



Health Inequalities

Regional Report 2016

A product of NI Health and Social Care Inequalities Monitoring System



Biennial Publication
October 2016

Health Inequalities

Regional Report 2016

Authors: Dr Carey Bell, Adam Robinson & Caolan Laverty

Public Health Information & Research Branch, Information Analysis Directorate

Ext: 22501

☑ Email: healthinequalities@health-ni.gov.uk

http://www.health-ni.gov.uk/topics/dhssps-statistics-and-research/health-inequalities-statistics

For information on other Government statistics contact:
The Northern Ireland Statistics and Research Agency (NISRA)
McAuley House, 2-14 Castle Street, Belfast, BT1 1SA
Tel: 02890348100

Email: info.nisra@finance-ni.gov.uk

© Crown Copyright 2012. Published with the permission of the Controller of Her Majesty's Stationary Office.

This publication is Crown copyright and may be reproduced free of charge in any format or medium. Any material used must be acknowledged and sourced to the NI Health and Social Care Inequalities Monitoring System.





Information Analysis Directorate (IAD) sits within the **Department of Health** and carries out various statistical work and research on behalf of the department. It comprises four statistical areas: Hospital Information, Community Information, Public Health Information & Research and Project Support Analysis.

IAD is responsible for compiling, processing, analysing, interpreting and disseminating a wide range of statistics covering health and social care.

The statisticians within IAD are out-posted from the Northern Ireland Statistics & Research Agency (NISRA) and our statistics are produced in accordance with the principles and protocols set out in the UK Code of Practice for Official Statistics.

About Public Health Information and Research Branch

The role of Public Health Information and Research Branch (PHIRB) is to support the public health survey function and to provide support on public health issues within the Department. The head of the branch is the Principal Statistician, Mr. Bill Stewart.

In support of the public health survey function, PHIRB is involved in the commissioning, managing and publishing of results from departmental funded surveys, such as the Health Survey Northern Ireland, All Ireland Drug Prevalence Survey, Young Persons Behaviour & Attitudes Survey, and the Adult Drinking Patterns Survey.

PHIRB provides support to a range of key DoH NI strategies including Making Life Better, a 10 year cross-departmental public health strategic framework as well as a range of other departmental strategies such as those dealing with suicide, sexual health, breastfeeding, tobacco control and obesity prevention. It also has a key role in supporting the Alcohol and Drug New Strategic Direction 2011-2016, by maintaining and developing key departmental databases such as, the Drug Misuse Database, Impact Measurement Tool and the Census of Drug & Alcohol Treatment Services, which are all used to monitor drug misuse and treatments across Northern Ireland.

The branch also houses the NI Health and Social Care Inequalities Monitoring System which covers a range of different health inequality/equality based projects conducted for both the region as well as for more localised area levels.

Health Inequalities Regional Report 2016

CONTENTS

	PAGE NUMBER
INTRODUCTION	3
KEY FINDINGS	3
FORMAT OF THE REPORT	4
LIFE EXPECTANCY & GENERAL HEALTH	7
PREMATURE MORTALITY	10
MAJOR DISEASES	13
HOSPITAL ACTIVITY	15
MENTAL HEALTH	17
ALCOHOL, SMOKING & DRUGS	18
PREGNANCY & EARLY YEARS	21
DIET & DENTAL HEALTH	23
APPENDICIES	25
APPENDIX A: SOCIAL GRADIENT OF HEALTH	25
APPENDIX B: POPULATION ATTRIBUTABLE RISK (PAR) OF DEPRIVATION	31
APPENDIX C: ADDITIONAL INDICATORS	32
APPENDIX D: URBAN RURAL ANALYSIS	33
APPENDIX E: TECHNICAL NOTES & DEFINITIONS	43

Regional Report 2016 **Health Inequalities**

INTRODUCTION

This biennial publication is one of a series of reports produced as part of the NI Health & Social Care Inequalities Monitoring System (HSCIMS) and presents a comprehensive analysis of health inequality gaps between the most and least deprived areas of NI, across a range of indicators. The report is accompanied by downloadable data tables² which contain all figures including urban and rural breakdowns. In addition, the report is also accompanied by a set of infographics incorporating some of the main findings of the report.

KEY FINDINGS

- Life expectancy at birth has continued to improve across all areas of NI, with the inequality gap narrowing for males and remaining constant for females.
- Premature mortality rates have generally improved across NI, with inequality gaps remaining broadly similar. These gaps continue to be large with rates in the most deprived areas around two to three times that in the least deprived. The largest premature mortality gap was seen for respiratory disease, where the rate in the most deprived areas was over three times the rate in the least deprived areas.
- Inequality gaps for major disease related health outcomes have remained fairly constant over the period analysed, with the exception of respiratory admission rates where gaps widened.
- Inequality gaps related to mental health outcomes narrowed over the last five years, though the gaps remained large, with rates of suicide and self-harm admissions in the most deprived areas three and four times respectively the rate in the least deprived.
- Alcohol, smoking and drug related indicators continue to show some of the largest health inequalities monitored in NI despite a narrowing of gaps for alcohol related mortality and admissions, and drug related admissions.
- Despite improvements in the rate of teenage births over the period, the inequality gap has widened.

Largest I	 	
- 1 d o / - 1 St 1		

Most Notable Narrowing of Gaps

Most Notable Widening of Gaps

Teenage Birth Rate (U20)

SAR – Alcohol Related Causes

SDR - Drug Misuse

SDR – Alcohol Related Causes

Smoking During Pregnancy

SDR – Alcohol Related Causes

SAR – Self-Harm Admissions

SAR – Drug Related Causes

SAR – Alcohol Related Causes

Crude Suicide Rate

SDR – Drug Misuse

Teenage Birth Rate (U20)

Smoking During Pregnancy

SAR – Respiratory (U75)

SAR – Respiratory

Previously named 'Health Inequalities, NI Health & Social Care Inequalities Monitoring System - Regional'

² www.health-<u>ni.gov.uk/publications/ni-health-and-social-care-inequalities-monitoring-system-hscims-regional-2016</u>

Health Inequalities Regional Report 2016

FORMAT OF THE REPORT

This report is split into separate sections for each theme/topic area, with each section containing a summary of the key findings, followed by individual indicator analysis. For each indicator two charts are displayed. The first chart shows trends in rates over time for NI, its 20% most deprived areas and 20% least deprived areas, while the second shows the trend for the most-least deprived inequality gap over the same period. For ease of understanding each theme is assigned a separate colour (for example purple for premature mortality), with a deeper tone representing the 20% most deprived areas and a lighter tone the 20% least deprived.

In addition various symbols are provided that depict changes in the rates in the most deprived and least deprived areas, and in the most-least deprived inequality gap (see below). An improvement or decline in the rate is only indicated when the change is statistically significant, or where there is a clear and consistent trend observed over the series. For a notable change in the inequality gap to have occurred, a significant change in at least one of the areas (most/least deprived) has to have been observed, or, where no statistically significant change is apparent then a change in the gap will have deemed to have occurred if there is a clear and consistent trend in both the outcome and the gap over the analysed period. Table 3 overleaf can be used as a reference to aid the reader in understanding how indicated changes in the inequality gap in this report have been determined³.

Table 1: Indication of change to Indicator Rate

Changes in inequality gaps Widening of the gaps Gap remains constant

Table 2: Indication of change in Inequality Gap

Decline Most Deprived Areas MD No Notable Change Narrowing of the gaps LD Gap fluctuates **Least Deprived Areas** Improvement

It should be noted that inequality gaps for indicators can exist in either direction; however health outcomes generally tend to be worse in the most deprived areas than in the least deprived. For the purposes of this report, a positive value for the gap means that the health outcomes experienced in the most deprived areas were worse than in the least deprived.

³ It should be noted that any indicated changes are open to interpretation.

Regional Report 2016 Health Inequalities

Table 3: Understanding changes in the inequality gap

	Change in He	Inequality Gap	
	Most Deprived Areas	Least Deprived Areas	Symbol
	Small Improvement	Large Improvement	MD
	Decline	Improvement	MD
Gap Widens	Decline	Constant	(MD)
Gap	Large Decline	Small Decline	MD
	Constant	Improvement	MD
	Large Improvement	Small Improvement	\MD/
	Improvement	Decline	MD
Gap Narrows	Improvement	Constant) MD (
Gap	Small Decline	Large Decline	
	Constant	Decline) MD
	Improvement	Improvement	MD
	Decline	Decline	MD
Constant	Constant	Constant	MD LD
S	Small Decline (Red)/ Improvement/(Green)	Constant	MD
	Constant	Small Decline (Red)/ Improvement/(Green)	MD LD
Fluctuates	Fluctuates (Any combination of colour)	Fluctuates (Any combination of colour)	MD LD

Observed differences in the most and least deprived areas, as indicated by the symbol, does not always lead to a change in the gap. Where this has occurred an explanation has been provided where appropriate.

