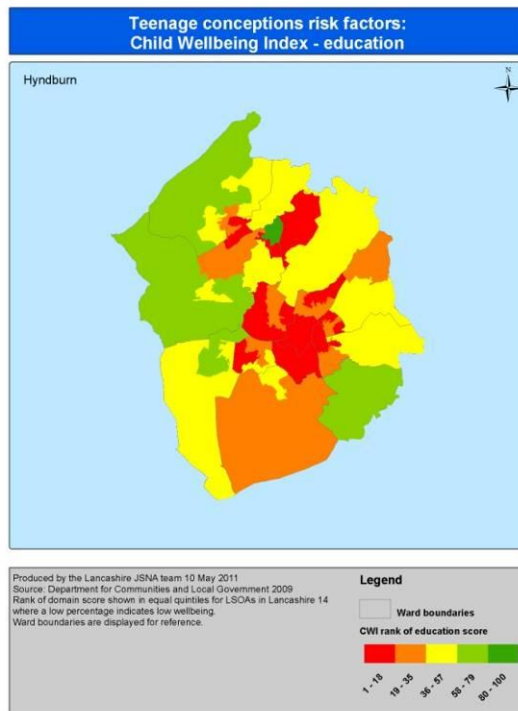
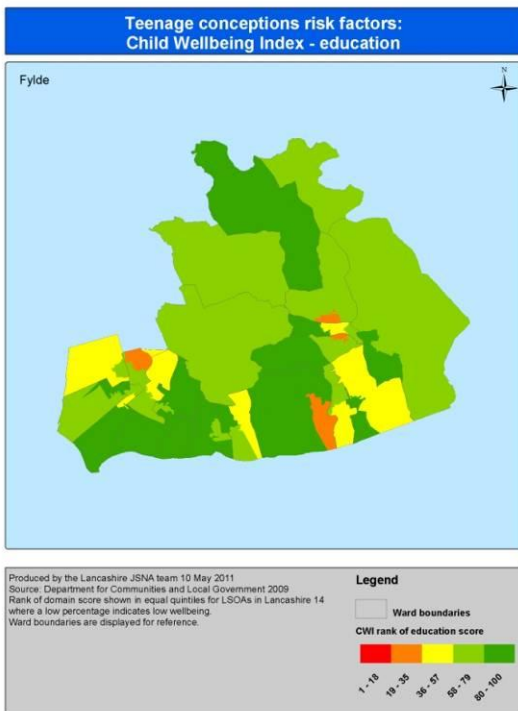
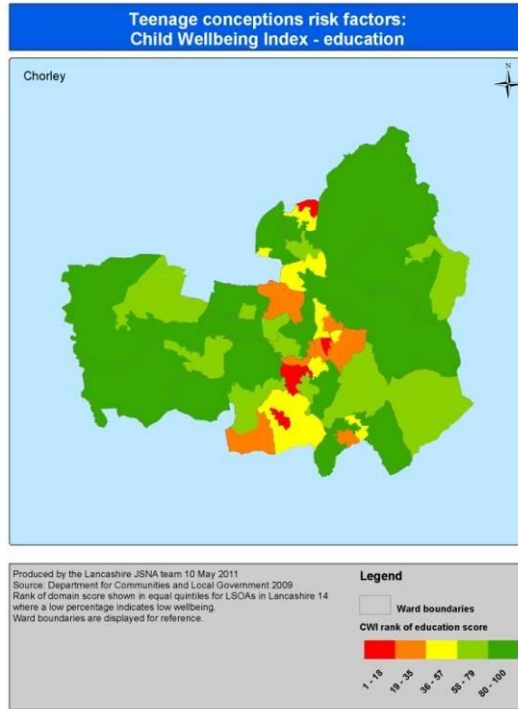
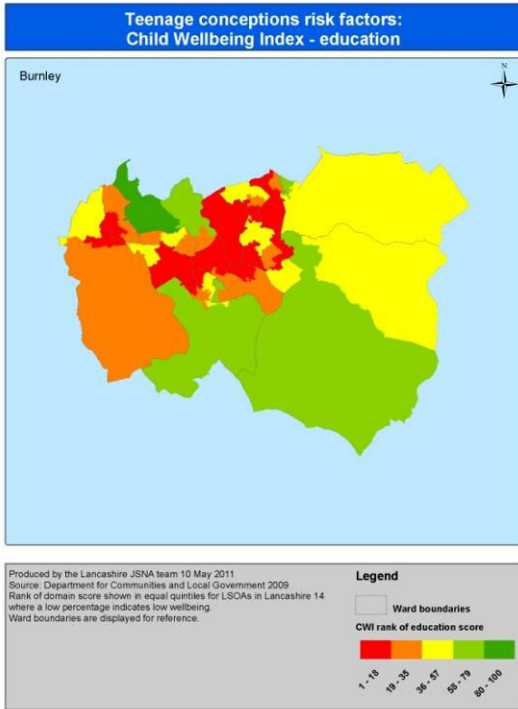
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Ward boundaries

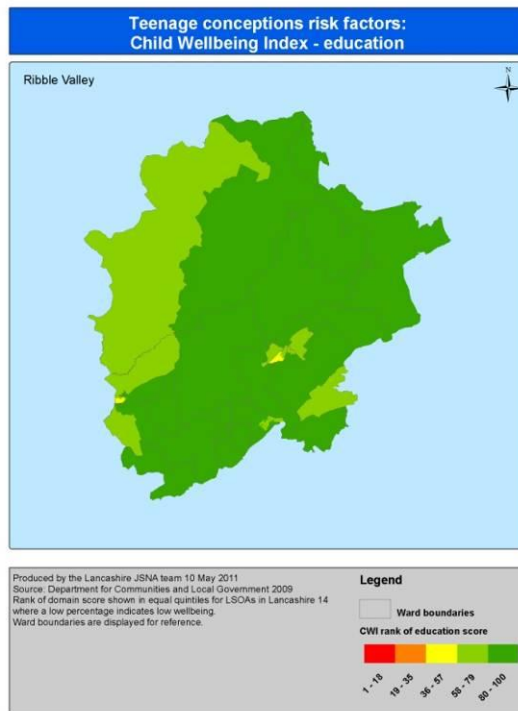
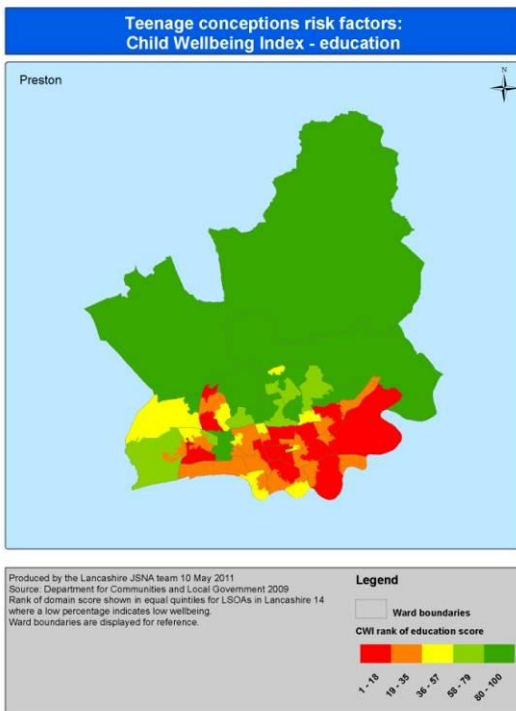
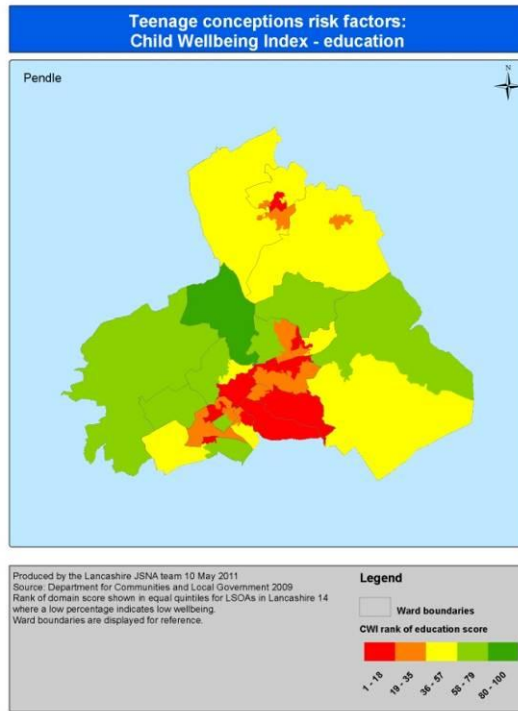
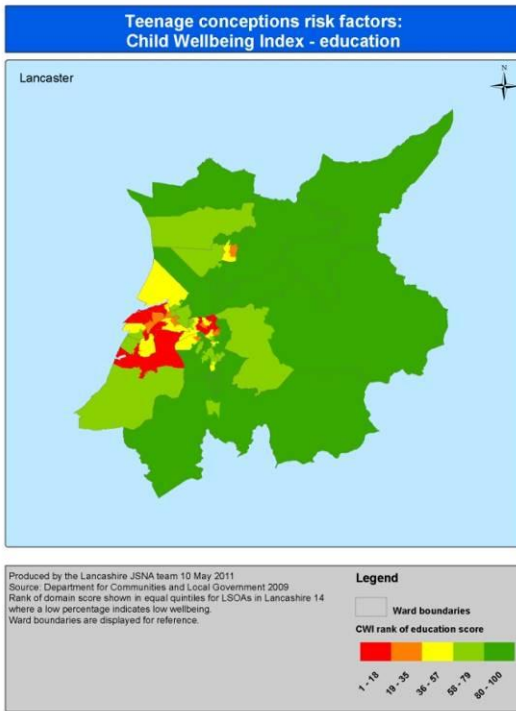
CWI rank of education score

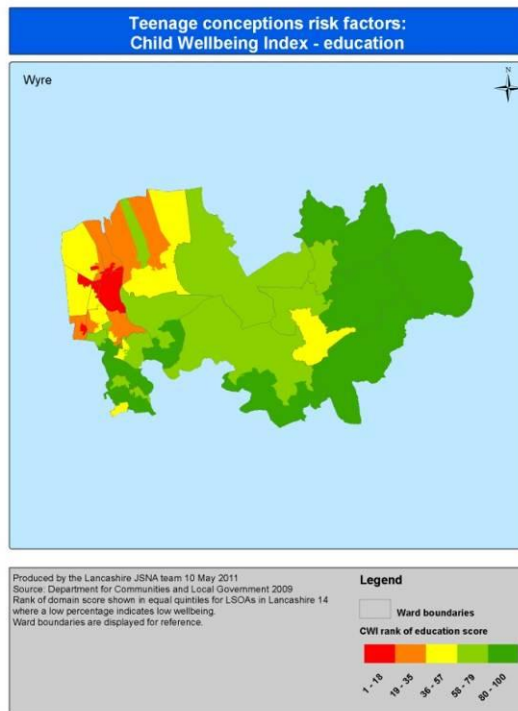
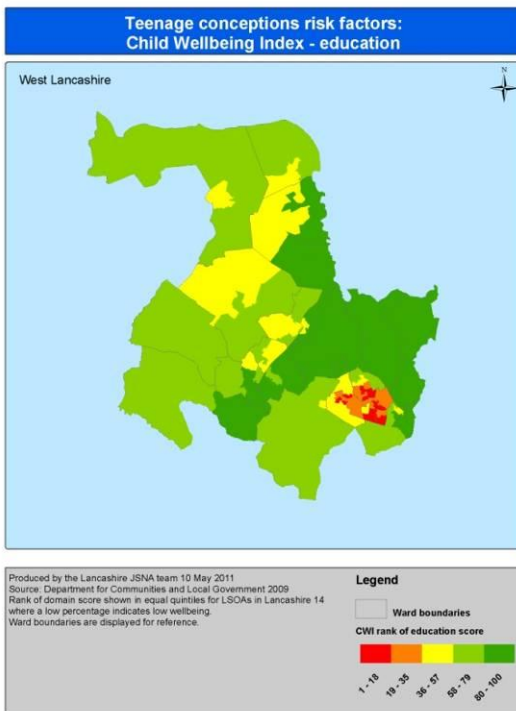
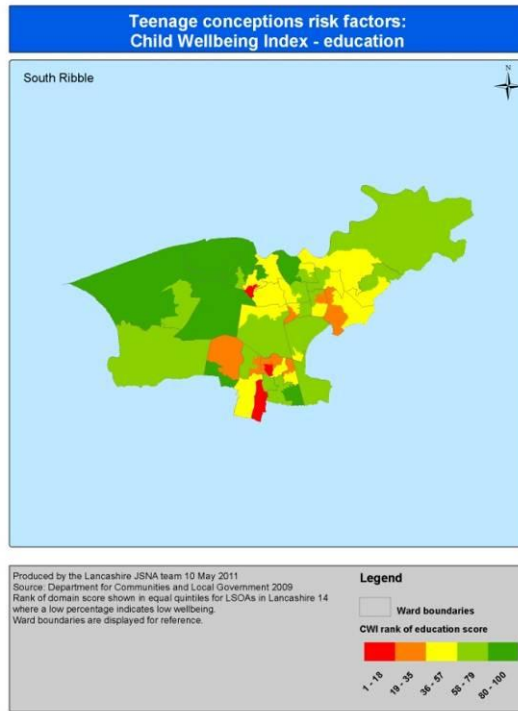
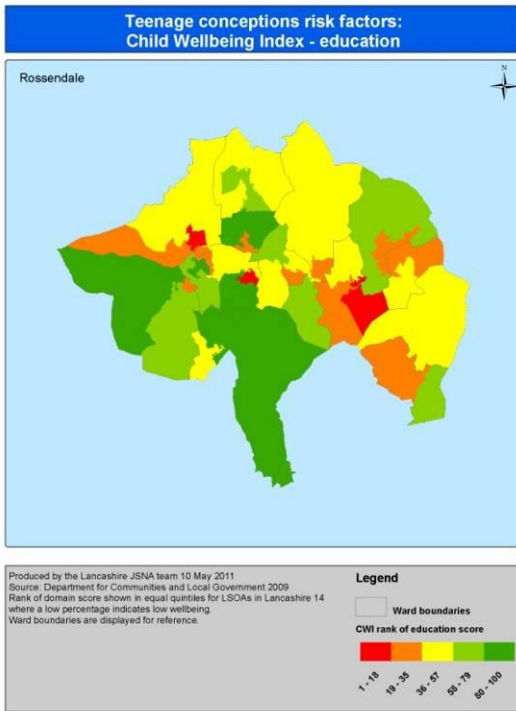
1 - 18	19 - 35	36 - 57	58 - 79	80 - 100

Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



Teenage pregnancy in the Lancashire sub-region: Risk factors analysis

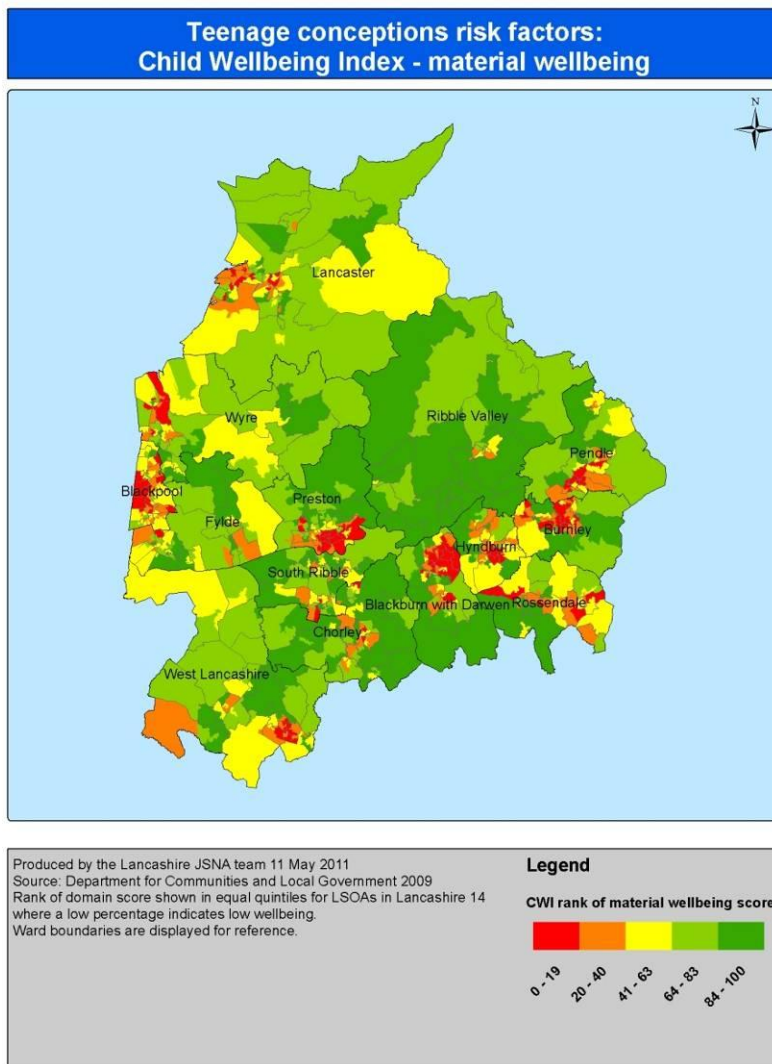




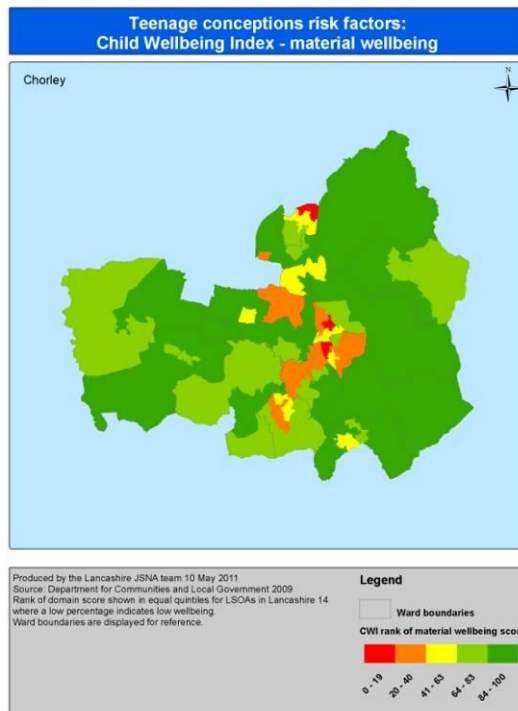
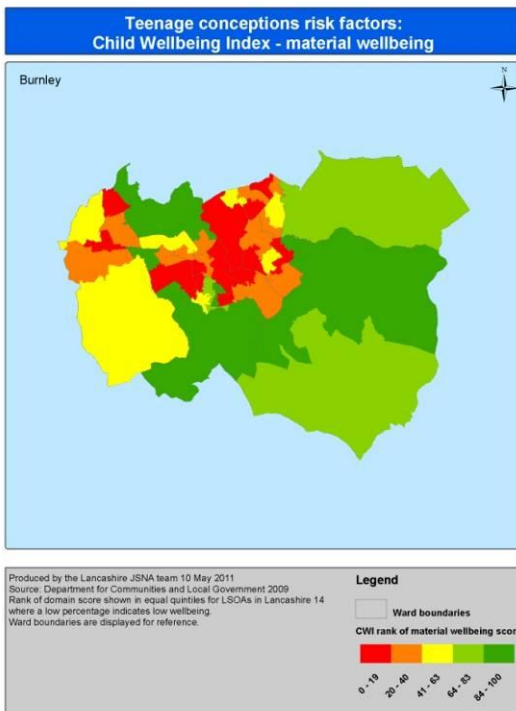
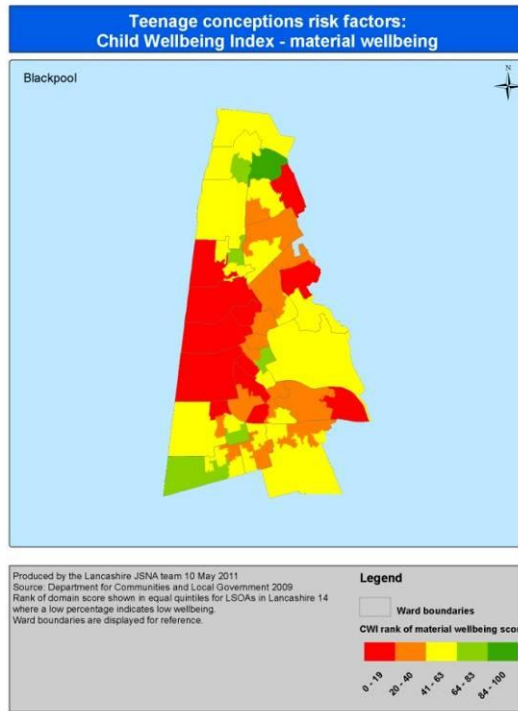
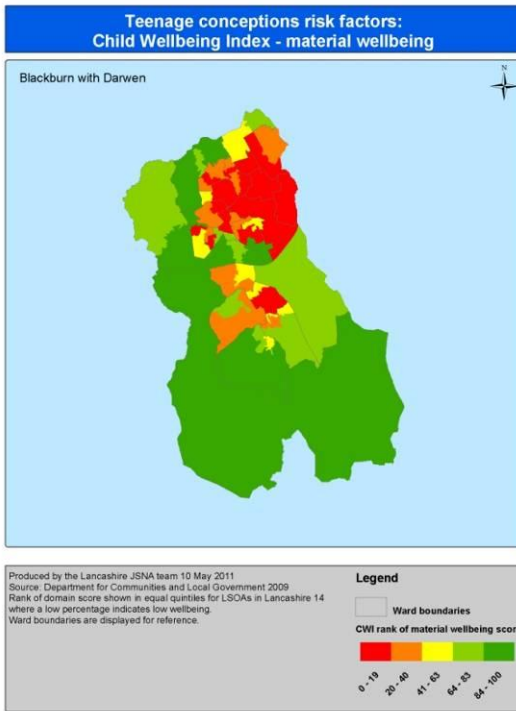
Child Wellbeing Index – material wellbeing

The purpose of this domain is to capture the proportion of children experiencing income deprivation in a small area. This domain has antecedents within the Indices of Deprivation for England. In those Indices a separate 'Income Deprivation Affecting Children Index' (IDACI) was published alongside the IMD 2007. The IDACI comprised the percentage of children under 16 living in families reliant on various means tested benefits. The material

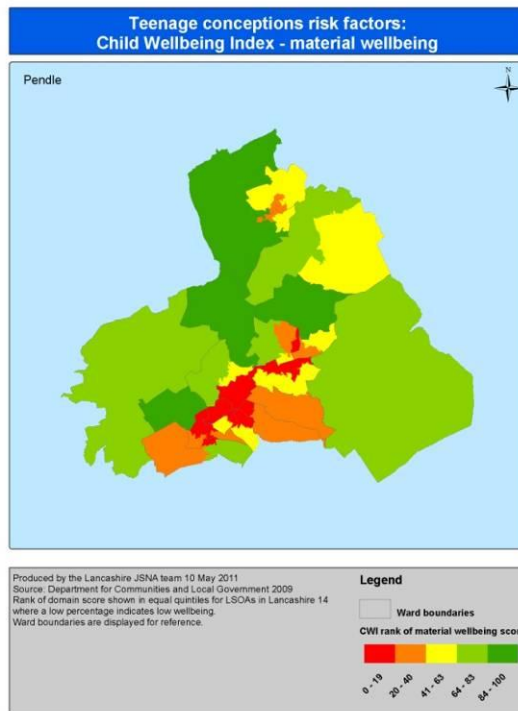
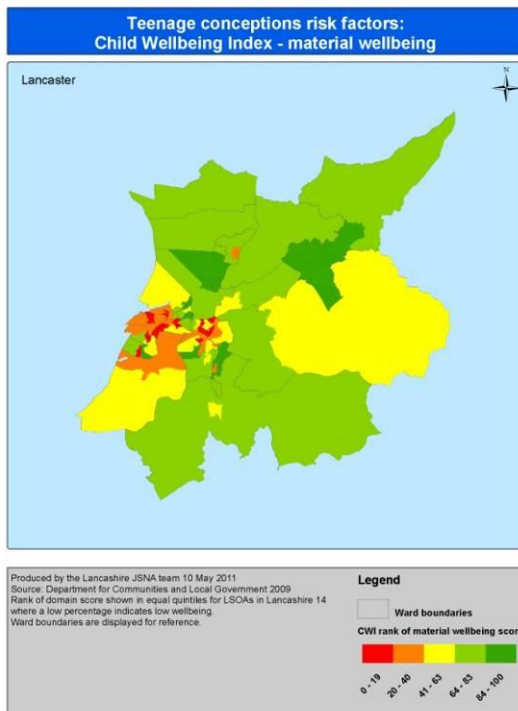
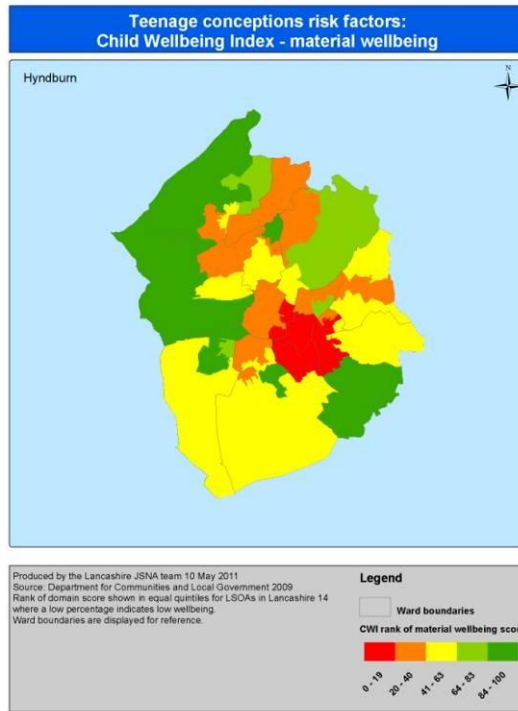
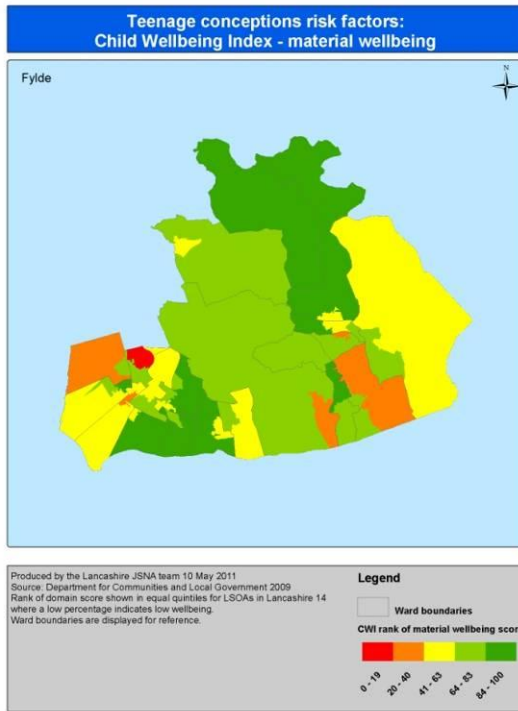
well-being domain for CWI is the same as the IDACI 2007.



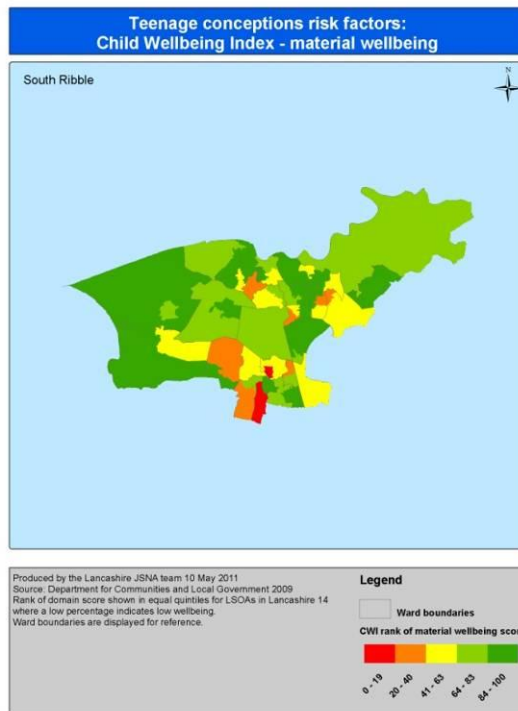
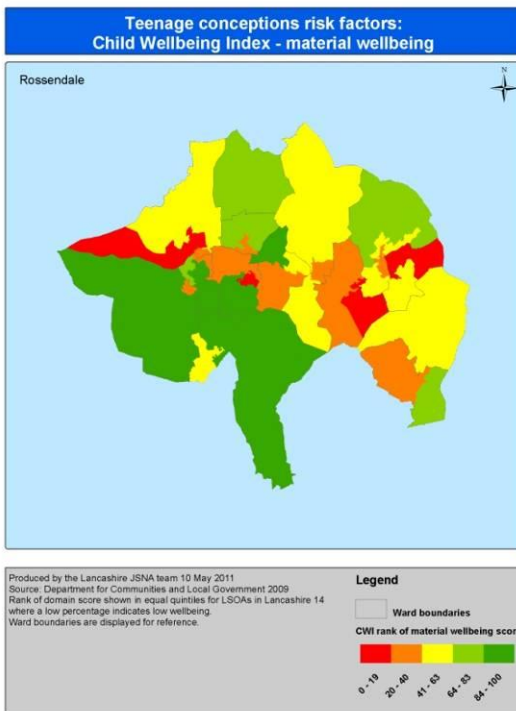
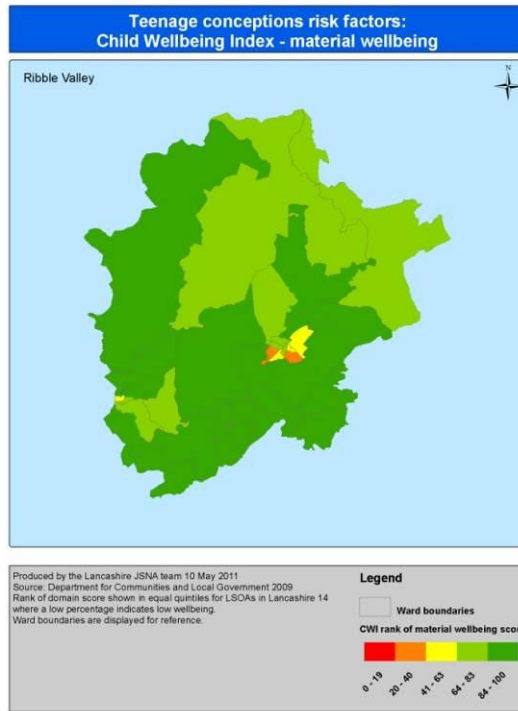
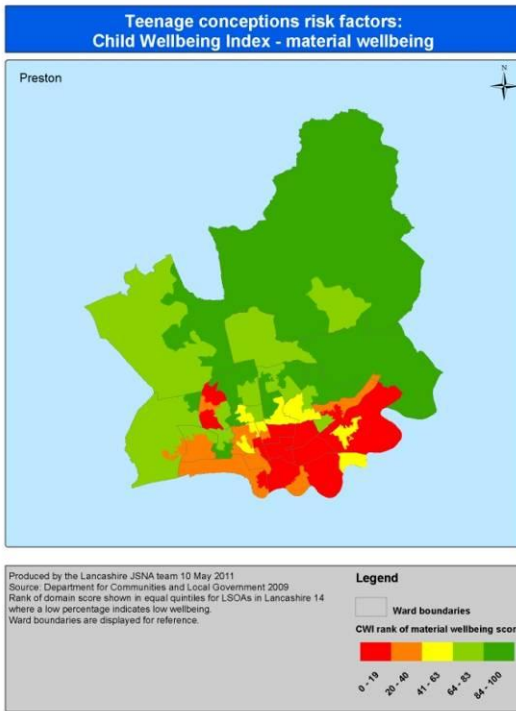
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



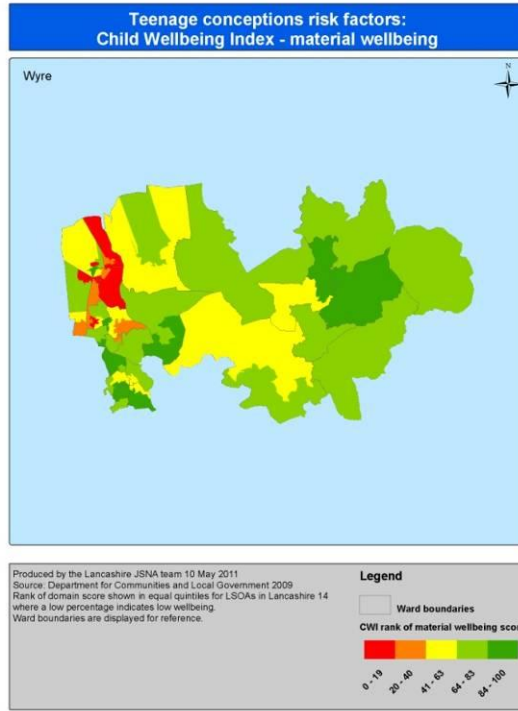
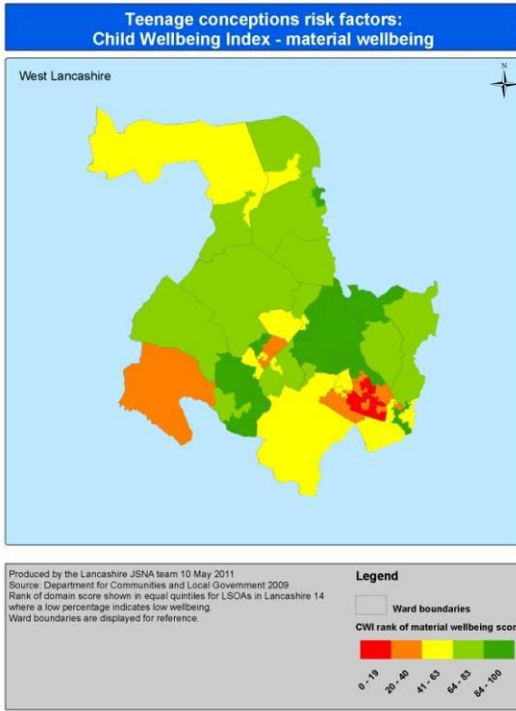
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



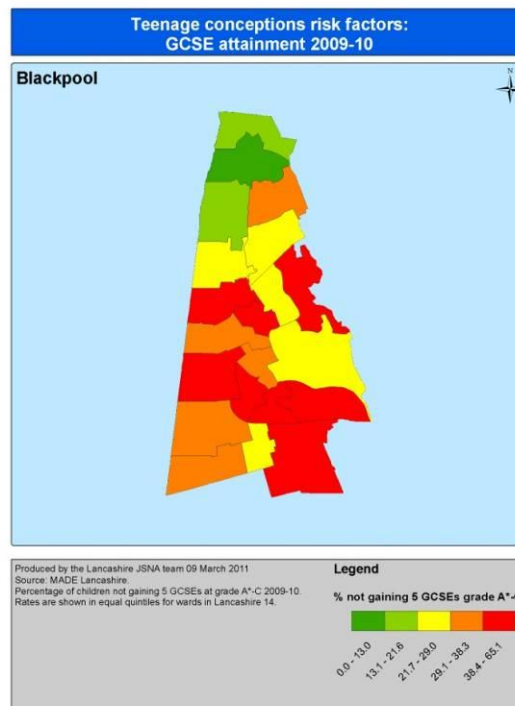
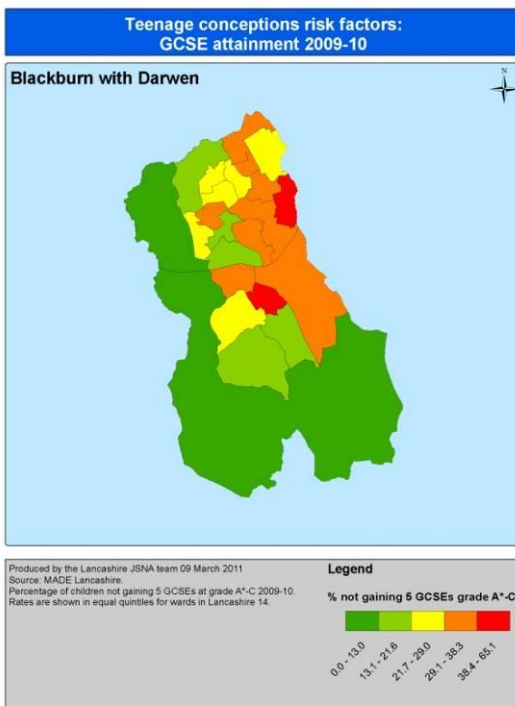
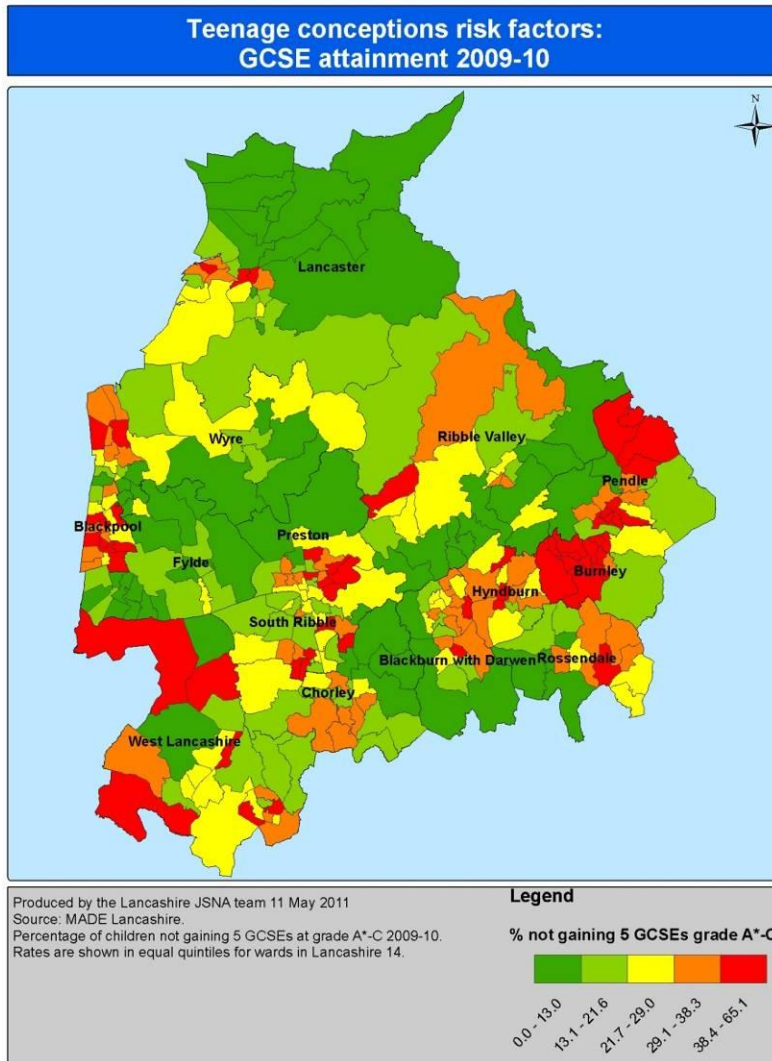
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