Health Inequalities Regional Report 2016

NOTES FOR USER

Inequality Gaps refer to the difference in outcomes between the 20% most deprived and 20% least deprived areas as defined according to the latest Northern Ireland Multiple Deprivation Measure.⁴

- Rounded Figures: some individual figures have been rounded to either zero or one decimal place independently. As a result, the sum of component items may not therefore always add to the totals shown.
- Additional Indicators: figures relating to five additional indicators such as Median Fire Response Times and Median Ambulance Response Times, which form part of the HSCIMS but are not contained in the main body of the report, can be found in Appendix C.
- Further Analysis: The appendix section included at the back of the report provides further analysis regarding the Social Gradient of Health (Appendix A) and the Population Attributable Risk (PAR) of Deprivation (Appendix B).
- Urban/Rural Figures: In addition urban and rural figures have been provided for each indicator, including the Rural-NI Gap (Appendix D).
- A number of data and indicator methodologies/definitions have been revised and as such figures may differ from those previously published. For further information regarding methodologies, indicator descriptions and sources of data used to produce the analyses in this report, please refer to Appendix E Technical Notes & Definitions.

A positive inequality gap means that the health outcomes in the most deprived areas are worse than in the least deprived areas.

Other routine reports in the HSCIMS series include:

Health Inequalities Sub-regional Report - Previously named 'Health Inequalities, NI Health & Social Care Inequalities Monitoring System - Sub-regional' and analyses health inequality gaps within NI's Health and Social Care Trusts and Local Government Districts.

Life Expectancy Decomposition Report - Previously named 'Health Inequalities, NI Health & Social Care Inequalities Monitoring System - Life Expectancy Decomposition: Explaining the Variations' and examines the causes that contribute to life expectancy gaps and changes over time.

Making life better: monitoring the wider social determinants of health & wellbeing - key indicators monitoring report into the key indicators of the wider social determinants of health & wellbeing, contained in the Making Life Better, the public health strategic framework for NI⁵.

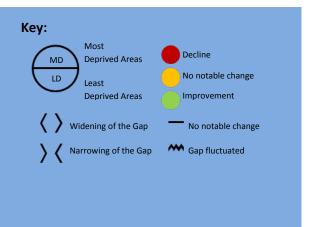
⁴ http://www.nisra.gov.uk/deprivation/nimdm 2010.htm

⁵ www.health-n<u>i.gov.uk/topics/public-health-policy-and-advice/making-life-better-whole-system-strategic-framework-public</u>

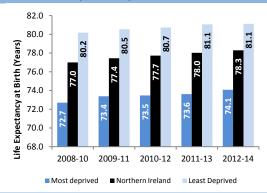
Life Expectancy & General Health

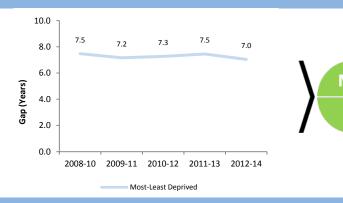
In 2012-14 the gender gap between life expectancy for males and females in Northern Ireland was 4.0 years.

Life expectancy at birth improved across all areas of NI for both genders. For males, life expectancy increased at a faster rate in the most deprived areas, which resulted in the inequality gap narrowing over the period. The gap for females remained constant. The male life expectancy at age 65 inequality gap remained constant over the period, while the gap widened for females. Inequality gaps for healthy life expectancy⁶ and disability free life expectancy⁶ for both genders remained fairly constant across the period.

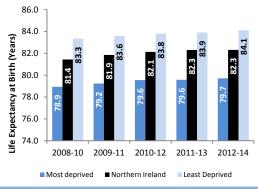


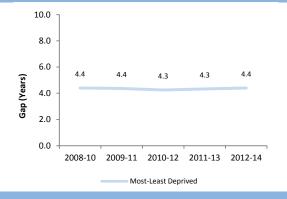
Male Life Expectancy at Birth





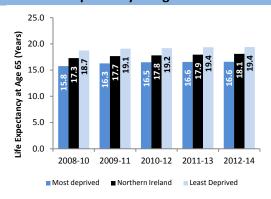
Female Life Expectancy at Birth

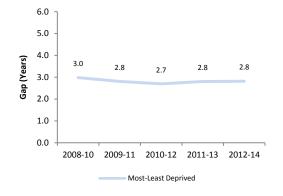






Male Life Expectancy at Age 65

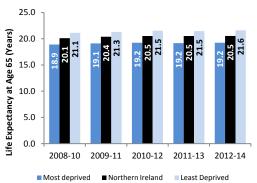


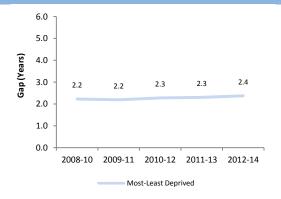




⁶ The calculation for Healthy Life Expectancy and Disability Free Life Expectancy has been revised to exclude Communal Establishments.

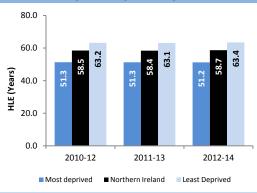


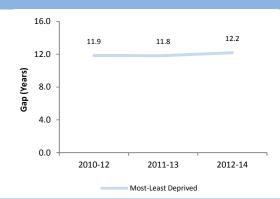






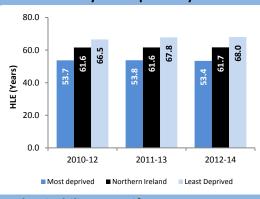
Male Healthy Life Expectancy

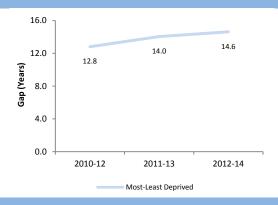






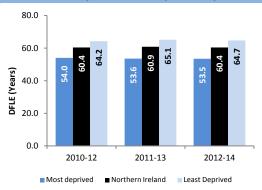
Female Healthy Life Expectancy

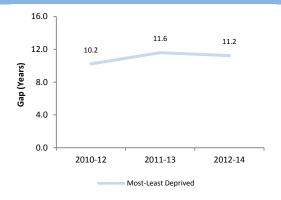






Male Disability Free Life Expectancy

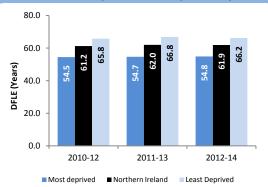


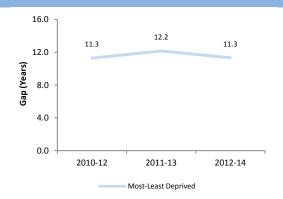




⁷ Changes in the rates within the most and least deprived areas were not statistically significant; as such, what appears to be a widening of the inequality gap cannot be reliably determined over such a short time period.

Female Disability Free Life Expectancy



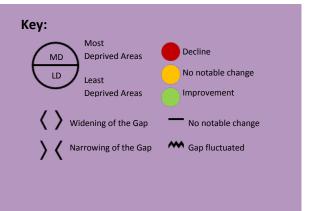


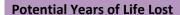


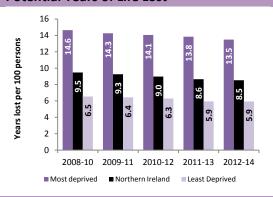
Premature Mortality Regional Report 2016

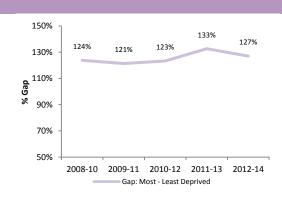
Premature Mortality

Generally premature mortality⁸ decreased over the period in NI and both its most and least deprived areas. Inequality gaps remained broadly similar over the period with the exception of death rates due to circulatory disease and to respiratory disease, where the gaps between the most and least deprived areas widened. These gaps remain large with mortality in the most deprived areas ranging from almost double that in the least deprived areas for cancer mortality (76%), to more than three times that for respiratory deaths (236%).



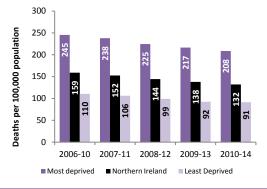


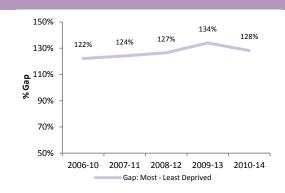






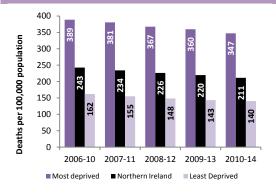
Standardised Death Rate - Amenable

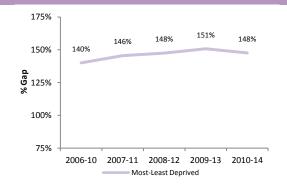






Standardised Death Rate - Preventable



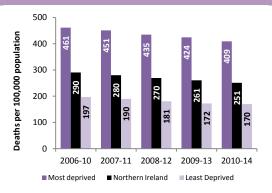


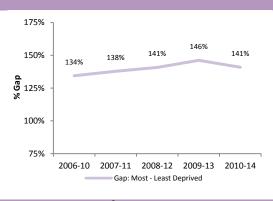


⁸ Individual indicator definitions can be found in Appendix E.