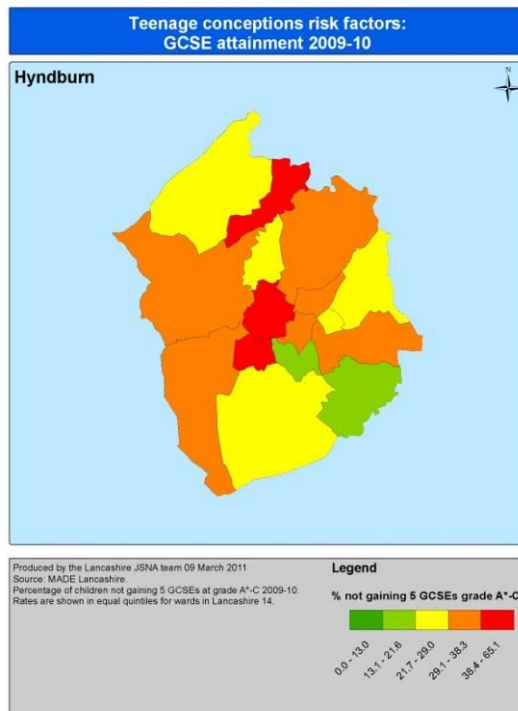
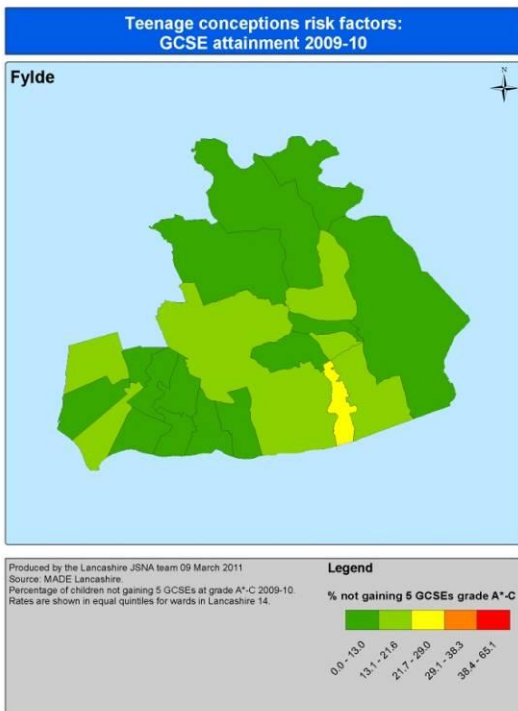
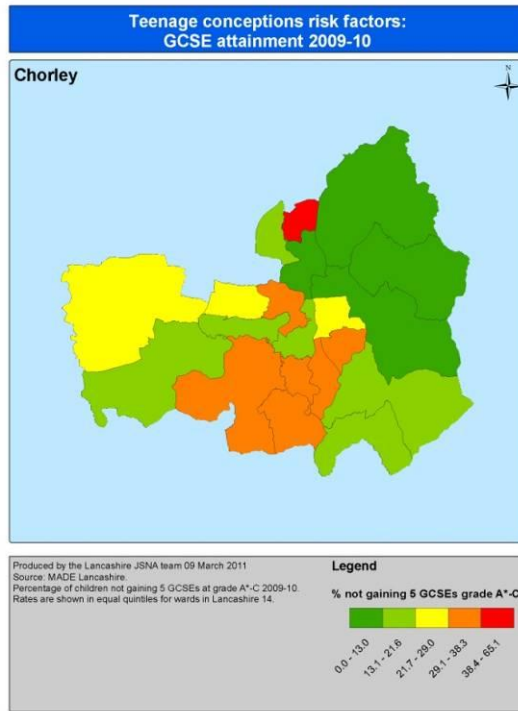
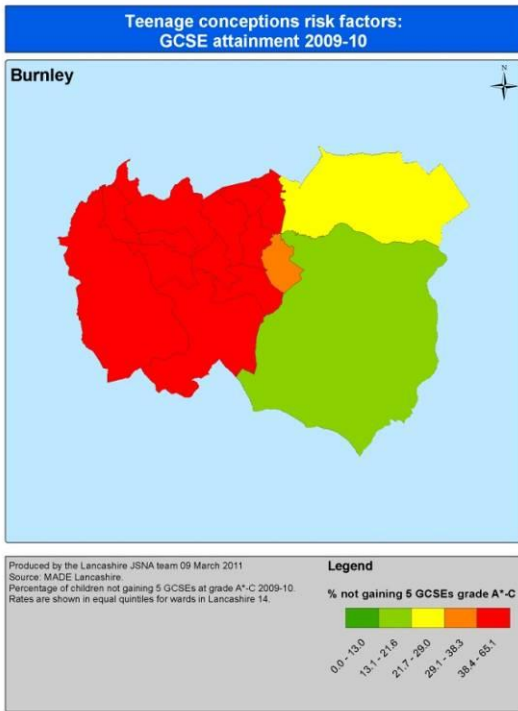
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



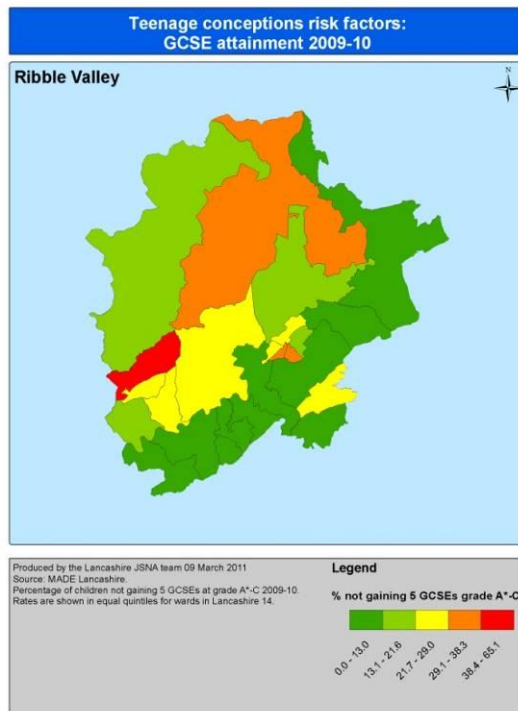
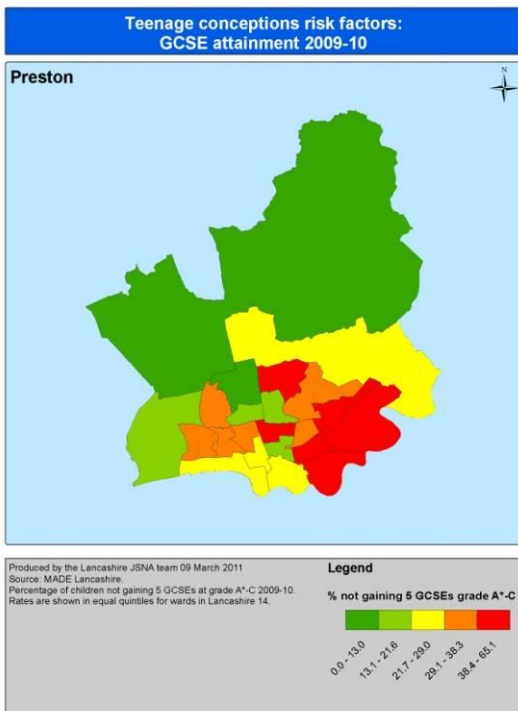
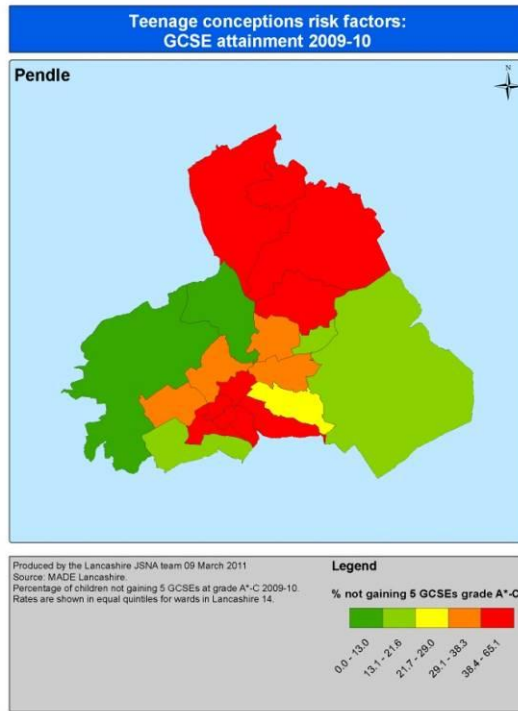
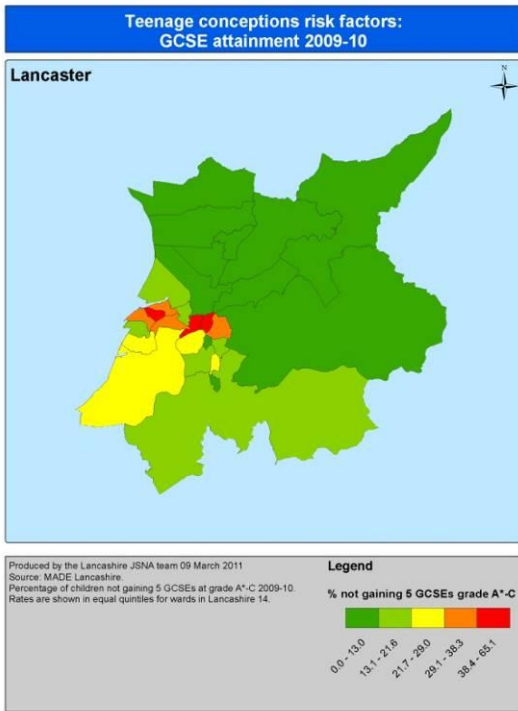
GCSE attainment



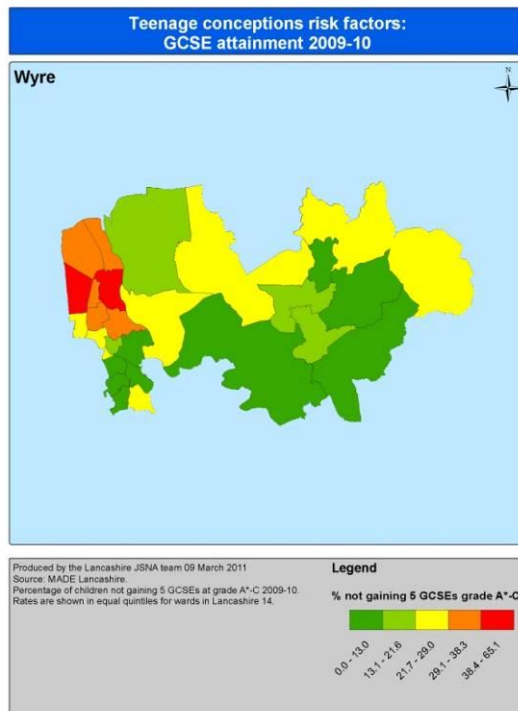
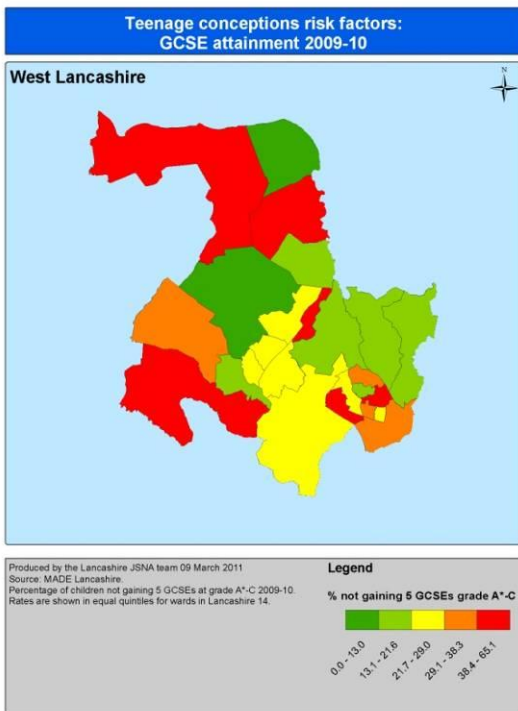
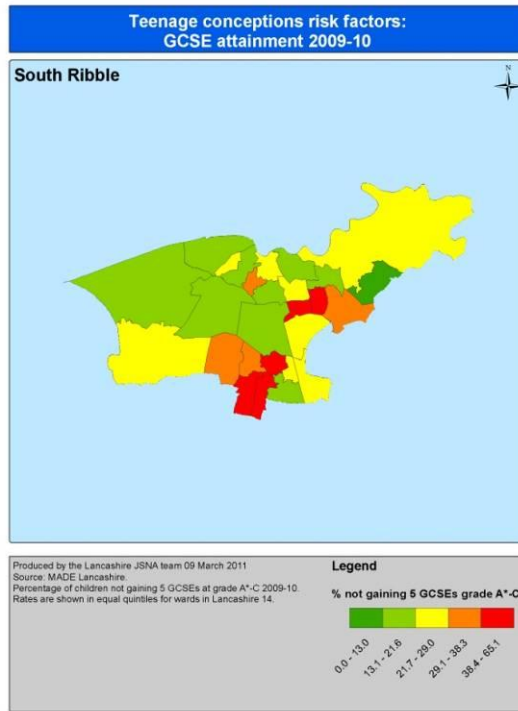
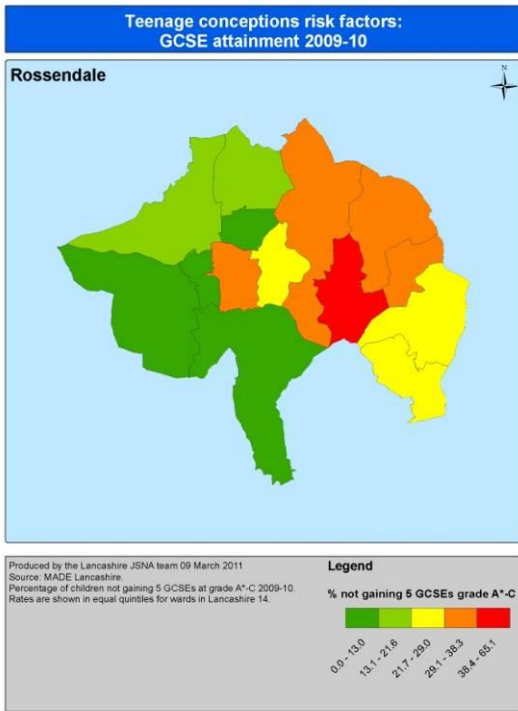
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



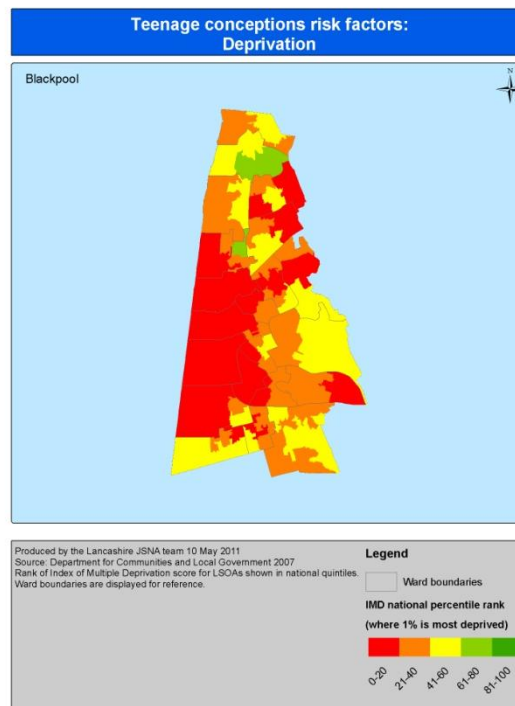
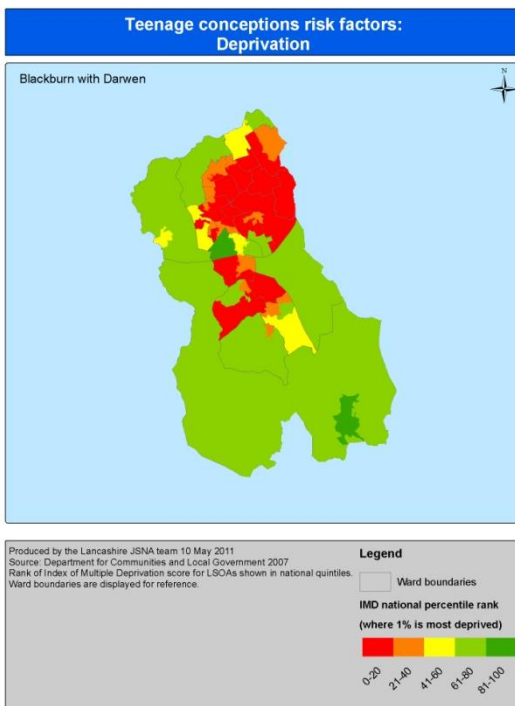
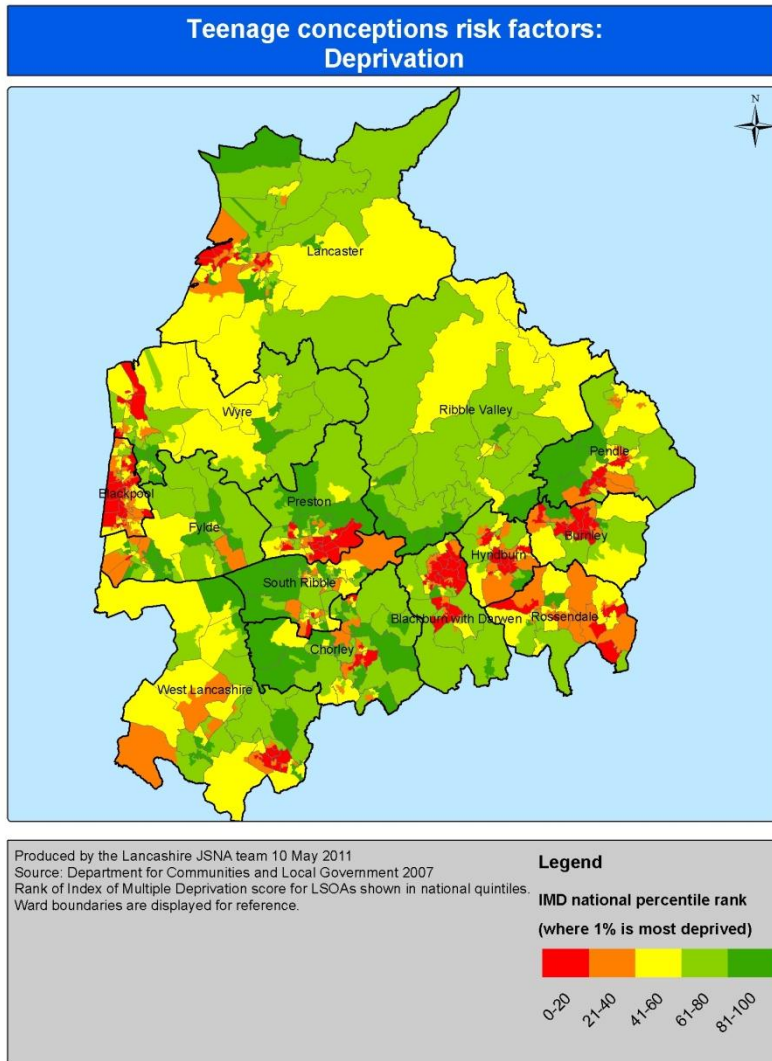
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