Regional Report 2016 Premature Mortality

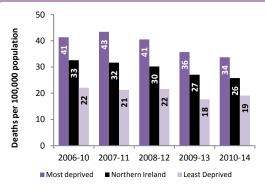
Standardised Death Rate - Avoidable

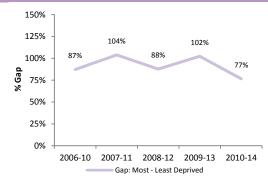






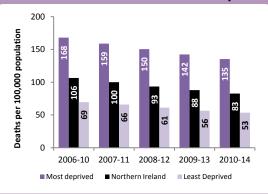
Standardised Death Rate – Avoidable: Children & Young People⁹

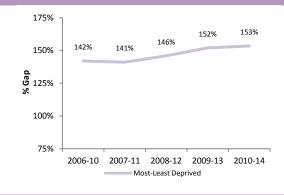






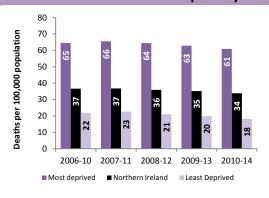
Standardised Death Rate - Circulatory U75

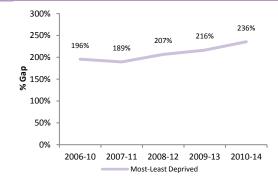






Standardised Death Rate - Respiratory U75





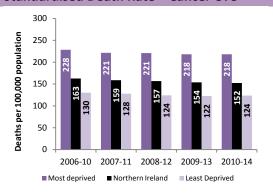


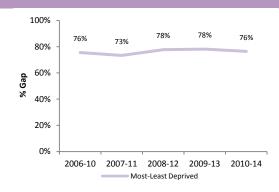
⁹ Given the relatively small numbers and large variability in specific causes of childhood deaths, interpretation should be made with caution and this indicator should be treated as an experimental statistic.

¹⁰ Changes in the rates within the most and least deprived areas were not statistically significant; however a clear and consistent trend was observed across the region and as such, the widening of the inequality gap was determined to have occurred.

Premature Mortality Regional Report 2016

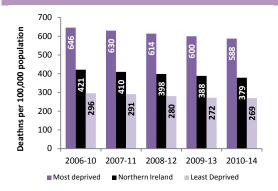
Standardised Death Rate – Cancer U75

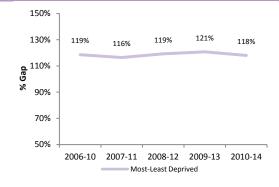






Standardised Death Rate - All Cause U75





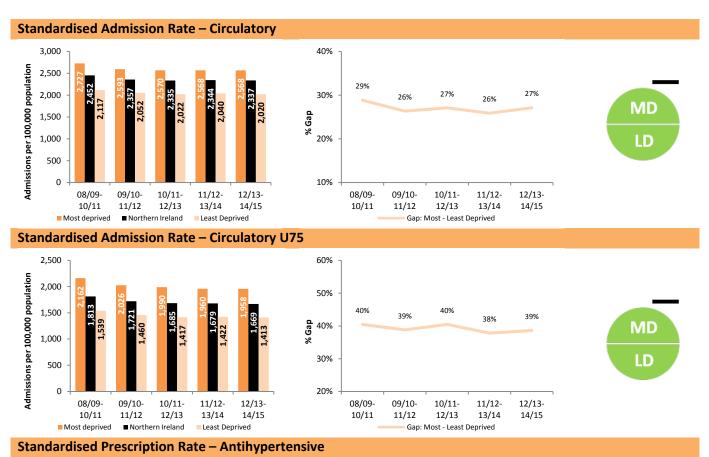


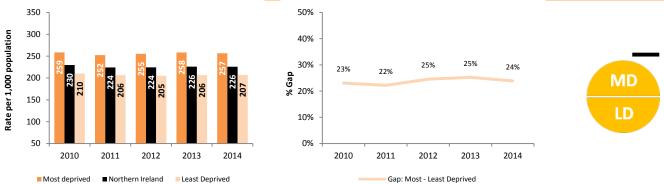
Regional Report 2016 Major Diseases

Major Diseases¹¹

Inequality gaps in health outcomes for 'major diseases' remained fairly constant over the period, with the exception of admission rates due to respiratory disease, where the gaps between the most and least deprived areas widened. Furthermore, admissions for respiratory disease showed the largest inequality gaps among the major disease indicators with the rate in the most deprived areas double the rate in the least deprived for all ages, and more than double for those aged under 75 years.



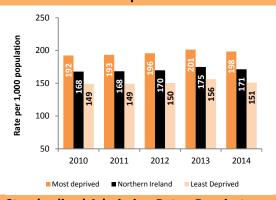


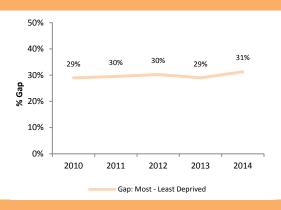


¹¹ Mental health related conditions, alcohol and drug related conditions; are considered in separate chapters.

Major Diseases Regional Report 2016

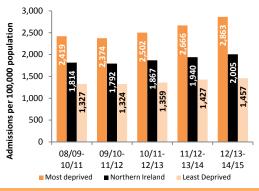
Standardised Prescription Rate - Statin

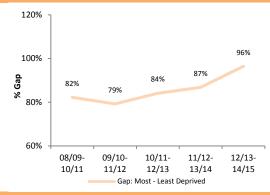






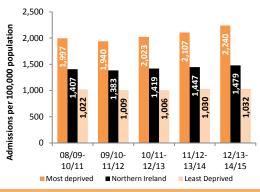
Standardised Admission Rate - Respiratory

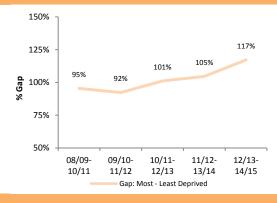






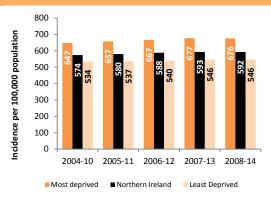
Standardised Admission Rate – Respiratory U75

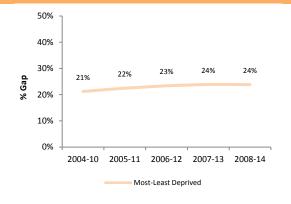






Standardised Incidence Rate - Cancer







¹² Despite a statistically significant increase in the rate in the most deprived areas, an observed increase in the least deprived areas which was not significant, meant the gap remained consistent.

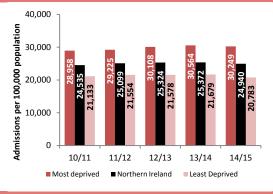
Regional Report 2016 Hospital Activity

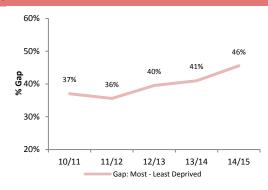
Hospital Activity

Inequality gaps for elective inpatient, day case and all admissions increased over the period 2010/11 to 2014/15. Despite no notable change in the gap for emergency admissions, it still showed the largest inequality of the four indicators analysed, with the rate in the most deprived areas over three-quarters (77%) higher than that seen in the least deprived areas. The Population Attributable Risk (PAR) indicates that 29% of emergency admissions in NI were attributable to deprivation ¹³.



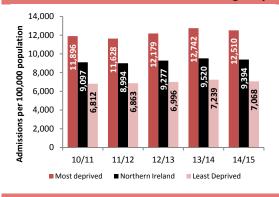
Standardised Admission Rate - All Admissions

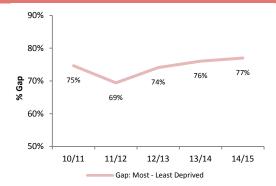






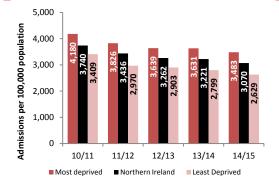
Standardised Admission Rate - Emergency Admissions

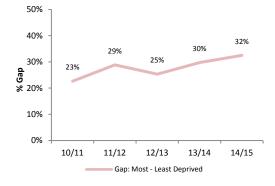






Standardised Admission Rate – Elective Inpatient Admissions



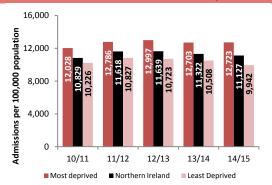


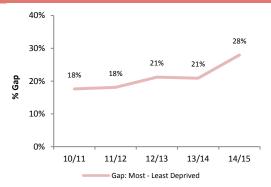


¹³ For further information on Population Attributable Risk (PAR) refer to Appendix B.