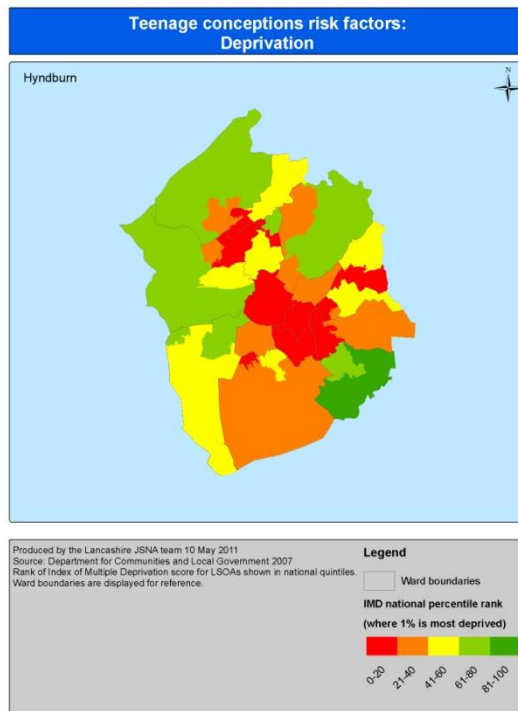
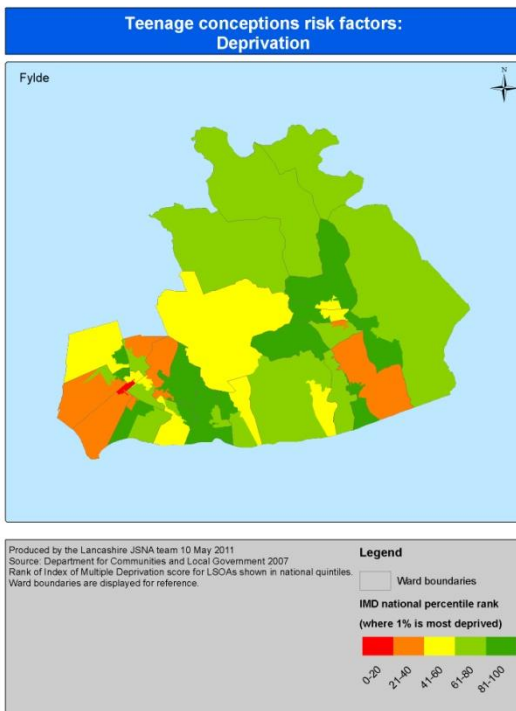
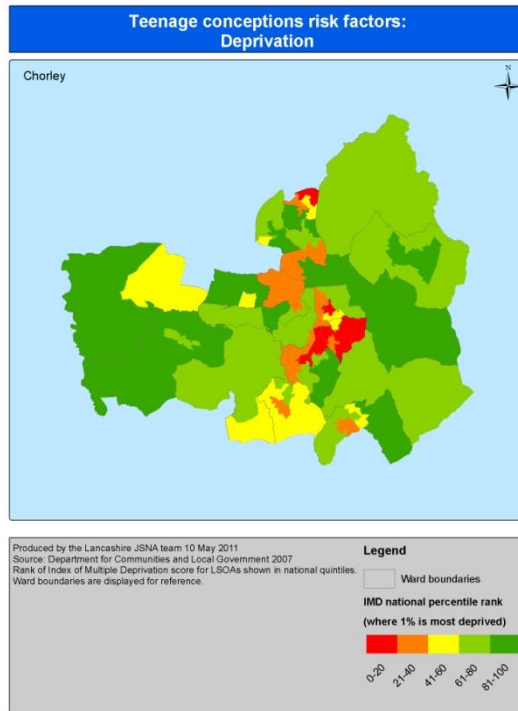
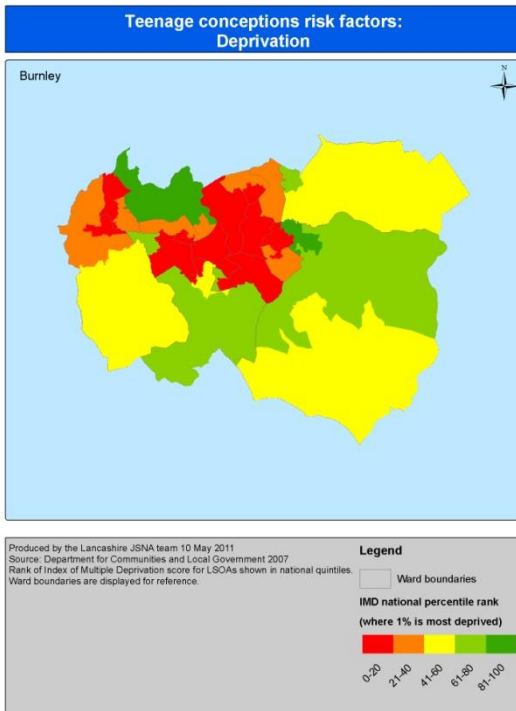
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



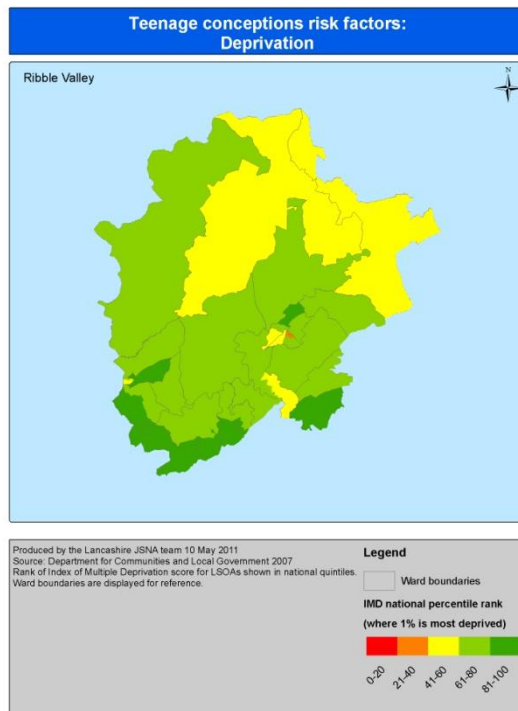
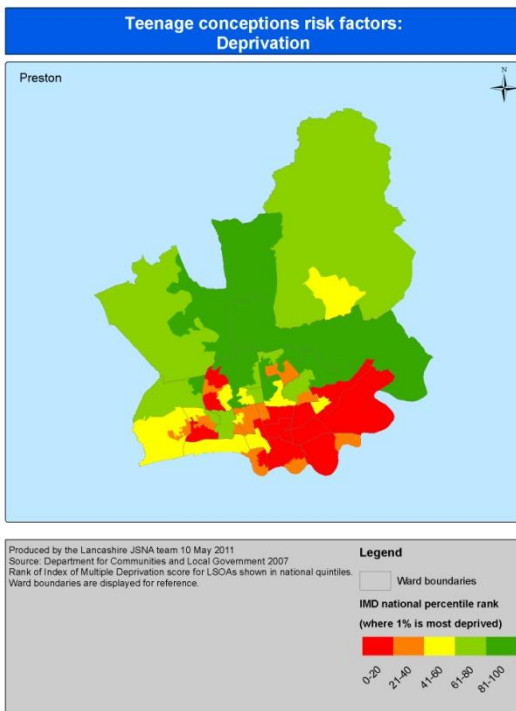
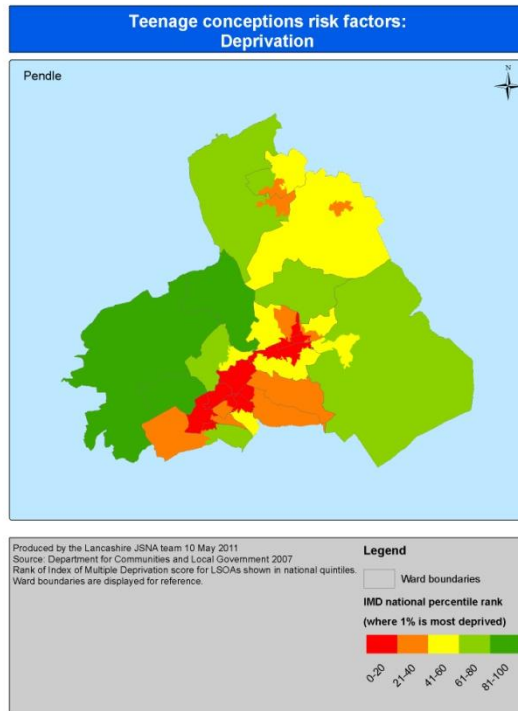
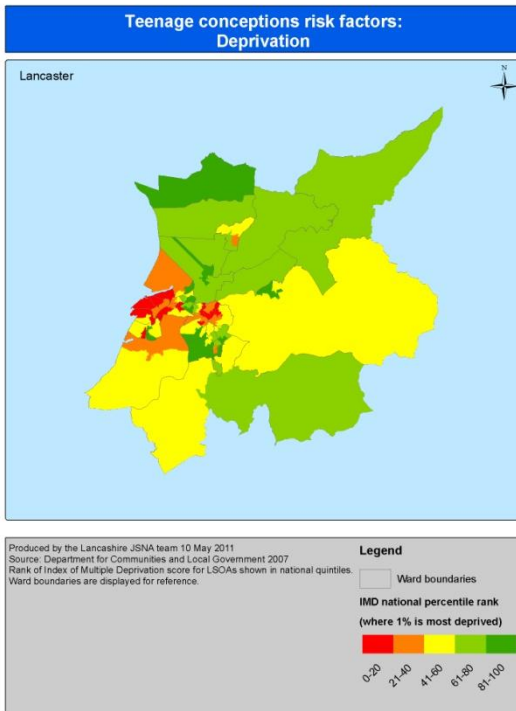
Index of Multiple Deprivation



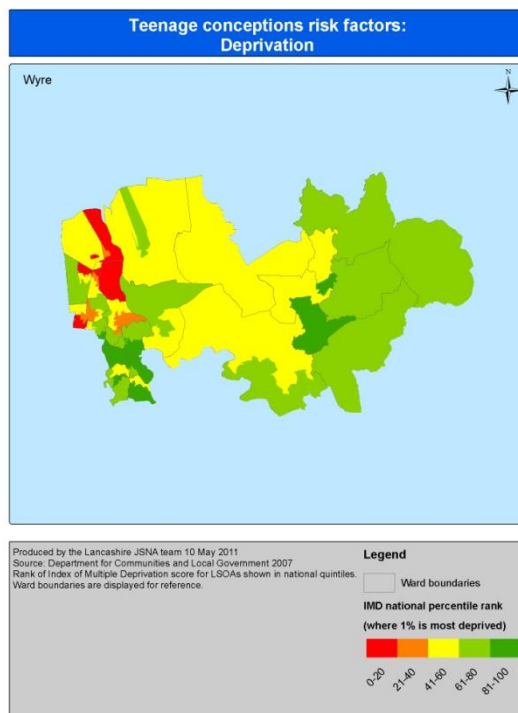
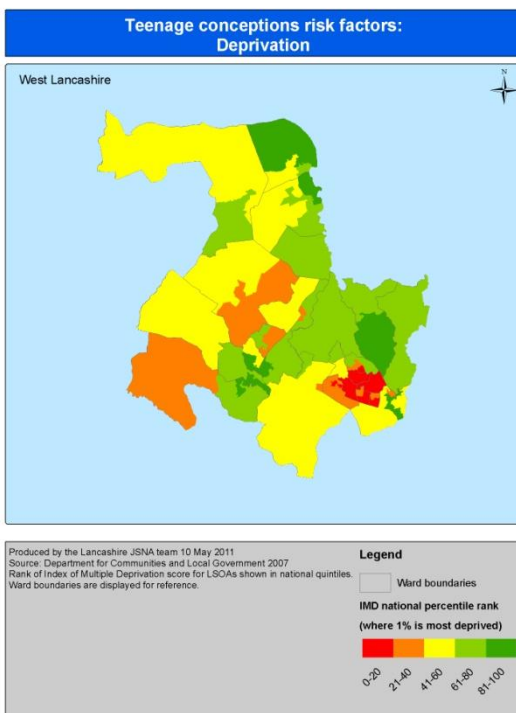
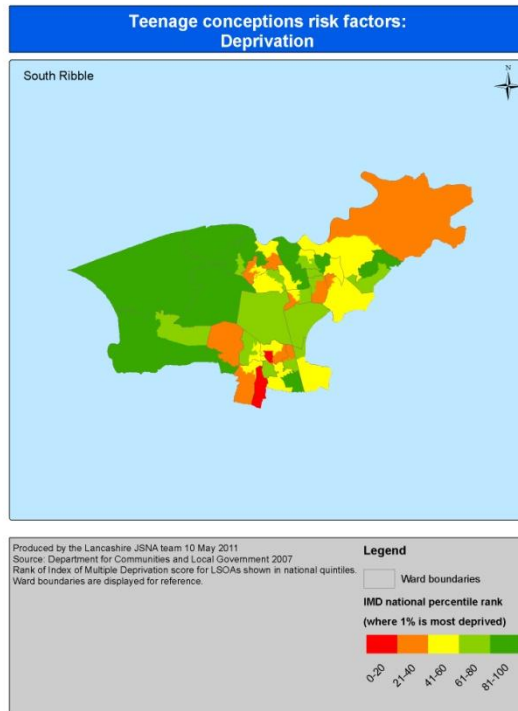
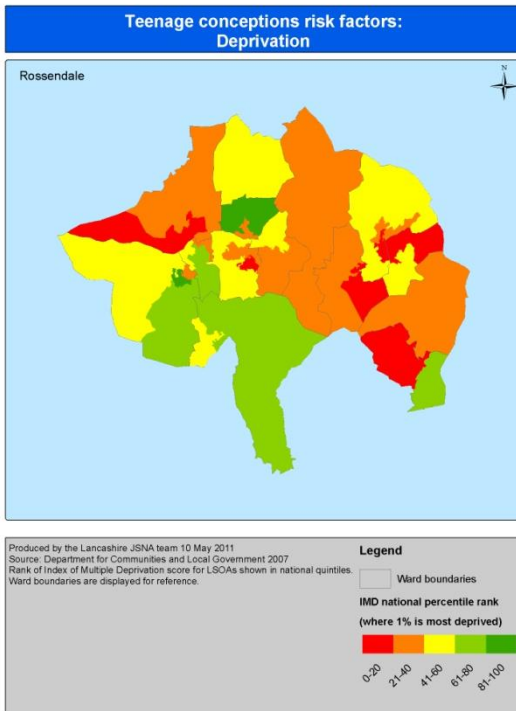
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



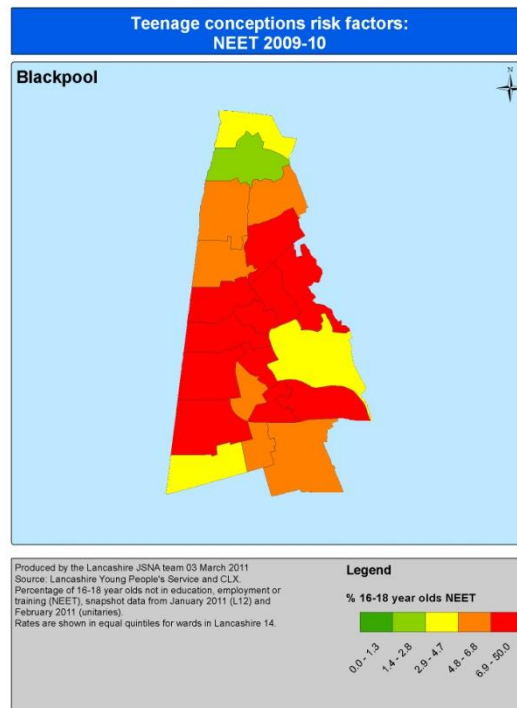
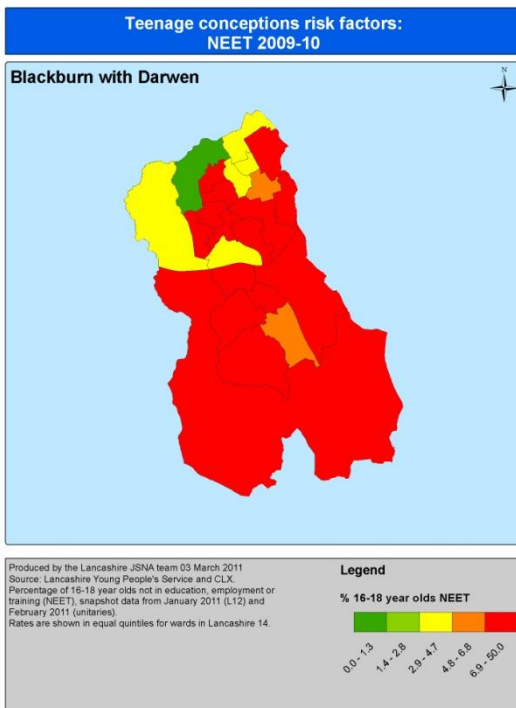
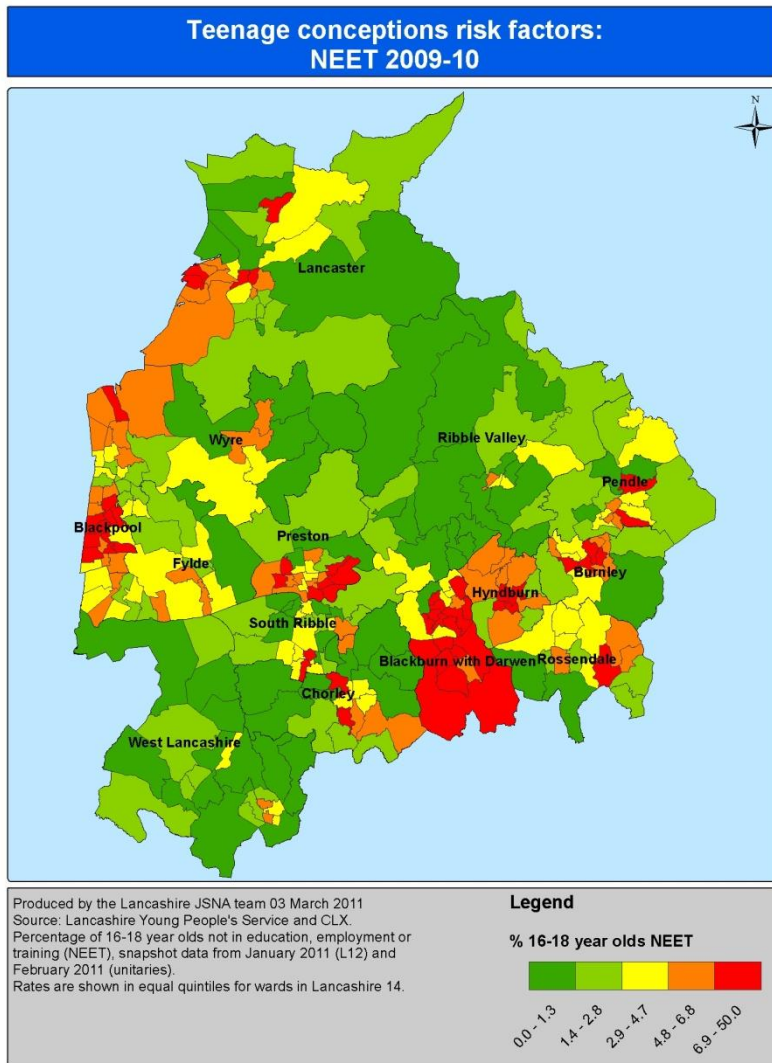
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



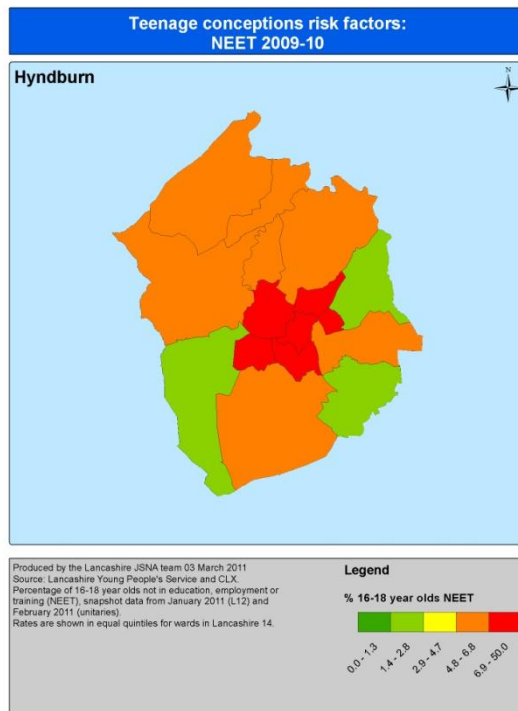
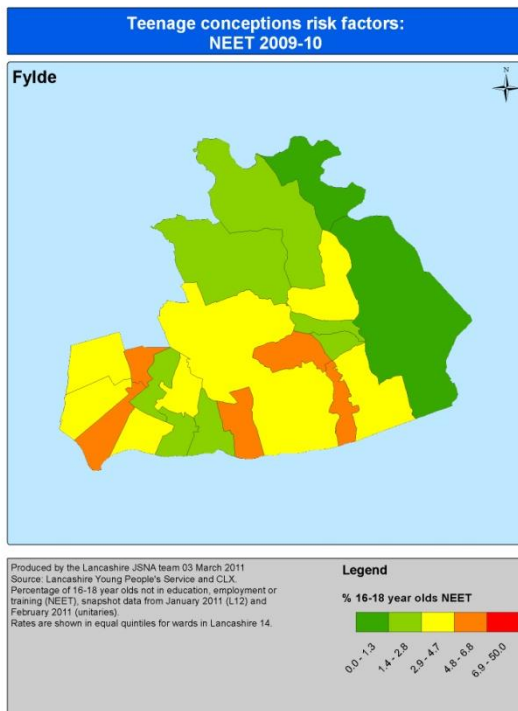
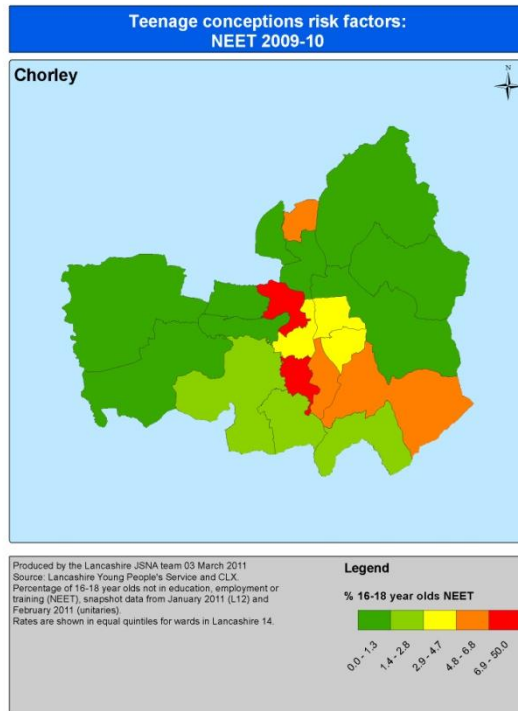
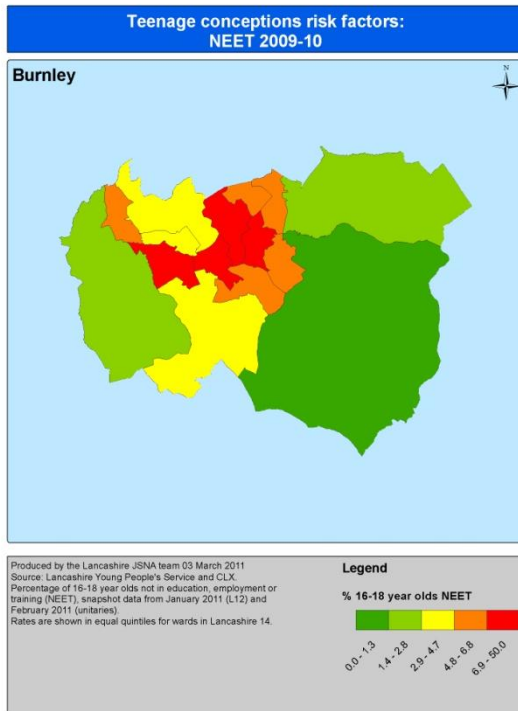
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



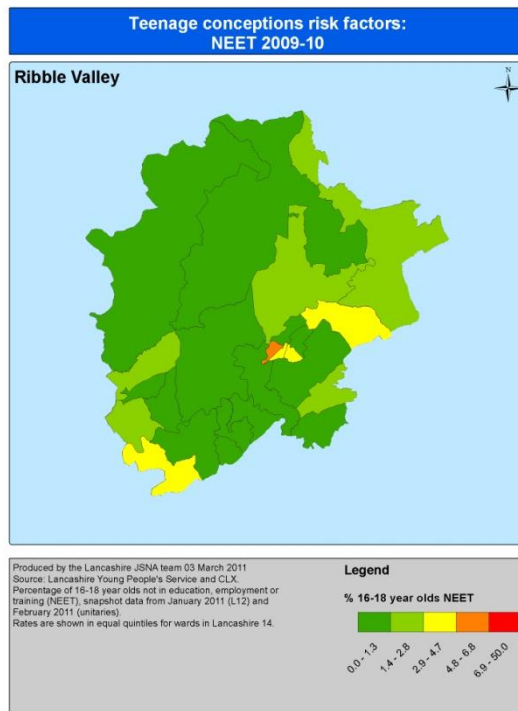
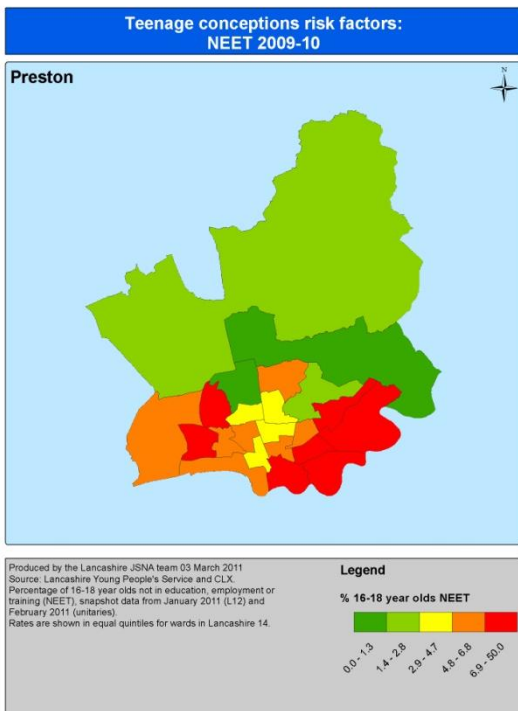
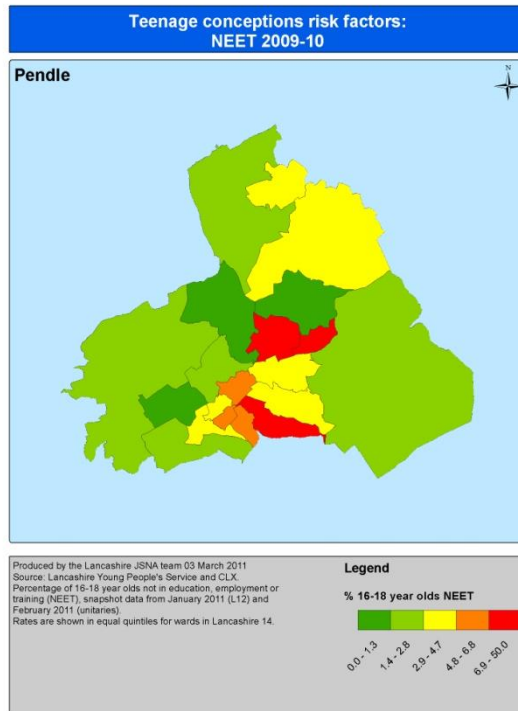
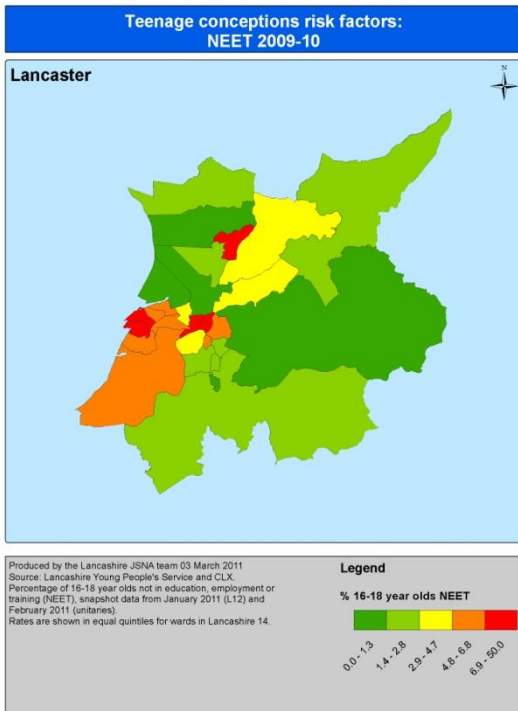
NEET (young people not in education, employment or training)



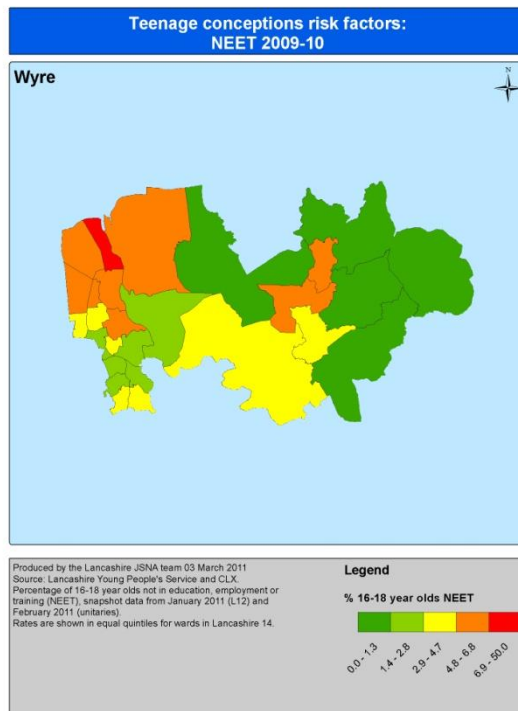
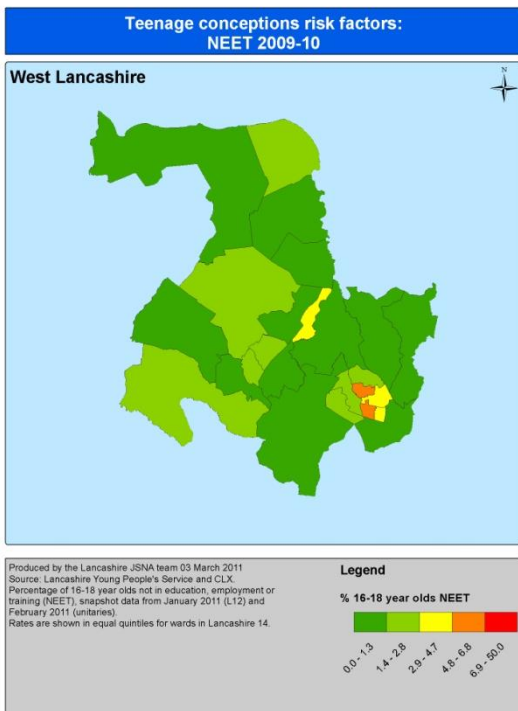
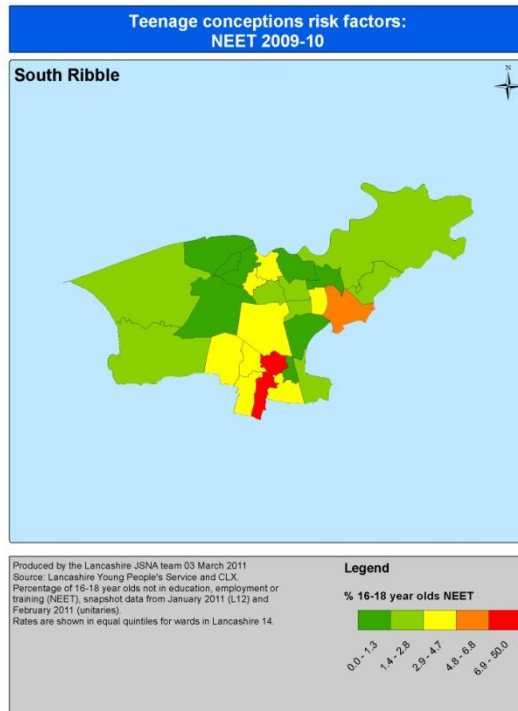
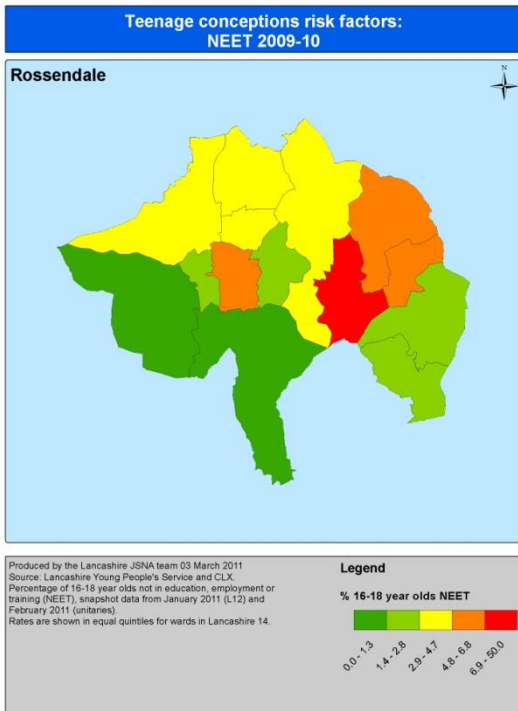
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



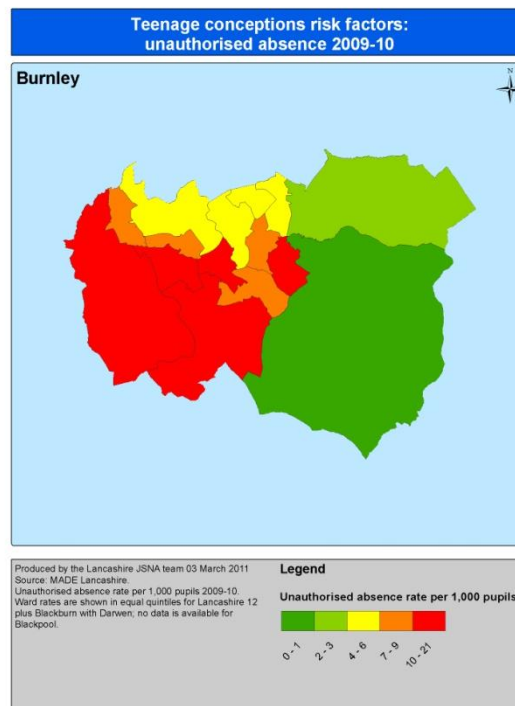
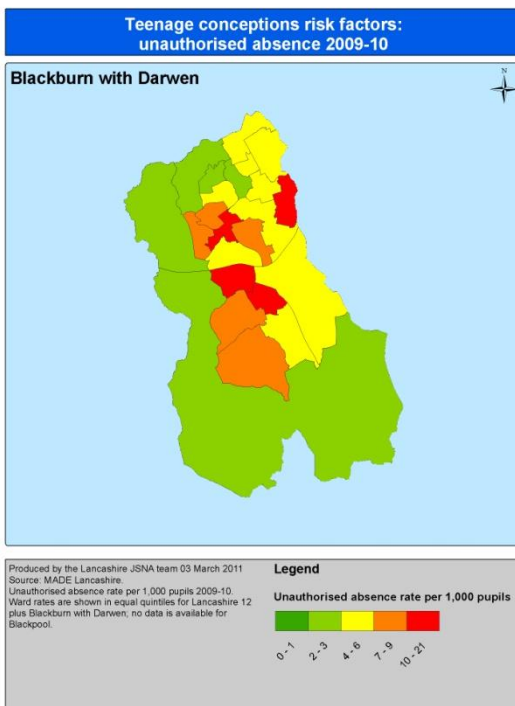
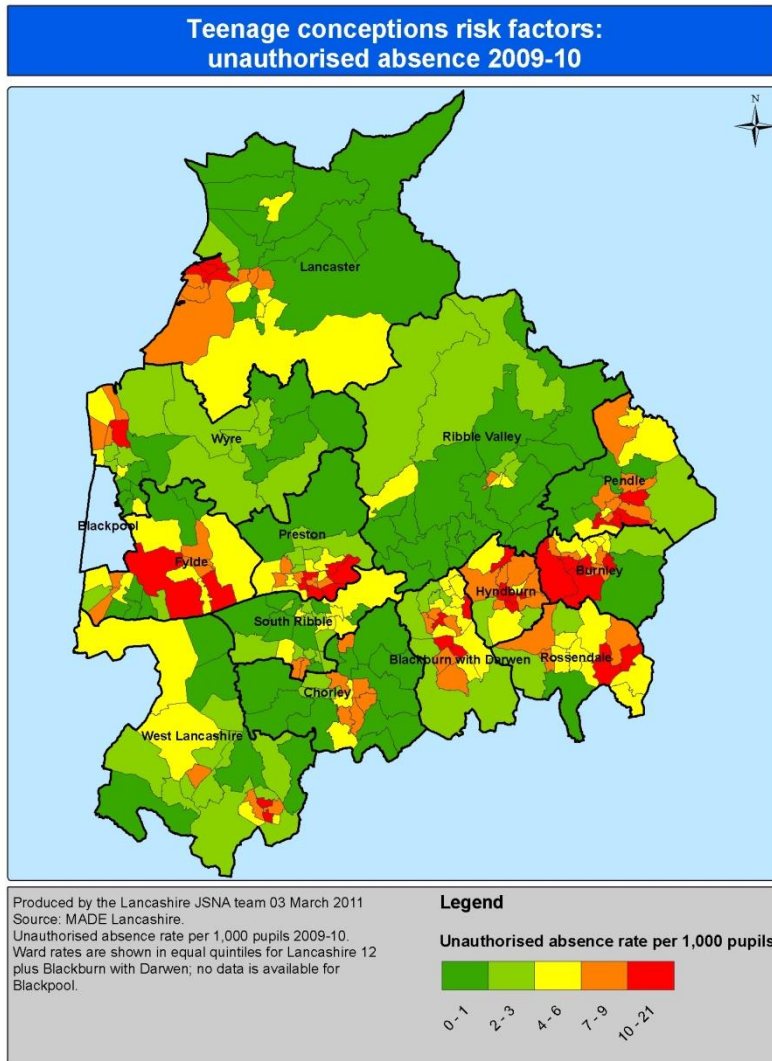
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