Hospital Activity Regional Report 2016

Standardised Admission Rate – Day Case Admissions

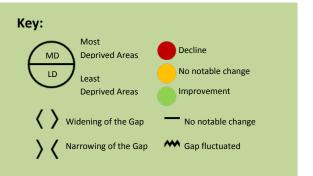




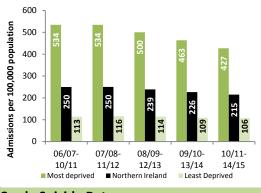


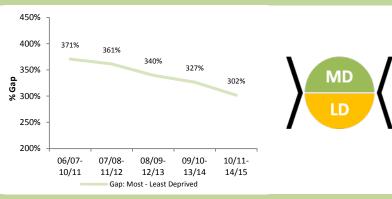
Mental Health

Inequality gaps for mental health indicators narrowed over the last five years. Despite this narrowing, the gaps for self-harm admissions and suicide remained large with the self-harm admission rate in the most deprived areas four times, and the crude suicide rate almost treble, that seen in the least deprived areas. The rate for mood and anxiety prescriptions was 69% higher in the most deprived areas than in the least deprived.

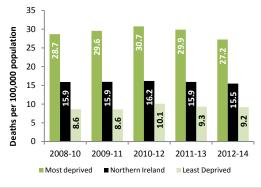


Standardised Admission Rate - Self-Harm Admissions



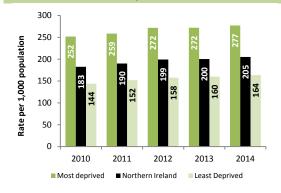


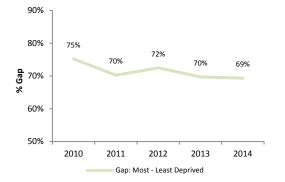
Crude Suicide Rate





Standardised Prescription Rate - Mood & Anxiety

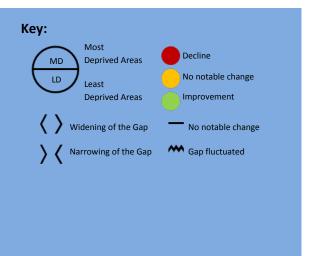




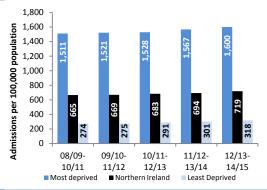


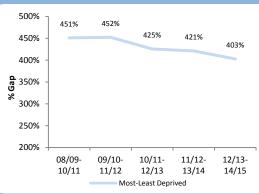
Alcohol, Smoking & Drugs

Alcohol, smoking and drug related indicators show some of the largest health inequalities monitored in NI. For alcohol related mortality and admissions the inequality gaps narrowed over the period analysed, but remained very large with the alcohol related admissions rate in the most deprived areas five times, and for alcohol related mortality more than four times, the rate in the least deprived areas. Inequality gaps for drug related admissions and mortality remained large over the period, even with an improvement in the inequality gap for drug related admissions. The Population Attributable Risk (PAR) indicates that alcohol-related admissions to hospital in NI could be reduced by 61% if all areas experienced the same level of deprivation as the least deprived areas¹⁴.



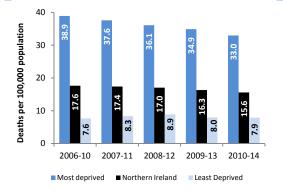
Standardised Admission Rate – Alcohol Related Causes

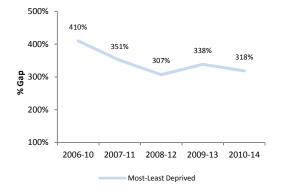






Standardised Death Rate - Alcohol Related Causes

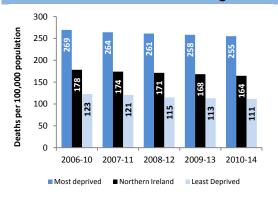


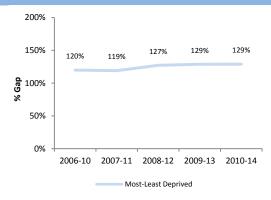




 $^{^{14}}$ For further information on Population Attributable Risk (PAR) refer to Appendix B.

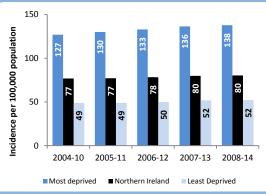
Standardised Death Rate - Smoking Related Causes

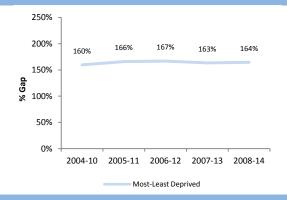






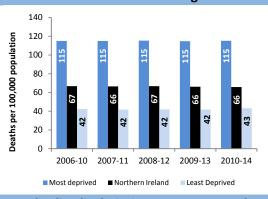
Standardised Incidence Rate - Lung Cancer

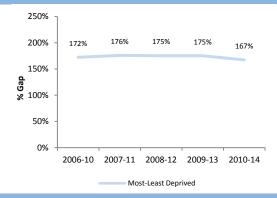






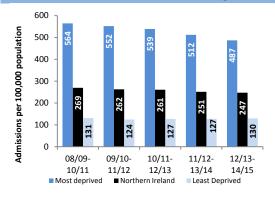
Standardised Death Rate - Lung Cancer

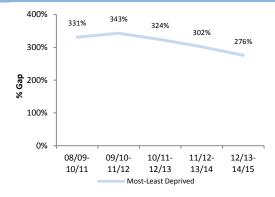






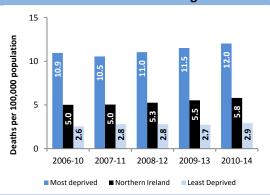
Standardised Admission Rate - Drug Related Causes

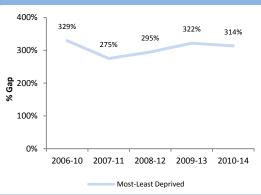






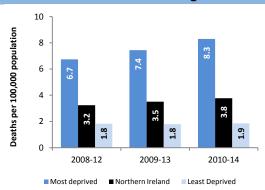
Standardised Death Rate – Drug Related Causes

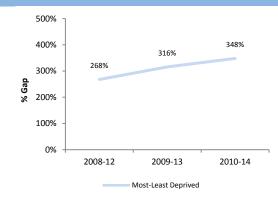






Standardised Death Rate - Drug Misuse







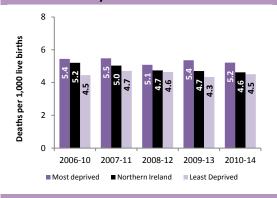
¹⁵ Despite the indication that the inequality gap widened, this should be taken with a degree of caution due to the small numbers of deaths due to drug misuse and the time series being limited to just three years.

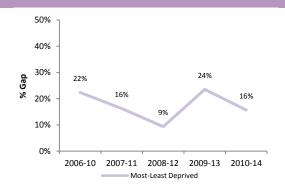
Pregnancy & Early Years

Changes in inequality gaps for health outcomes related to pregnancy and early years tended to vary over the period analysed. Inequality gaps for teenage births and smoking during pregnancy widened over the period, despite improvements in rates across the region. The teenage birth rate in the most deprived areas was five times the rate in the least deprived and the proportion of mothers reporting smoking in pregnancy in the most deprived areas was more than four times that in the least deprived. PAR indicates that two-thirds of teenage births could be related to deprivation.



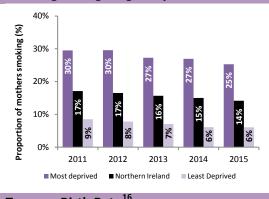
Infant Mortality Rate

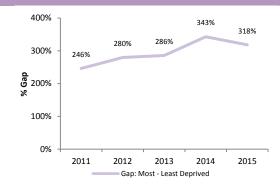






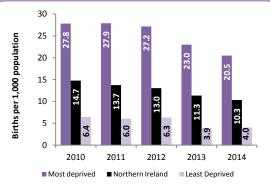
Smoking During Pregnancy

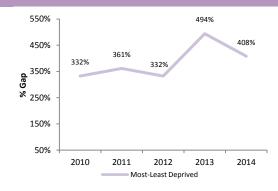






Teenage Birth Rate¹⁶

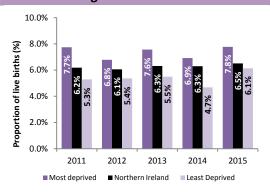


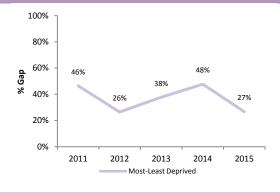




 $^{^{16}}$ The teenage birth rate refers to mothers between 13 and 19 years of age.

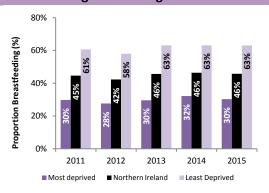
Low Birth Weight 17

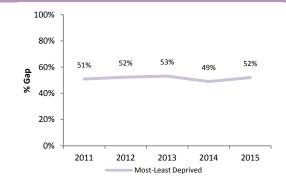






Breastfeeding on Discharge







¹⁷ Previously presented as a five year rolling average and as such figures will differ from those published in previous years.

Regional Report 2016

Diet & Dental Health

4.0%

2.0%

0.0%

2010/11 2011/12 2012/13 2013/14 2014/15

Least Deprived

■ Most deprived ■ Northern Ireland

Generally, inequality gaps relating to levels of childhood overweight or obesity¹⁸ fluctuated over the period analysed, with the exception of Primary 1 BMI: Overweight or Obese which widened, despite improvements in rates across the region. The inequality gap for dental registrations narrowed over the period, with improvements in the proportion of the population registered with a dentist seen in both the most and least deprived areas.