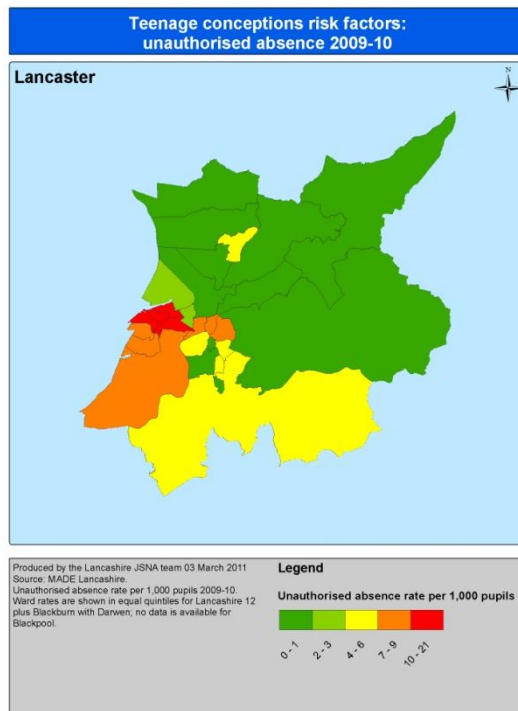
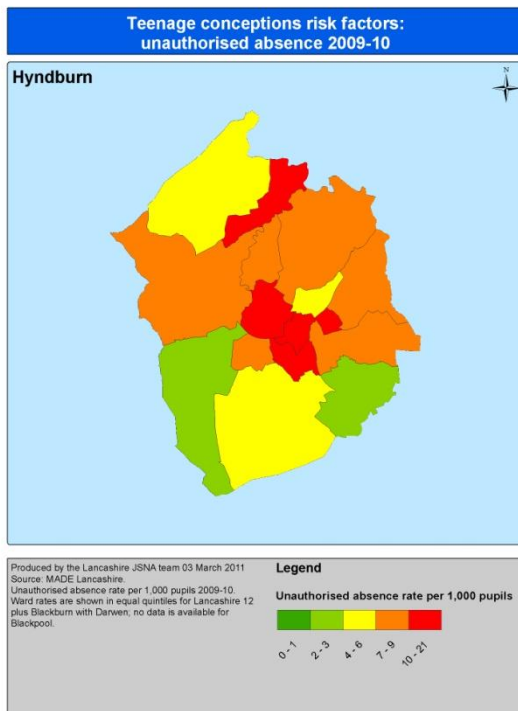
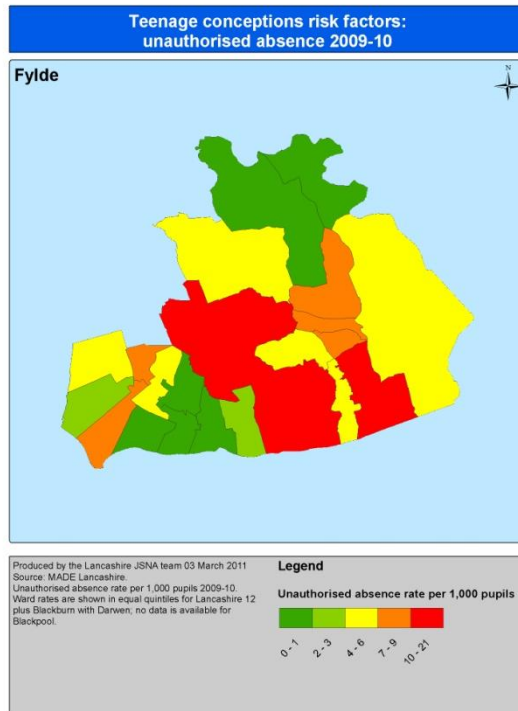
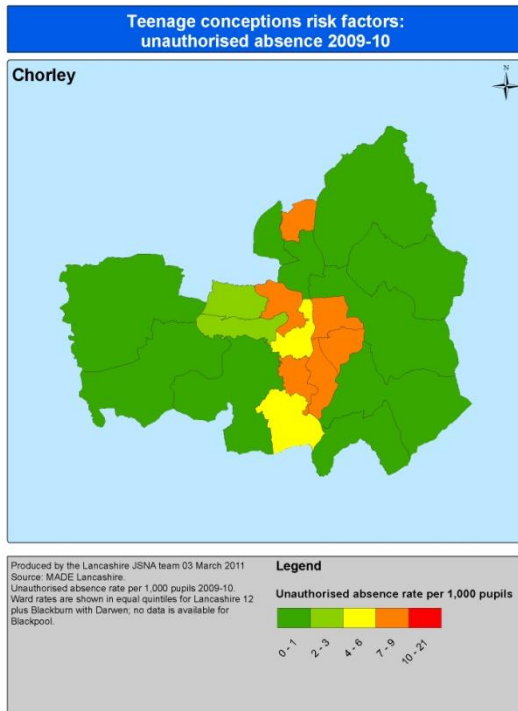
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



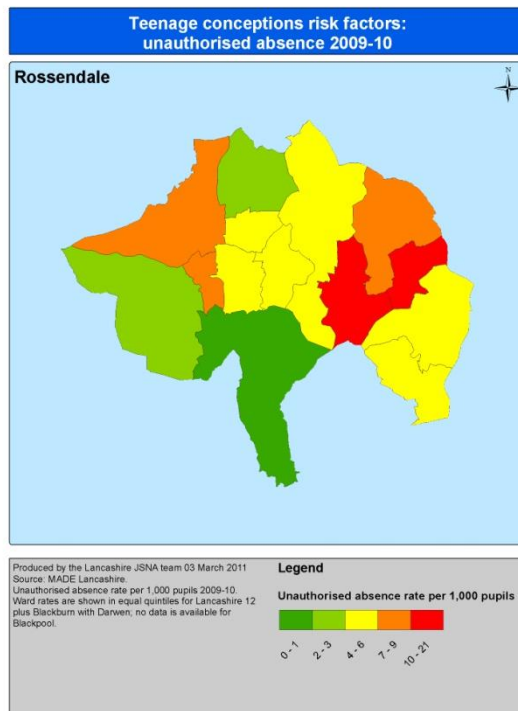
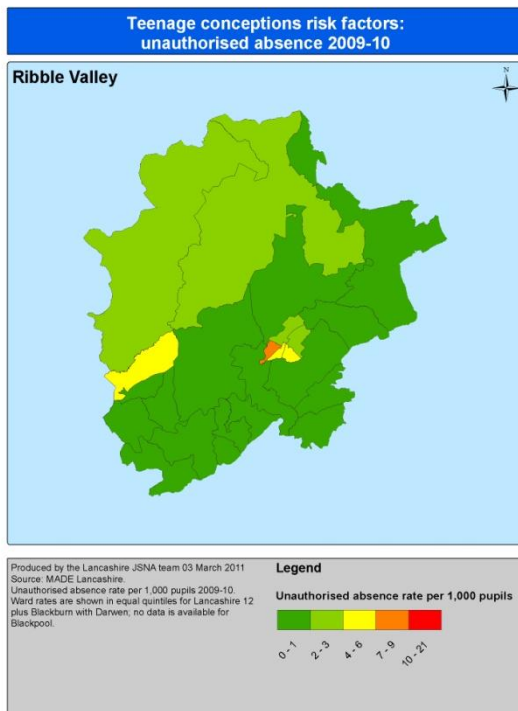
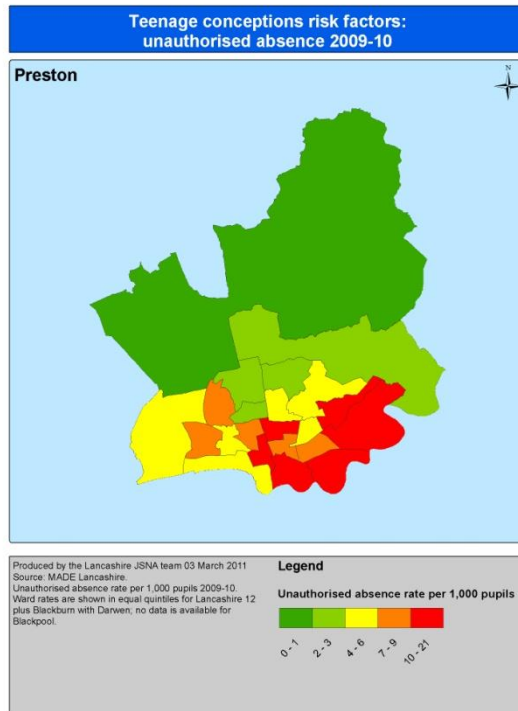
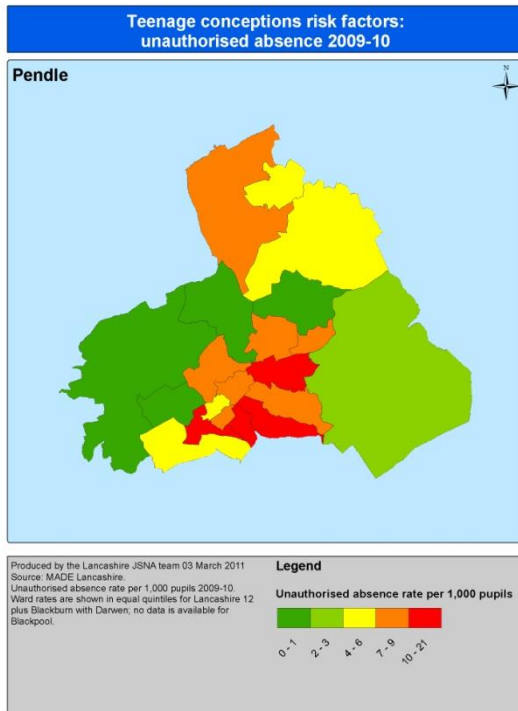
Unauthorised absence

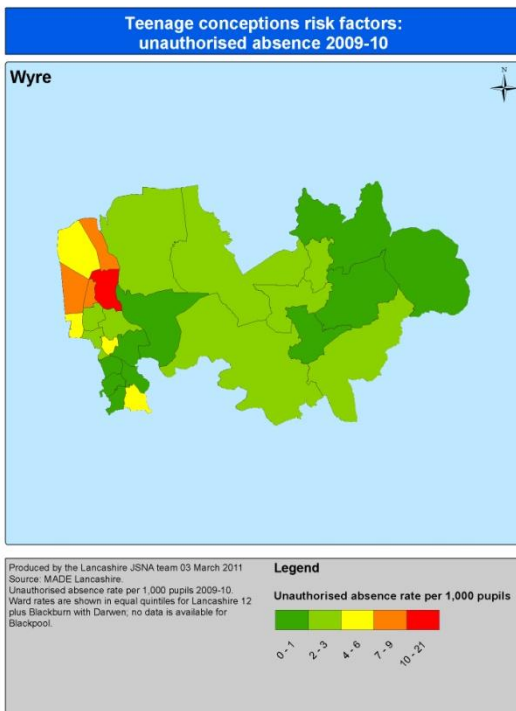
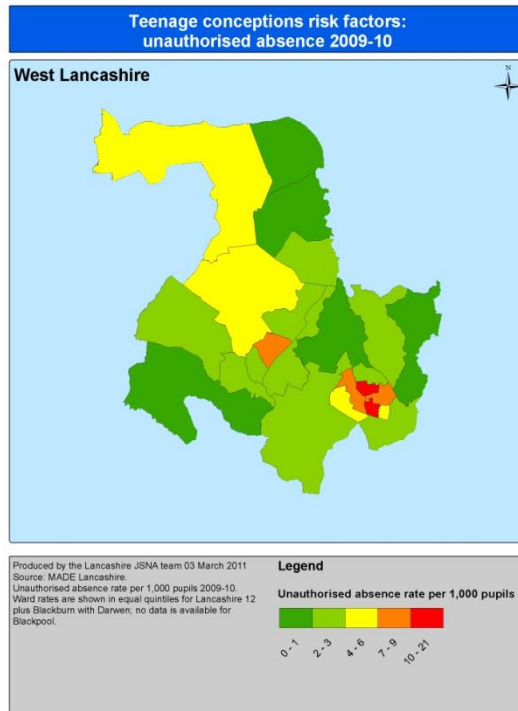
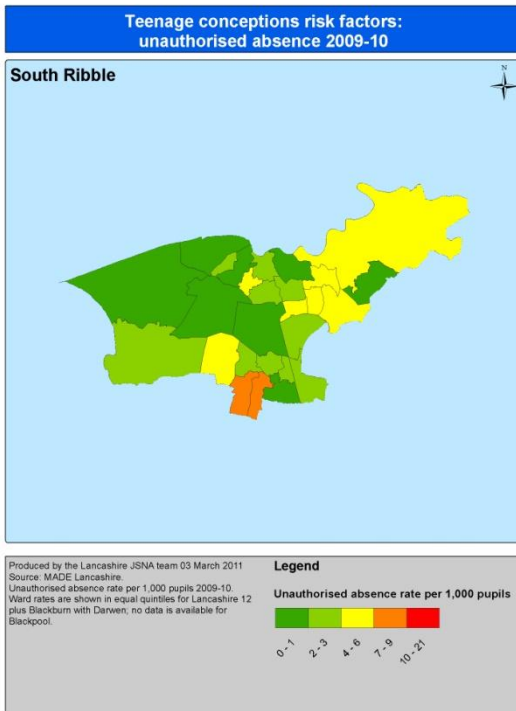


Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



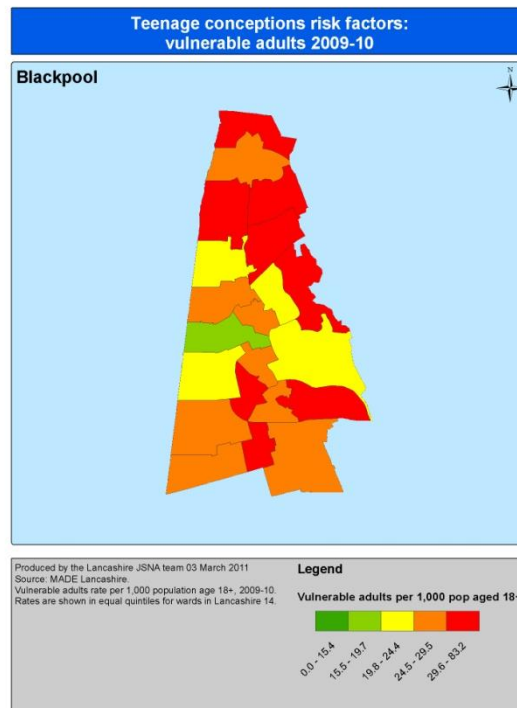
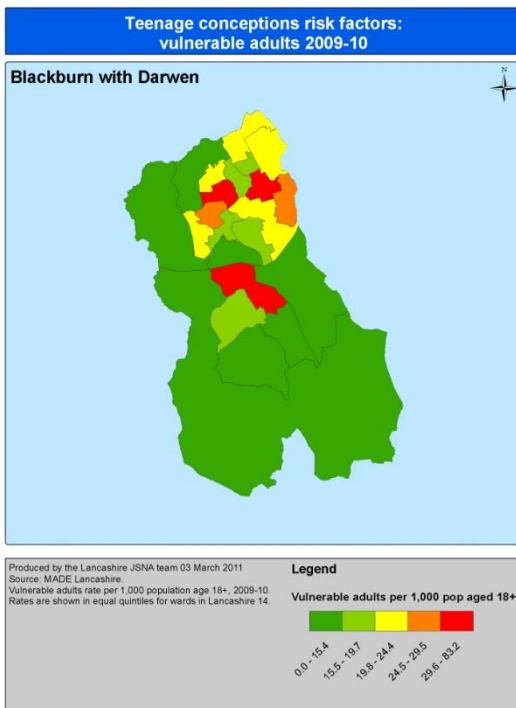
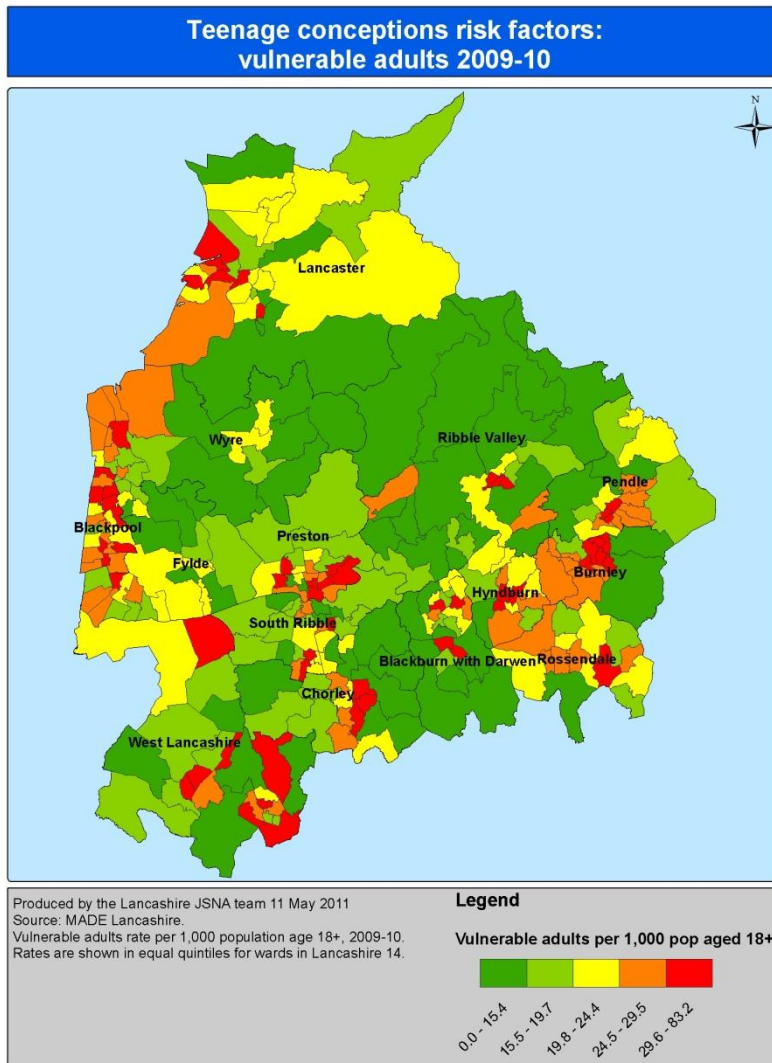
Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



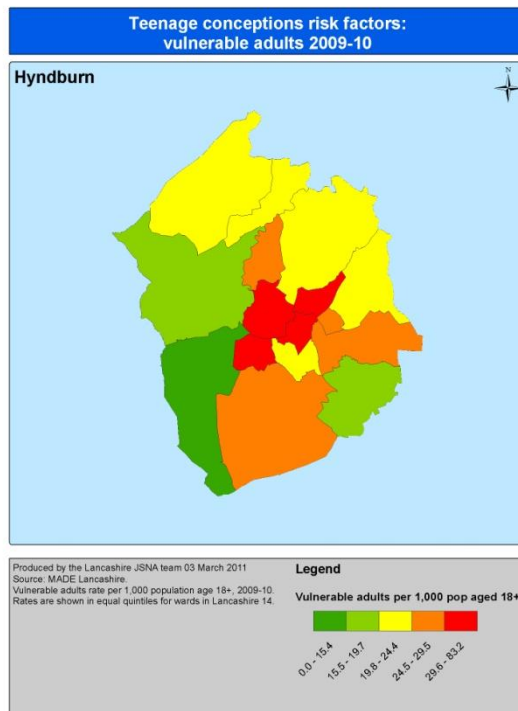
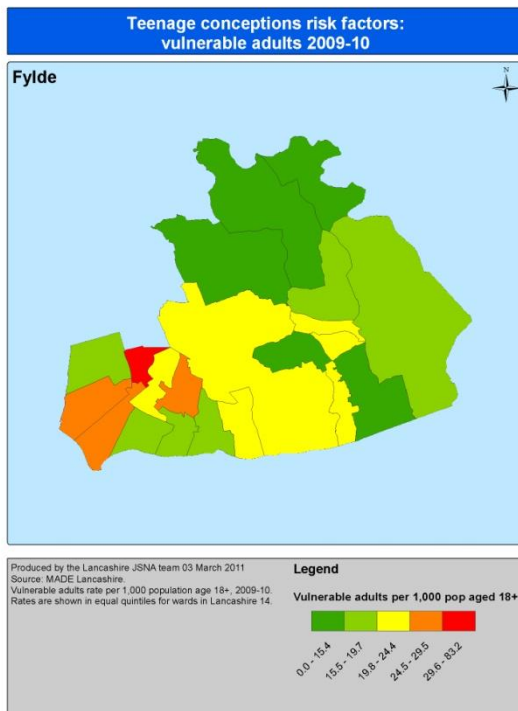
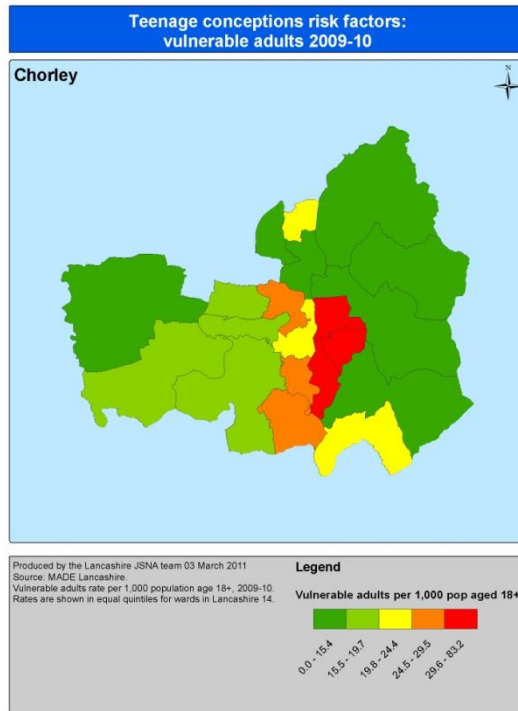
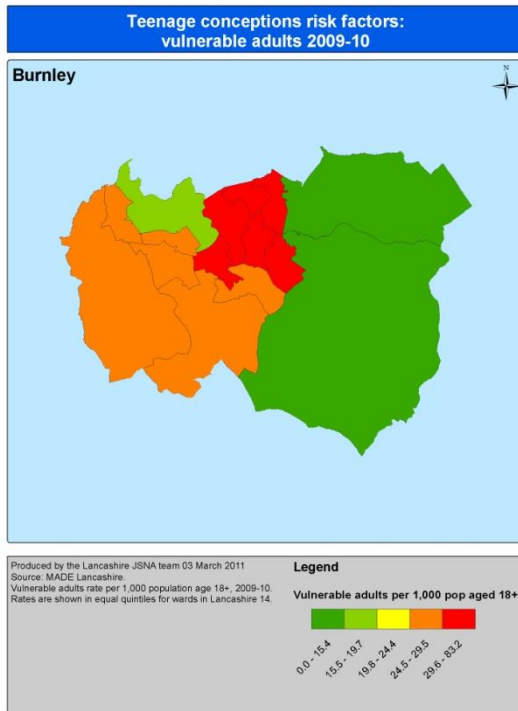


Vulnerable adults

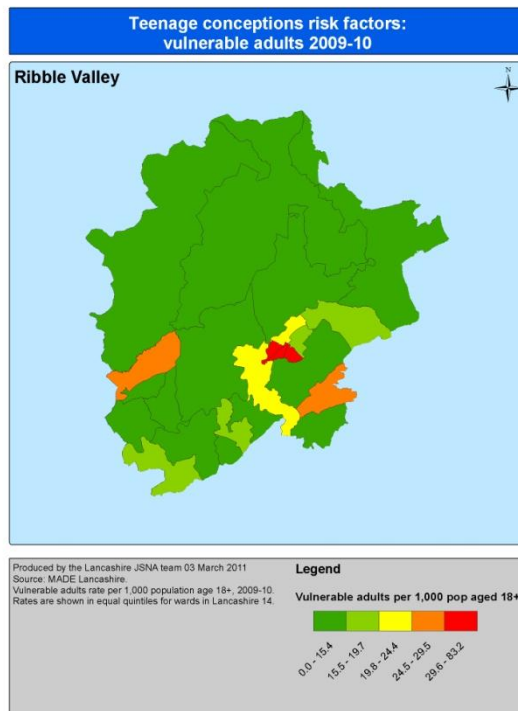
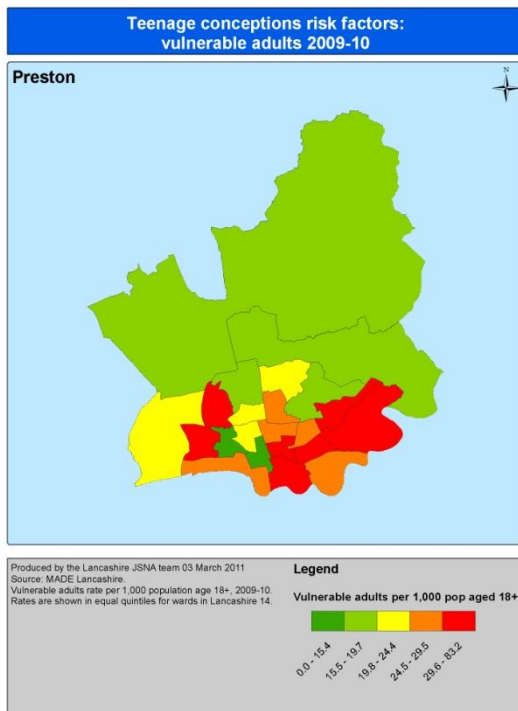
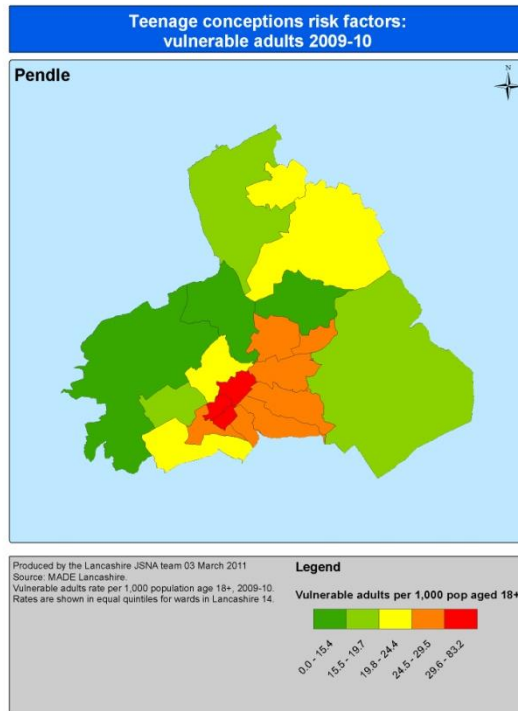
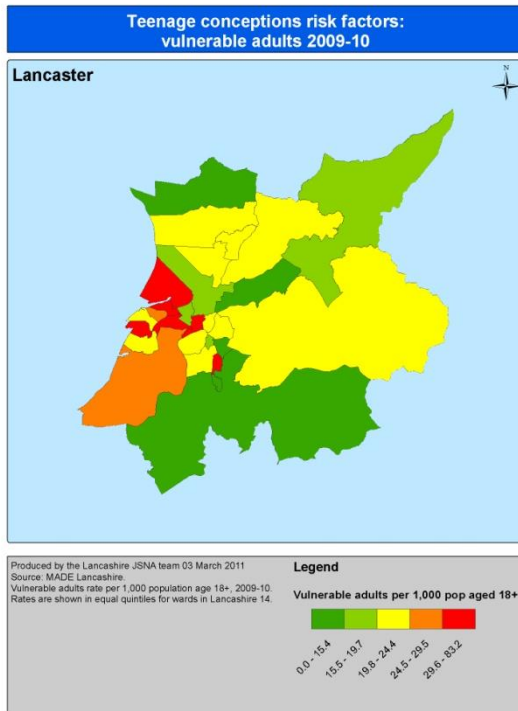
A vulnerable adult is a person aged 18 years or over who may be unable to take care of themselves, or protect themselves from harm or from being exploited. This may be because they have a mental health problem, a disability, a sensory impairment, are old and frail, or have some form of illness. We found there to be a positive correlation between the numbers of vulnerable adults referred to social services and teenage conceptions rates.

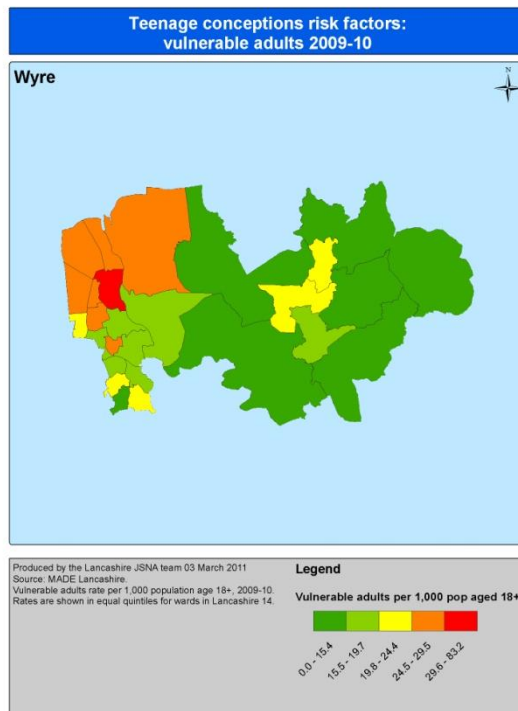
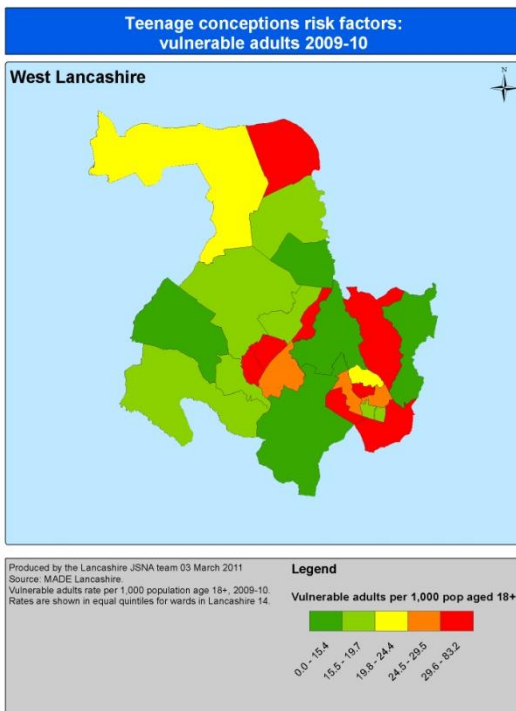
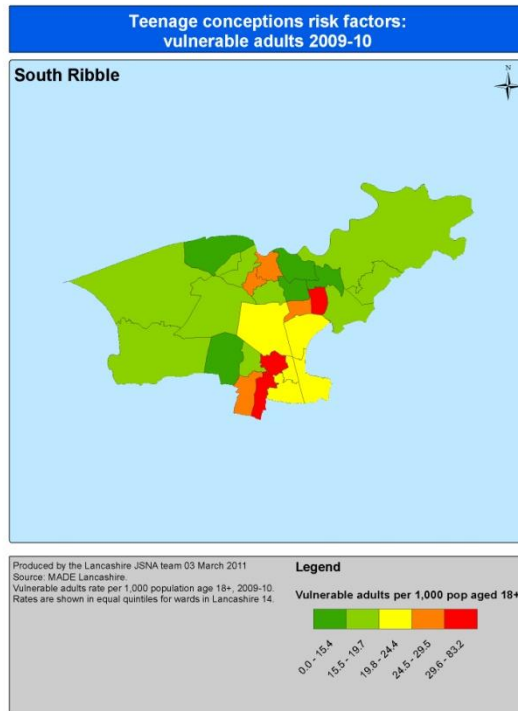
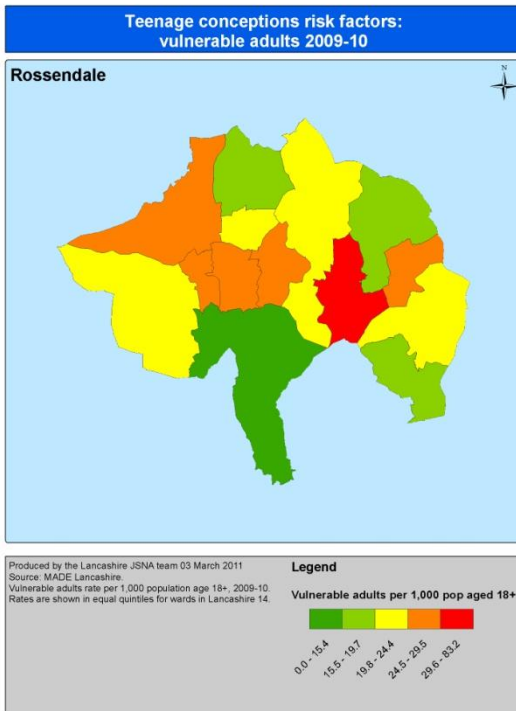


Teenage pregnancy in the Lancashire sub-region: Risk factors analysis



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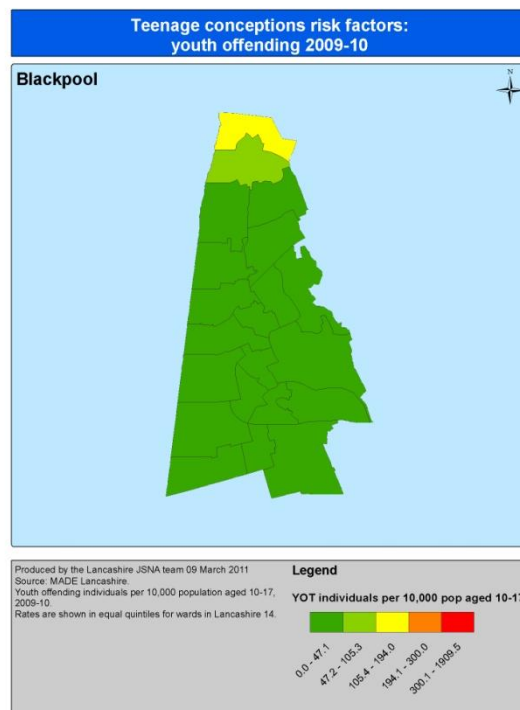
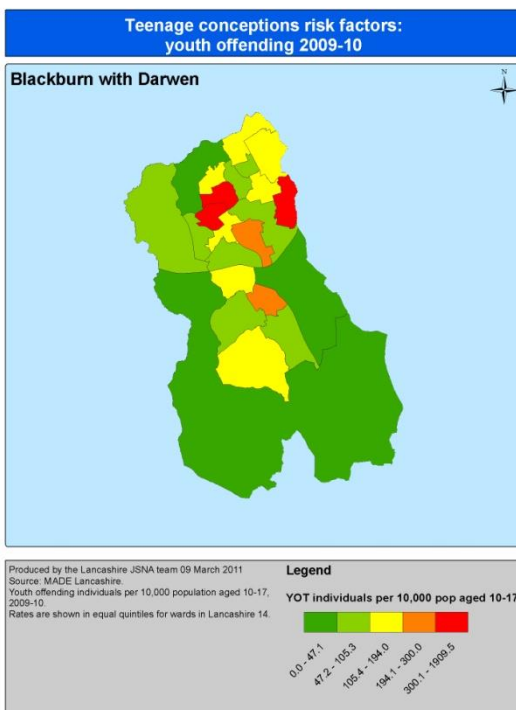
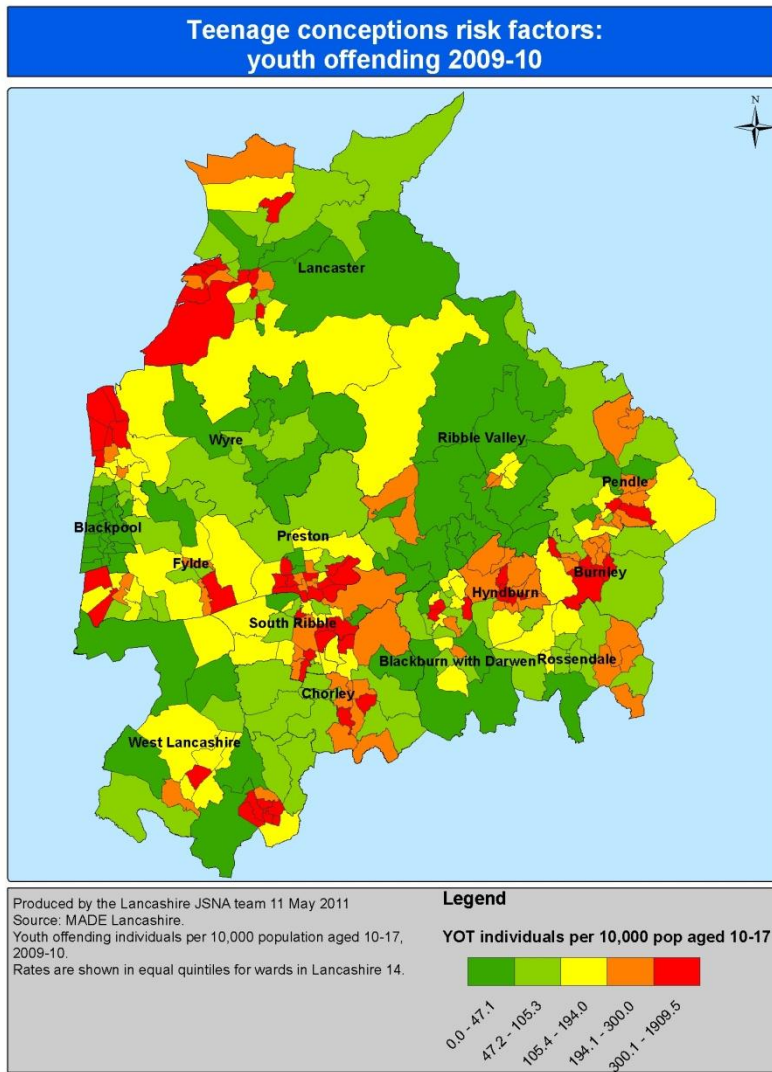