50%

0%

48%

2010/11 2011/12 2012/13 2013/14 2014/15

Gap: Most - Least Deprived

חו

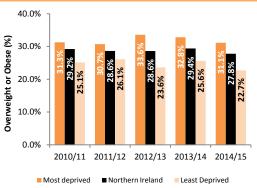
See note 19

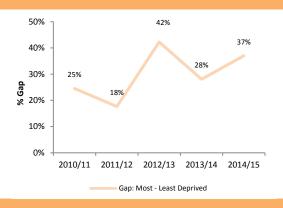
¹⁸ The inclusion criteria used to identify those children in Primary 1 and Year 8 were updated and as such figures may differ from those published in previous years, for more information refer to the Indicator Definitions section in Appendix E.

¹⁹ Despite the inequality gap fluctuating it should be noted that by the end of the five year period (2014/15) the inequality gap had reached its highest value of 101%.

Diet & Dental Health Regional Report 2016

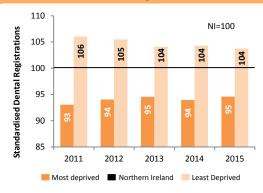
Year 8 BMI: Overweight or Obese

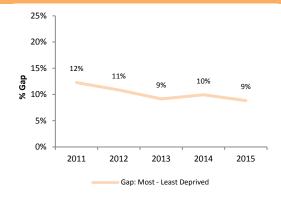






Standardised Dental Registrations







²⁰The reported improvement in dental registrations in both the most and least deprived areas was based on the overall proportion of the population on the medical register who were registered with a dentist in 2011 and 2015, rather than the indirectly standardised rate. Indirectly standardised rates are presented relative to the overall rate in the population, therefore an increase in registrations in the least deprived areas, but at a slower rate than that in NI, will lead to the indirectly standardised rate decreasing. For further information refer to the indicator definitions in appendix E.

Regional Report 2016 Appendices

APPENDICIES

APPENDIX A: SOCIAL GRADIENT OF HEALTH

Health inequalities are often considered in terms of the gap between the most and least deprived quintiles of the population. However this does not account for those areas of intermediate levels of deprivation that may also be relatively disadvantaged in terms of their health status. The Marmot Review²¹ demonstrated that there is a social gradient in health that runs from top to bottom of the socioeconomic spectrum, meaning that health inequalities affect everyone. There is consistent evidence from throughout the world that people at a socioeconomic disadvantage suffer a heavier burden of illness and have higher mortality rates than their better off counterparts.

Different inequality measures can give information about different aspects of inequalities. Some measures concentrate on the extremes of deprivation such as the most-least deprived (*or absolute*) gap analysis presented in the main body of this report, whilst others include relative inequality gaps across the socioeconomic scale – taking into account the whole population - and can give quite different interpretations of inequalities. Therefore, in addition to the most-least deprived (*or absolute*) gap analysis presented in this report, a social gradient analysis using the Relative Index of Inequalities (RII) has been undertaken to provide a fuller assessment of inequalities.

Absolute gap (most-least deprived gap): This measure describes the absolute difference between the extremes of deprivation. It has the advantage that it is intuitive and straightforward to explain, but the disadvantage that, because it focuses only on the extremes of deprivation, it does not take account of patterns of inequalities observed across the intermediate groups.

Relative Index of Inequalities (RII): The RII describes the gradient of health observed across the deprivation scale, relative to the average for the observed population (by dividing the Slope of Index of Inequality (SII) by the mean). RII has the advantage that it is based on data about the whole population, rather than just the extremes of deprivation. The value of RII tells you the magnitude of inequality in relation to the mean thus representing the proportionate change in the health outcome across the population. It allows inequalities to be compared and contrasted across a number of different health indicators, and also to be monitored over time.

For further information regarding the RII methodology, including how it is calculated, please refer to the NI Health & Social Care Inequalities Monitoring System – Regional 2014 report: https://www.health-ni.gov.uk/publications/ni-health-and-social-care-inequalities-monitoring-system-hscims-regional-2014

2.

²¹ Fair Society, Healthy Lives: The Marmot Review can be accessed at http://www.instituteofhealthequity.org/projects/fair-society-healthy-lives-the-marmot-review

Appendices Regional Report 2016

RESULTS

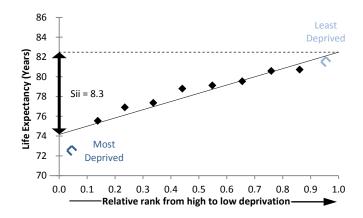
Social gradient analyses were carried out for the majority of indicators included in the HSCIMS. For some indicators this analysis could not be performed due to limitations on the level of data available. An explanatory interpretation of RII results is provided for life expectancy at birth for both genders below, with a time series for the Absolute Gap (most-least deprived) and Relative Index of Inequality (RII) for all other indicators provided in Table 4.

The symbols used in the main body of the report to show the change in the inequality gap indicated by the absolute gap analysis, have also been included in the table for each indicator. Changes in the inequality gap indicated by the RII analysis are only presented where the conclusion of the RII analysis differs from that of the absolute gap analysis.

Male Life Expectancy at Birth

Year	2008-10	2009-11	2010-12	2011-13	2012-14
Absolute Gap (Most-Least Deprived) ²²	7.5	7.2	7.3	7.5	7.0
Relative Index of Inequality (RII)	0.11	0.10	0.11	0.11	0.11

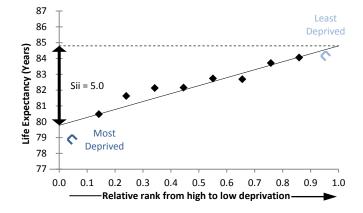
The Relative Index of Inequality (RII) gives a proportionate gap of 0.11, meaning that the gradient in male life expectancy observed across the deprivation scale of 8.3 years is equivalent to 11% of the average male life expectancy in NI. The RII indicates that the deprivation gap remained similar across the period analysed, however this is in contrast to the absolute gap which showed a narrowing.



Female Life Expectancy at Birth

Year	2008-10	2009-11	2010-12	2011-13	2012-14
Absolute Gap (Most-Least Deprived)	4.4	4.4	4.3	4.3	4.4
Relative Index of Inequality (RII)	0.06	0.06	0.06	0.06	0.06

The RII gives a proportionate gap of 0.06, meaning that the gradient in female life expectancy observed across the deprivation scale of 5.0 years is equivalent to 6% of the average female life expectancy in NI. As with the absolute gap analysis, RII indicates that the deprivation gap remained similar across the period.



²² Calculation is deprivation quintile based i.e. difference between 20% most and least deprived areas.

Regional Report 2016 Appendices

Table 4: Social Gradient Analysis of Indicators

Assessment of changes in the inequality gap presented in the table below, are taken from the analysis carried out in the main body of the report, for further explanation surrounding these changes it is advised to refer to the corresponding chapter.

Indicator		Time Series				
Male Life Expectancy at Age 65 New		2008-10	2009-11	2010-12	2011-13	2012-14
Absolute Gap (Most–Least Deprived)	_	3.0	2.8	2.7	2.8	2.8
Relative Index of Inequality (RII)		0.19	0.18	0.18	0.19	0.19
Female Life Expectancy at Age 65 New		2008-10	2009-11	2010-12	2011-13	2012-14
Absolute Gap (Most–Least Deprived)	〈 〉	2.2	2.2	2.3	2.3	2.4
Relative Index of Inequality (RII)	<u>~</u>	0.13	0.12	0.12	0.13	0.13
Potential Years of Life Lost		2008-10	2009-11	2010-12	2011-13	2012-14
Absolute Gap (Most–Least Deprived)	_	124%	121%	123%	133%	128%
Relative Index of Inequality (RII)		0.99	0.96	0.97	1.02	1.02
SDR- Amenable Revised		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	_	122%	124%	127%	134%	128%
Relative Index of Inequality (RII)		1.01	1.01	1.02	1.04	1.03
SDR – Preventable Revised		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	_	140%	146%	148%	151%	148%
Relative Index of Inequality (RII)		1.10	1.12	1.11	1.12	1.12
SDR – Avoidable Revised		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)		134%	138%	141%	146%	141%
Relative Index of Inequality (RII)		1.07	1.08	1.08	1.09	1.09
SDR - Avoidable Children & Young People New		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	~	87%	104%	88%	102%	77%
Relative Index of Inequality (RII)	,,,,,	0.70	0.82	0.80	0.77	0.67
SDR - Circulatory (U75)		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	/\	142%	141%	146%	152%	153%
Relative Index of Inequality (RII)	〈 〉	1.11	1.07	1.09	1.11	1.14
SDR - Respiratory (U75)		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	〈 〉	196%	189%	2008-12	216%	236%
Relative Index of Inequality (RII)	()	1.37	1.37	1.42	1.43	1.50
SDR - Cancer (U75)		2006-10	2007-11	2008-12	2009-13	2010-14
		76%	73%	78%	78%	76%
Absolute Gap (Most–Least Deprived)		0.68	0.67	0.70	0.69	0.71
Relative Index of Inequality (RII)		2006-10	2007-11	2008-12	2009-13	2010-14
SDR - All Cause Mortality (U75)						
Absolute Gap (Most–Least Deprived)	_	119%	116%	119%	121%	118%
Relative Index of Inequality (RII)		0.97	0.95 2009/10-	0.95 2010/11-	0.95 2011/12-	0.96
CAR Circulatory		10/11	11/12	12/13	13/14	2012/13- 14/15
SAR - Circulatory Absolute Cap (Mast Least Deprised)		29%	26%	27%	26%	27%
Absolute Gap (Most–Least Deprived) Relative Index of Inequality (RII)	_					0.27
Relative index of inequality (RII)		0.26	0.25	0.25 2010/11-	0.24 2011/12-	2012/13-
SAR - Circulatory (U75)		10/11	11/12	12/13	13/14	14/15
Absolute Gap (Most–Least Deprived)	_	40%	39%	40%	38%	39%
Relative Index of Inequality (RII)		0.38	0.38	0.39	0.37	0.39
SPR - Antihypertensive			2011	2012	2013	
		2010				2014
Absolute Gap (Most–Least Deprived)	_	23%	22%	25%	25%	24%
Relative Index of Inequality (RII)		0.23	0.22	0.25	0.26	0.24
SPR - Statin		2010	2011	2012	2013	2014
Absolute Gap (Most–Least Deprived)		29%	30%	30%	29%	31%
Relative Index of Inequality (RII)		0.30	0.31	0.32	0.30	0.32
CAD Decoirates		2008/09-	2009/10-	2010/11-	2011/12-	2012/13-
SAR - Respiratory	/\	10/11	11/12	12/13	13/14	14/15
Absolute Gap (Most–Least Deprived)	〈〉	82%	79%	84%	87%	96%
Relative Index of Inequality (RII)		0.68	0.67	0.70	0.73	0.79

Appendices Regional Report 2016

Indicator		Time Series				
		2008/09-	2009/10-	2010/11-	2011/12-	2012/13-
SAR - Respiratory (U75)		10/11	11/12	12/13	13/14	14/15
Absolute Gap (Most–Least Deprived)	()	95%	92%	101%	105%	117%
Relative Index of Inequality (RII)		0.72	0.71	0.75	0.78	0.87
SIR - Cancer		2004-10	2005-11	2006-12	2007-13	2008-14
Absolute Gap (Most–Least Deprived)	_	21%	22%	23%	24%	24%
Relative Index of Inequality (RII)		0.22	0.23	0.24	0.24	0.25
SAR - All Admissions		2010/11	2011/12	2012/13	2013/14	2014/15
Absolute Gap (Most–Least Deprived)	〈〉	37%	36%	40%	41%	46%
Relative Index of Inequality (RII)		0.36	0.35	0.38	0.40	0.44
SAR - Emergency Admissions		2010/11	2011/12	2012/13	2013/14	2014/15
Absolute Gap (Most–Least Deprived)	_	75%	69%	74%	76%	77%
Relative Index of Inequality (RII)		0.64	0.62	0.65	0.66	0.68
SAR - Elective Inpatient Admissions		2010/11	2011/12	2012/13	2013/14	2014/15
Absolute Gap (Most–Least Deprived)	〈〉	23%	29%	25%	30%	32%
Relative Index of Inequality (RII)		0.23	0.28	0.27	0.29	0.31
SAR - Day Case Admissions		2010/11	2011/12	2012/13	2013/14	2014/15
Absolute Gap (Most–Least Deprived)	〈 〉	18%	18%	21%	21%	28%
Relative Index of Inequality (RII)		0.18	0.18	0.20	0.22	0.28
CAD Colf Harms Advaiceiana		2006/07-	2007/08-	2008/09-	2009/10-	2010/11-
SAR – Self-Harm Admissions	\ /	10/11	11/12	12/13	13/14	14/15
Absolute Gap (Most–Least Deprived)	><	371%	361%	340%	327%	302%
Relative Index of Inequality (RII)		1.92 2008-10	1.91 2009-11	1.84 2010-12	1.79 2011-13	1.73 2012-14
Crude Suicide Rate	\ /	232%	244%	2010-12	2011-13	196%
Absolute Gap (Most–Least Deprived)	><	1.40	1.42	1.33	1.38	1.18
Relative Index of Inequality (RII) SPR - Mood & Anxiety		2010	2011	2012	2013	2014
Absolute Gap (Most–Least Deprived)	\ /	75%	70%	72%	70%	69%
Relative Index of Inequality (RII)	><	0.68	0.65	0.65	0.64	0.64
Relative index of inequality (Kil)		2008/09-	2009/10-	2010/11-	2011/12-	2012/13-
SAR - Alcohol Related Causes		10/11	11/12	12/13	13/14	14/15
Absolute Gap (Most–Least Deprived)	><	451%	452%	425%	421%	403%
Relative Index of Inequality (RII)	, ,	2.11	2.11	2.08	2.09	2.06
SDR - Alcohol Related Causes		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	><	410%	351%	307%	338%	318%
Relative Index of Inequality (RII)		2.06	1.95	1.80	1.86	1.79
SDR - Smoking Related Causes		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	()	120%	119%	127%	129%	129%
Relative Index of Inequality (RII)		0.94	0.94	0.98	0.99	1.00
SIR - Lung Cancer		2004-10	2005-11	2006-12	2007-13	2008-14
Absolute Gap (Most–Least Deprived)	_	160%	166%	167%	163%	164%
Relative Index of Inequality (RII)		1.16	1.20	1.19	1.18	1.18
SDR - Lung Cancer		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	_	172%	176%	175%	175%	167%
Relative Index of Inequality (RII)		1.21	1.23	1.24	1.24	1.25
		2008/09-	2009/10-	2010/11-	2011/12-	2012/13-
SAR - Drug Related Causes		10/11	11/12	12/13	13/14	14/15
Absolute Gap (Most–Least Deprived)	><	331%	343%	324%	302%	276%
Relative Index of Inequality (RII)		1.82	1.84	1.79	1.75	1.67
SDR - Drug Related Causes		2006-10	2007-11	2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	~	329%	275%	295%	322%	314%
Relative Index of Inequality (RII)		1.95	1.86	1.82	1.84	1.89

Regional Report 2016 Appendices

Indicator		Time Series				
SDR - Drug Misuse				2008-12	2009-13	2010-14
Absolute Gap (Most–Least Deprived)	〈 〉			268%	316%	348%
Relative Index of Inequality (RII)	• • •			1.79	1.83	1.97
Smoking During Pregnancy		2011	2012	2013	2014	2015
Absolute Gap (Most–Least Deprived)	〈 〉	246%	280%	286%	343%	318%
Relative Index of Inequality (RII)		1.47	1.60	1.58	1.65	1.63
Teenage Birth Rate (U20)		2010	2011	2012	2013	2014
Absolute Gap (Most–Least Deprived)	〈 〉	332%	361%	332%	494%	408%
Relative Index of Inequality (RII)		1.72	1.74	1.83	1.88	1.75
Low Birth Weight		2011	2012	2013	2014	2015
Absolute Gap (Most–Least Deprived)	***	46%	26%	38%	48%	27%
Relative Index of Inequality (RII)		0.53	0.18	0.37	0.28	0.33
Breastfeeding on Discharge		2011	2012	2013	2014	2015
Absolute Gap (Most–Least Deprived)	_	51%	52%	53%	49%	52%
Relative Index of Inequality (RII)		0.78	0.81	0.79	0.75	0.81
Primary 1 BMI: Obese		2010/11	2011/12	2012/13	2013/14	2014/15
Absolute Gap (Most–Least Deprived)	><	125%	136%	52%	86%	85%
Relative Index of Inequality (RII)	_	0.72	0.75	0.46	0.47	0.74
Primary 1 BMI: Overweight or Obese New		2010/11	2011/12	2012/13	2013/14	2014/15
Absolute Gap (Most–Least Deprived)	><	37%	28%	28%	28%	32%
Relative Index of Inequality (RII)	<u>~`</u>	0.33	0.24	0.31	0.23	0.34
Year 8 BMI: Obese		2010/11	2011/12	2012/13	2013/14	2014/15
Absolute Gap (Most–Least Deprived)	~	74%	57%	70%	62%	117%
Relative Index of Inequality (RII)		0.52	0.61	0.64	0.56	0.65
Year 8 BMI: Overweight or Obese New		2010/11	2011/12	2012/13	2013/14	2014/15
Absolute Gap (Most–Least Deprived)	~	27%	17%	40%	26%	41%
Relative Index of Inequality (RII)		0.24	0.18	0.38	0.27	0.31

Changes in Inequality Gaps

In contrast to the absolute gap analysis which suggested that the most-least deprived gaps for female life expectancy at age 65 widened, the RII indicated no proportionate change. In addition, where the absolute gap narrowed for male life expectancy at birth, Primary 1 BMI: Obese and Primary 1 BMI: Overweight or Obese, the proportionate gap, as indicated by RII, remained similar over the analysed period. This suggests that the level of inequality across the population remained broadly similar for these indicators, despite variation in the gap between the most and least deprived quintiles.