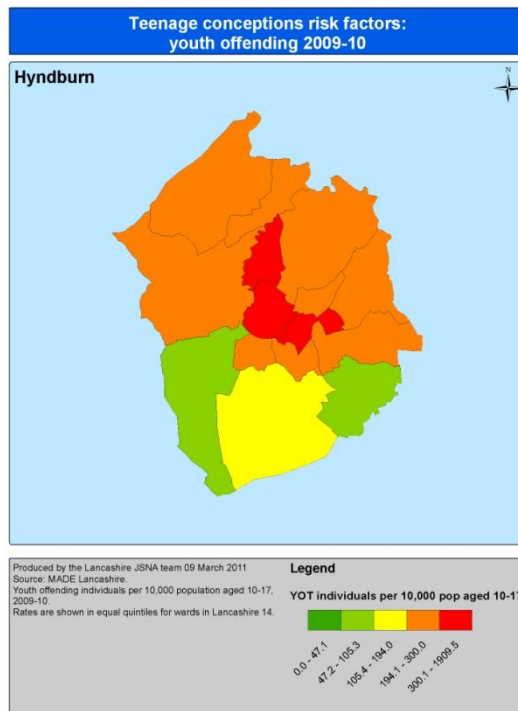
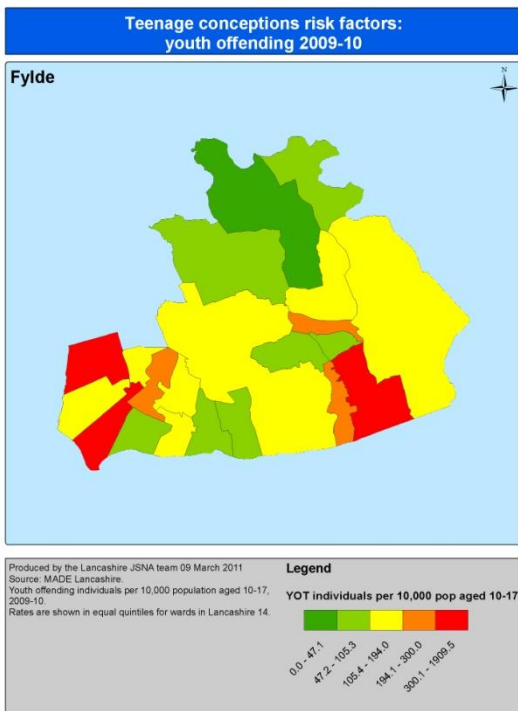
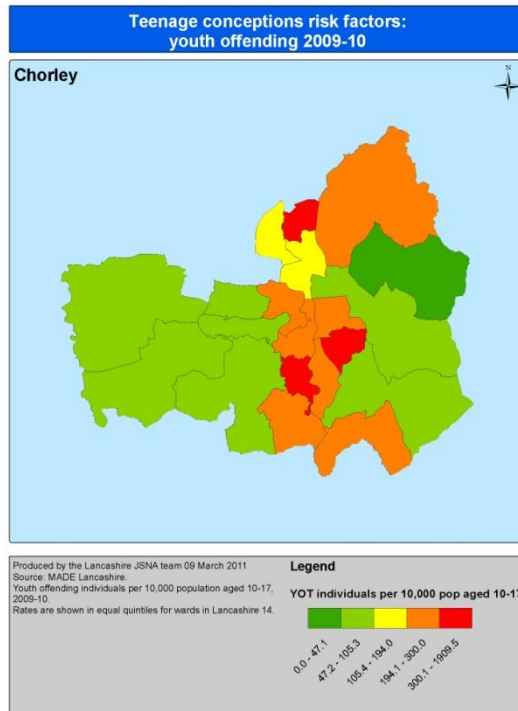
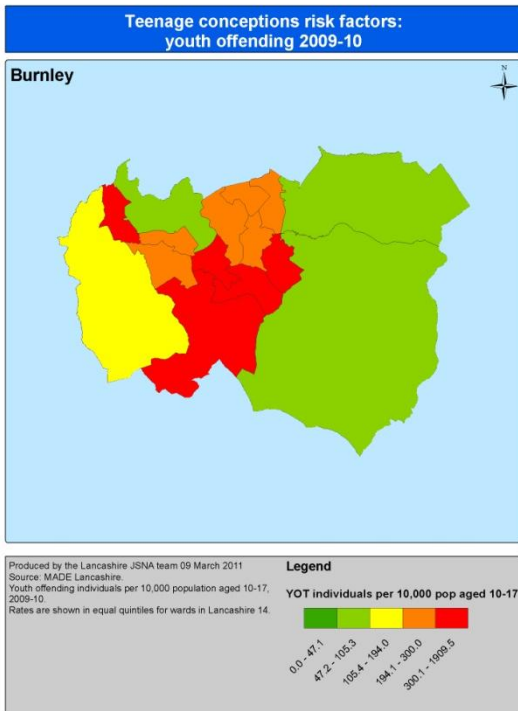
Youth offending

Young people who are involved in crime are one population sub-group vulnerable to becoming teenage parents⁶. Locally we found a positive correlation between rates of youth offending individuals and under 18 conceptions rates.

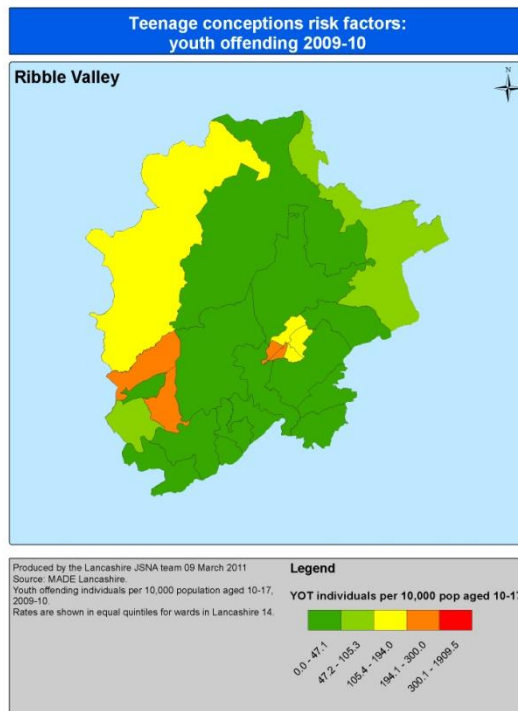
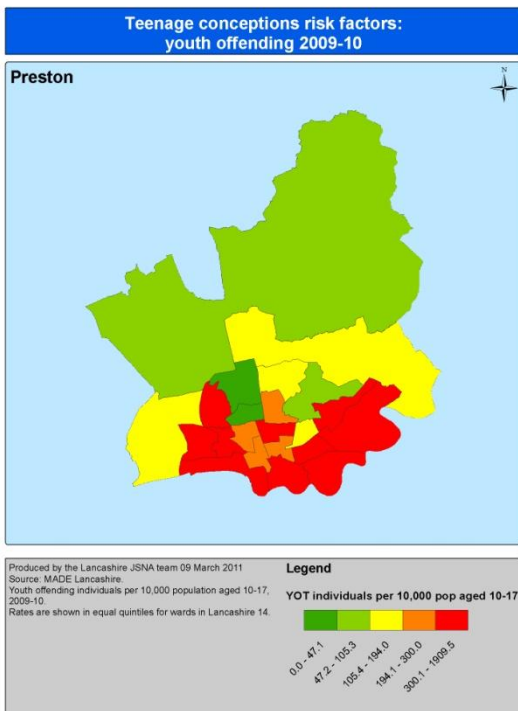
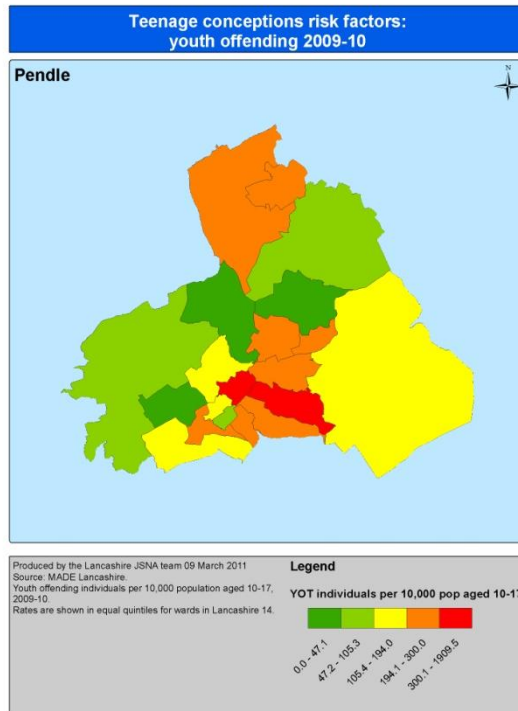
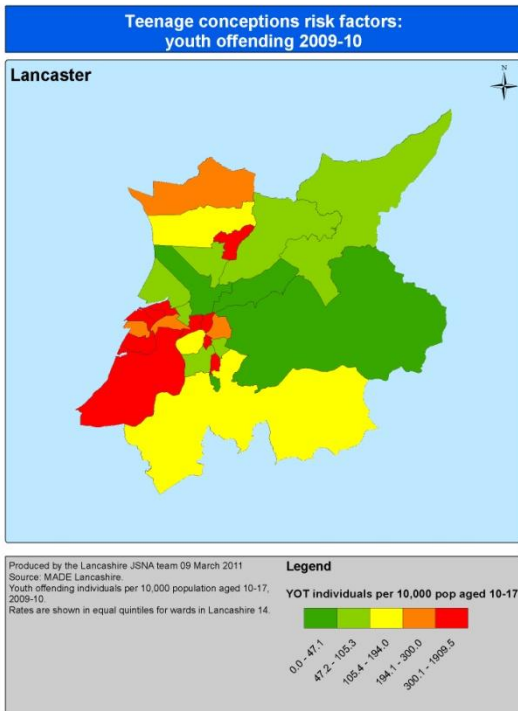
⁶ Swann et al (2003: 14)



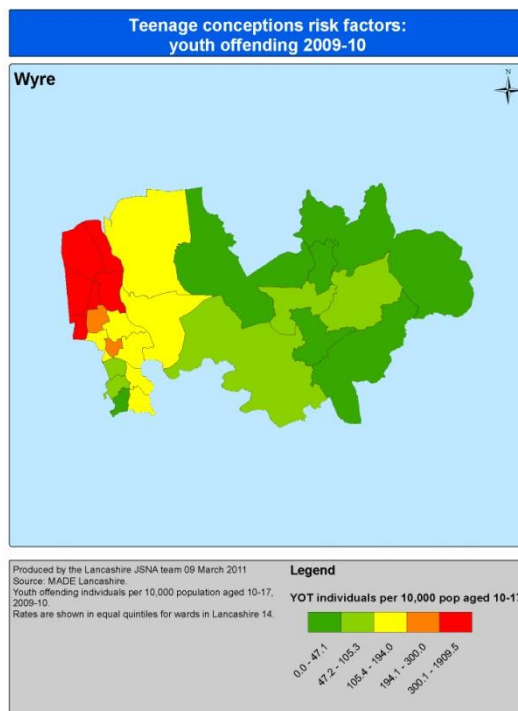
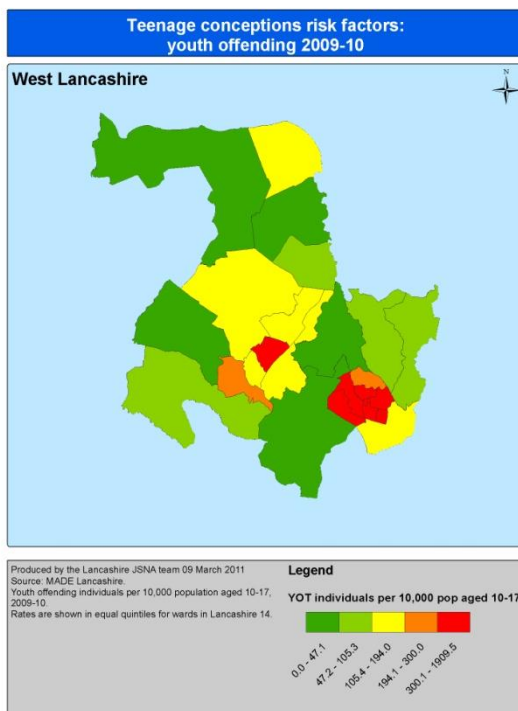
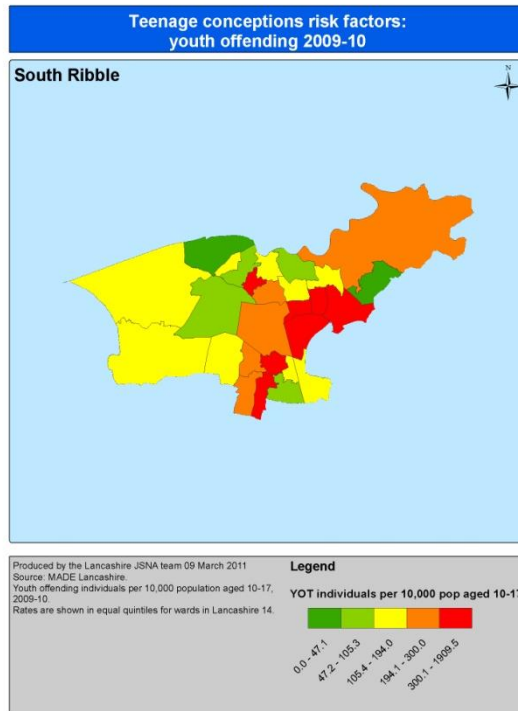
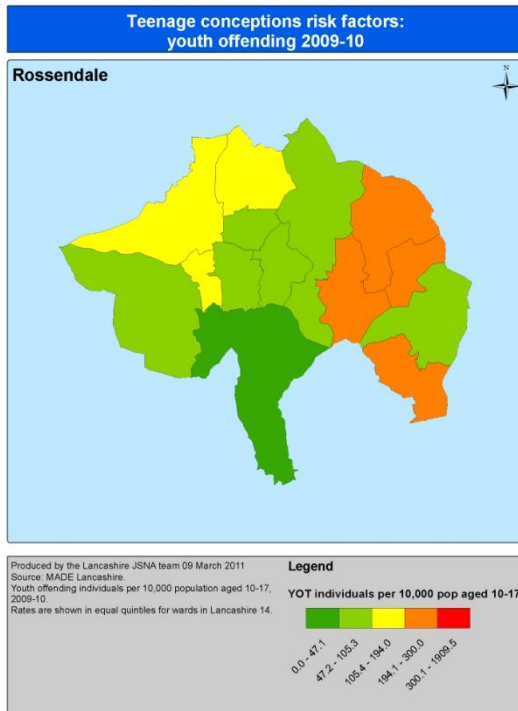
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Future risk

The table below shows those wards which are not currently teenage conceptions hotspots, but are found to have high rates of 7 or more of the 12 risk factors we have found to correlate strongly with teenage conceptions. This method identifies 25 wards which are currently statistically significant, hotspots and 32 which are not. It is likely that measures to reduce teenage conceptions are already in place in the 25 hotspot wards, but may not be in the 32 wards which are not currently hotspots that have high levels of many of the risk factors. These wards are at risk of becoming teenage conceptions hotspots in the future if preventative measures are not in place.

Table: Wards with high levels of 7 or more known risk factors, which are not currently teenage conceptions hotspots

District	Ward	Number of risk factors at high level
Blackburn with Darwen	Audley	7
Blackburn with Darwen	Higher Croft	7
Blackburn with Darwen	Wensley Fold	10
Blackpool	Brunswick	9
Blackpool	Clifton	9
Blackpool	Hawes Side	8
Blackpool	Victoria	9
Burnley	Bank Hall	10
Burnley	Daneshouse with Stoneyholme	8
Burnley	Gawthorpe	8
Burnley	Lanehead	7
Burnley	Rosegrove with Lowerhouse	9
Burnley	Rosehill with Burnley Wood	8
Hyndburn	Central	11
Lancaster	Heysham North	9
Lancaster	Poulton	9
Lancaster	Skerton West	10
Lancaster	Westgate	7
Pendle	Bradley	10
Pendle	Clover Hill	7
Pendle	Walverden	8
Pendle	Whitefield	7
Preston	Brookfield	11
Preston	Fishwick	10
Preston	Larches	8
Preston	Town Centre	10
Preston	University	8
South Ribble	Golden Hill	7
South Ribble	Lowerhouse	9
West Lancashire	Moorside	7
Wyre	Mount	9
Wyre	Rossall	8

Conclusions

This analysis identifies which risk factors are present in each area so that interventions can be targeted accordingly and are summarised below:

- Many of the areas with high levels of multiple risk factors are not teenage conceptions hotspots
- Some areas with average or low levels of many risk factors are nonetheless still teenage conceptions hotspots
- Early interventions could be taken in the areas with high levels of multiple risk factors which are not currently teenage conceptions hotspots.
- We have identified 32 wards across Lancashire 14 which are not currently teenage conceptions hotspots but where high levels of multiple risk factors are present. These areas are at risk of becoming teenage conceptions hotspots if early interventions are not put in place.

Recommendations

These maps should enable the targeting of upstream interventions to prevent under 18 conceptions, but also to consider commissioning of sexual health and other services in areas where they are currently not high to prevent the rise of teenage conceptions in those areas in the future. A full list of recommendations can be found in the main needs assessment report.

Further reading

This report should be taken within the context of the full Lancashire Teenage Pregnancy Needs Assessment 2011.