Appendices Regional Report 2016

Ranking of Inequality Gaps

The table below displays, in rank order from largest to smallest, the ten indicators with the largest inequality gaps as identified by RII and absolute gap analysis. As can be seen the first nine indicators identified in each analysis were the same. There were differences in the rank order of these inequality gaps, most notably drug related mortality, the teenage birth rate and smoking during pregnancy.

Rank	Absolute Gap	RII	
1.	Teenage Birth Rate (U20)	SAR - Alcohol Related Causes	1 🛦
2.	SAR - Alcohol Related Causes	SDR - Drug Misuse	1 🛦
3.	SDR - Drug Misuse	SDR - Drug Related Causes	3 ▲
4.	SDR - Alcohol Related Causes	SDR - Alcohol Related Causes	
5.	Smoking During Pregnancy	Teenage Birth Rate (U20)	4 ▼
6.	SDR - Drug Related Causes	SAR – Self-Harm Admissions	1 🛦
7.	SAR – Self-Harm Admissions	SAR - Drug Related Causes	1 🛦
8.	SAR - Drug Related Causes	Smoking During Pregnancy	3 ▼
9.	SDR - Respiratory (U75)	SDR - Respiratory (U75)	
10.	Crude Suicide Rate	SDR - Lung Cancer	

It should be noted that proportionately, life expectancy gaps are comparatively lower to those ranking highest in the table above. However, as the gap refers to years of life, and as life expectancy is an overarching indicator of health status it is a vital statistic of high importance and reducing this gap is considered a high priority²³.

²³ Life expectancy inequality gaps are included as key overarching indicators of the public health strategic framework 'Making Life Better' www.health-ni.gov.uk/articles/making-life-better-strategic-framework-public-health

Regional Report 2016 Appendices

APPENDIX B: POPULATION ATTRIBUTABLE RISK (PAR) OF DEPRIVATION

Population Attributable Risk (PAR) measures the proportion of a disease/outcome (i.e. prevalence, mortality, admissions etc.) in the population that is attributable to deprivation and thus could be eliminated if the population experienced the same level of deprivation as those in the least deprived areas. This allows us to determine, for example, the proportional decrease in alcohol-related admissions in the population, in the hypothetical situation that all individuals had the same rate of alcohol-related admission as those in the highest socioeconomic category (least deprived deprivation decile). The PAR is calculated as the rate of disease in the overall population minus the rate in the unexposed group (least deprived).

PAR has been calculated in the table below for a number of health outcomes. As can be seen, the PAR percentage for teenage births in 2014 was 67% which indicates that two-thirds of teenage births in Northern Ireland were attributable to deprivation inequality.

Indicator	%PAR
Teenage Birth Rate (U20)	67%
SDR - Avoidable	39%
SDR - Preventable	40%
SDR – Avoidable in Children & Young People	21%
SDR – Circulatory (U75)	39%
SDR - Respiratory (U75)	53%
SDR - Cancer (U75)	24%
SAR – Emergency	29%
Crude Suicide Rate	43%
SAR – Self-Harm Admissions	51%
SAR - Alcohol Related Causes	61%
SDR - Alcohol Related Causes	48%
SIR – Lung Cancer	40%

Appendices Regional Report 2016

APPENDIX C: ADDITIONAL INDICATORS

The tables below refer to additional indicators which form part of the HSCIMS that have not been included in the main body of the report. For each indicator the figures are presented for NI, the 20% most deprived areas, the 20% least deprived areas and the most-least deprived inequality gap. In addition the RII is provided, where appropriate.

Median Fire Response Times ²⁴	2010/11	2011/12	2012/13	2013/14	2014/15
Time (Minutes:Seconds)	All	All	All	All	All
NI	07:57	08:10	07:00	06:20	06:26
Most Deprived	06:14	06:11	05:40	04:46	04:56
Least Deprived	08:00	08:05	06:59	06:22	06:25
Most-Least Deprived	22%	23%	19%	25%	23%

Median Ambulance Response Times ¹⁸	2011	2012	2013	2014	2015
Time (Minutes:Seconds)	All	All	All	All	All
NI	05:50	06:51	06:48	08:15	09:21
Most Deprived	04:42	05:23	05:38	06:38	07:27
Least Deprived	06:44	07:39	07:18	09:02	10:16
Most-Least Deprived	30%	30%	23%	27%	27%

SDR - All Age All Cause Mortality	2006-10	2007-11	2008-12	2009-13	2010-14
Deaths per 100,000 population	All	All	All	All	All
NI	1,209	1,111	1,090	1,068	1,048
Most Deprived	1,487	1,320	1,300	1,278	1,249
Least Deprived	1,052	969	936	917	904
Most-Least Deprived	41%	36%	39%	39%	38%
RII	0.39	0.37	0.39	0.39	0.39

Looked After Children	2013	2014
Rate per 100,000 population under 18 years	All	All
NI	479	472
Most Deprived	1,040	946
Least Deprived	197	162
Most-Least Deprived	429%	485%

Autism Prevalence in School Age Children	2011/12	2012/13	2013/14	2014/15	2015/16
Rate per 100,000 population	All	All	All	All	All
NI	1,642	1,794	1,957	2,155	2,310
Most Deprived	1,793	2,001	2,236	2,544	2,844
Least Deprived	1,725	1,854	1,985	2,151	2,277
Most-Least Deprived	4%	8%	13%	18%	25%

²⁴ Evidence shows that emergency times are correlated more with location such as urban/rural than deprivation.

Regional Report 2016 Appendices

APPENDIX D: URBAN-RURAL ANALYSIS

Urban-rural analysis is also carried out as part of the HSCIMS. Previous reports have presented figures using the urban-rural classification 2005, however the updated urban-rural classification 2015 has been incorporated into the HSCIMS analyses, further information regarding urban-rural classification can be found in Appendix D. As these two classification systems are not directly comparable, only those years which use the urban-rural classification 2015 have been presented in the current report, however earlier years are available on request.

The tables below provide figures for each indicator for NI, Rural areas, Urban areas, Mixed Urban-Rural areas and the NI-Rural Gap, indicators are in the order found in the chapters making up the main body of the report²⁵.

A positive inequality gap means that the health outcomes in Northern Ireland are worse than in the rural areas.

Life Expectancy and General Health

	Life Expectancy at Birth	2009-11	2010-12	2011-13	2012-14
	Years				
Male	NI	77.4	77.7	78.0	78.3
	Rural	78.9	79.1	79.5	79.9
	Urban	76.4	76.7	77.0	77.3
	Mixed Urban/Rural	79.5	79.8	79.6	79.1
	NI-Rural Gap	1.5	1.4	1.5	1.6
Female	NI	81.9	82.1	82.3	82.3
	Rural	83.2	83.5	83.7	83.7
	Urban	81.1	81.4	81.6	81.6
	Mixed Urban/Rural	82.3	82.3	82.6	82.2
	NI-Rural Gap	1.3	1.4	1.4	1.4

L	ife Expectancy at Age 65 Years	2009-11	2010-12	2011-13	2012-14
Male	NI	17.7	17.8	17.9	18.1
	Rural	18.4	18.4	18.5	18.7
	Urban	17.2	17.4	17.6	17.7
	Mixed Urban/Rural	18.5	18.5	18.4	18.5
	NI-Rural Gap	0.7	0.6	0.5	0.6
Female	NI	20.4	20.5	20.5	20.5
	Rural	21.3	21.4	21.4	21.3
	Urban	19.9	20.1	20.1	20.2
	Mixed Urban/Rural	20.8	20.5	20.4	20.5
	NI-Rural Gap	0.9	0.9	0.9	0.8

²⁵ Refer to Appendix E: Technical Notes & Definitions for detail on Urban/Rural Classification methods.

Appendices Regional Report 2016

F	Healthy Life Expectancy Years	2010-12	2011-13	2012-14
Male	NI	58.5	58.4	58.8
	Rural	59.8	59.7	60.3
	Urban	57.8	57.6	57.8
	NI-Rural Gap	1.3	1.3	1.5
Female	NI	61.6	61.6	61.7
	Rural	63.6	63.7	64.2
	Urban	60.3	60.5	60.3
	NI-Rural Gap	2.0	2.1	2.5

Disa	bility Free Life Expectancy Years	2010-12	2011-13	2012-14
Male	NI	60.4	60.9	60.4
	Rural	61.8	62.4	61.6
	Urban	59.6	60.2	59.9
	NI-Rural Gap	1.4	1.6	1.2
Female	NI	61.2	62.0	61.9
	Rural	63.4	64.5	64.5
	Urban	59.9	60.5	60.4
	NI-Rural Gap	2.1	2.5	2.6

Note: Healthy Life Expectancy and Disability Free Life Expectancy use the 2005 urban rural classification, due to data limitations.

Premature Mortality

PYLL	2009-11	2010-12	2011-13	2012-14
Years Lost Per 100 Persons	All	All	All	All
NI	9.3	9.0	8.6	8.5
Rural	7.7	7.5	7.1	6.9
Urban	10.3	10.0	9.7	9.6
Mixed Urban/Rural	7.7	7.3	7.1	7.9
NI-Rural Gap	16%	16%	17%	19%

SDR - Amenable	2008-12	2009-13	2010-14
Deaths per 100,000 population	All	All	All
NI	144	138	132
Rural	120	116	110
Urban	160	153	146
Mixed Urban/Rural	116	114	117
NI-Rural Gap	17%	16%	17%

SDR - Preventable Deaths per 100,000 population	2008-12 All	2009-13 All	2010-14 All
NI	226	220	211
Rural	183	178	171
Urban	255	247	238
Mixed Urban/Rural	181	177	179
NI-Rural Gap	19%	19%	19%

SDR - Avoidable Deaths per 100,000 population	2008-12 All	2009-13 All	2010-14 All
NI	270	261	251
Rural	218	211	203
Urban	304	293	282
Mixed Urban/Rural	214	210	214
NI-Rural Gap	19%	19%	19%

SDR – Avoidable: Children & Young People	2008-12	2009-13	2010-14	
Deaths per 100,000 population	All	All	All	
NI	30	27	26	
Rural	30	26	24	
Urban	31	28	27	
Mixed Urban/Rural	24	19	20	
NI-Rural Gap	0%	2%	5%	

SDR - Circulatory U75	2008-12	2009-13	2010-14
Deaths per 100,000 population	All	All	All
NI	93	88	83
Rural	78	72	69
Urban	104	98	92
Mixed Urban/Rural	72	70	73
NI-Rural Gap	17%	18%	17%

SDR - Respiratory U75 Deaths per 100,000 population	2008-12 All	2009-13 All	2010-14 All
NI	36	35	34
Rural	26	27	25
Urban	42	41	39
Mixed Urban/Rural	30	31	31
NI-Rural Gap	27%	25%	25%

SDR - Cancer U75	2008-12	2009-13	2010-14
Deaths per 100,000 population	All	All	All
NI	157	154	152
Rural	138	137	132
Urban	169	166	166
Mixed Urban/Rural	134	130	126
NI-Rural Gap	12%	11%	13%

SDR - All Cause U75	2008-12	2009-13	2010-14
Deaths per 100,000 population	All	All	All
NI	398	388	379
Rural	334	327	316
Urban	441	429	420
Mixed Urban/Rural	328	327	332
NI-Rural Gap	16%	16%	16%

Major Diseases

SAR - Circulatory	09/10-11/12	10/11-12/13	11/12 13/14	12/13-14/15
Admissions per 100,000 population	All	All	All	All
NI	2,357	2,335	2,344	2,337
Rural	2,322	2,314	2,329	2,342
Urban	2,385	2,353	2,360	2,341
Mixed Urban/Rural	2,290	2,288	2,289	2,267
NI-Rural Gap	2%	1%	1%	0%

SAR - Circulatory U75	09/10-11/12	10/11-12/13	11/12-13/14	12/13-14/15
Admissions per 100,000 population	All	All	All	All
NI	1,721	1,685	1,679	1,669
Rural	1,674	1,638	1,646	1,649
Urban	1,756	1,719	1,705	1,688
Mixed Urban/Rural	1,634	1,623	1,621	1,573
NI-Rural Gap	3%	3%	2%	1%

SPR - Antihypertensive	2010	2011	2012	2013	2014
Persons Prescribed per 1,000 population	All	All	All	All	All
NI	230	224	224	226	226
Rural	223	215	215	216	216
Urban	234	230	231	233	232
Mixed Urban/Rural	221	213	213	215	217
NI-Rural Gap	3%	4%	4%	4%	4%

SPR - Statin	2010	2011	2012	2013	2014
SPK - Statill	2010	2011	2012	2015	2014
Persons Prescribed per 1,000 population	All	All	All	All	All
NI	168	168	170	172	171
Rural	162	162	163	163	165
172	172	173	174	177	176
Mixed Urban/Rural	160	160	162	165	164
NI-Rural Gap	4%	4%	4%	5%	4%

SAR - Respiratory	09/10-11/12	10/11-12/13	11/12-13/14	12/13-14/15
Admissions per 100,000 population	All	All	All	All
NI	1,792	1,867	1,940	2,005
Rural	1,641	1,691	1,717	1,756
Urban	1,885	1,977	2,077	2,161
Mixed Urban/Rural	1,732	1,777	1,835	1,878
NI-Rural Gap	8%	9%	11%	12%

SAR - Respiratory U75	09/10-11/12	10/11-12/13	11/12-13/14	12/13-14/15
Admissions per 100,000 population	All	All	All	All
NI	1,383	1,419	1,447	1,479
Rural	1,245	1,267	1,277	1,289
Urban	1,468	1,515	1,556	1,603
Mixed Urban/Rural	1,349	1,379	1,370	1,377
NI-Rural Gap	10%	11%	12%	13%

SIR - Cancer	2007-13	2008-14
Incidence per 100,000 population	All	All
NI	593	592
Rural	564	560
Urban	611	613
Mixed Urban/Rural	562	556
NI-Rural Gap	5%	5%

Hospital Admissions

SAR – All Admissions	2010/11	2011/12	2012/13	2013/14	2014/15
Admissions per 100,000 population	All	All	All	All	All
NI	24,535	25,099	25,324	25,372	24,940
Rural	23,439	24,064	24,238	24,067	23,856
Urban	25,289	25,770	26,040	26,243	25,652
Mixed Urban/Rural	23,165	24,330	24,474	24,169	24,232
NI-Rural Gap	4%	4%	4%	5%	4%

SAR – Emergency Admissions	2010/11	2011/12	2012/13	2013/14	2014/15
Admissions per 100,000 population	All	All	All	All	All
NI	9,097	8,994	9,277	9,520	9,394
Rural	8,440	8,183	8,498	8,633	8,554
Urban	9,533	9,502	9,782	10,095	9,928
Mixed Urban/Rural	8,351	8,447	8,588	8,791	8,882
NI-Rural Gap	7%	9%	8%	9%	9%

SAR - Elective Inpatient Admissions	2010/11	2011/12	2012/13	2013/14	2014/15
Admissions per 100,000 population	All	All	All	All	All
NI	3,740	3,436	3,262	3,221	3,070
Rural	3,593	3,412	3,258	3,254	3,129
Urban	3,841	3,459	3,264	3,211	3,050
Mixed Urban/Rural	3,560	3,331	3,280	3,119	2,913
NI-Rural Gap	4%	1%	0%	-1%	-2%

SAR - Day Case Admissions	2010/11	2011/12	2012/13	2013/14	2014/15
Admissions per 100,000 population	All	All	All	All	All
NI	10,829	11,618	11,639	11,322	11,127
Rural	10,442	11,378	11,345	10,915	10,830
Urban	11,089	11,778	11,831	11,590	11,313
Mixed Urban/Rural	10,484	11,507	11,576	11,121	11,159
NI-Rural Gap	4%	2%	3%	4%	3%

Mental Health

SAR - Self-Harm Admissions	08/09-12/13	09/10-13/14	10/11-14/15
Admissions per 100,000 population	All	All	All
NI	239	226	215
Rural	124	121	118
Urban	311	293	276
Mixed Urban/Rural	152	145	142
NI-Rural Gap	48%	46%	45%

Crude Suicide Rate	2009-11	2010-12	2011-13	2012-14
Deaths per 100,000 population	All	All	All	All
NI	15.9	16.2	15.9	15.5
Rural	11.8	11.7	11.2	11.0
Urban	18.7	19.2	19.0	18.2
Mixed Urban/Rural	11.5	11.4	11.3	14.5
NI-Rural Gap	26%	28%	29%	29%

SPR - Mood & Anxiety	2010	2011	2012	2013	2014
Persons Prescribed per 1,000 population	All	All	All	All	All
NI	183	190	199	200	205
Rural	155	163	172	171	176
Urban	200	208	217	219	224
Mixed Urban/Rural	161	169	180	182	184
NI-Rural Gap	15%	14%	14%	15%	14%

Alcohol, Smoking & Drugs

SAR - Alcohol Related Causes	09/10-11/12	10/11-12/13	11/12-13/14	12/13-14/15
Admissions per 100,000 population	All	All	All	All
NI	669	683	694	719
Rural	383	400	400	419
Urban	859	872	890	921
Mixed Urban/Rural	394	394	421	431
NI-Rural Gap	43%	41%	42%	42%

SDR - Alcohol Related Causes	2008-12	2009-13	2010-14
Deaths per 100,000 population	All	All	All
NI	17.0	16.3	15.6
Rural	9.8	9.4	9.2
Urban	21.8	20.9	19.8
Mixed Urban/Rural	11.0	11.0	11.0
NI-Rural Gap	43%	42%	41%

SDR - Smoking Related Causes Deaths per 100,000 population	2008-12 All	2009-13 All	2010-14 All
NI	171	168	164
Rural	145	143	140
Urban	188	185	180
Mixed Urban/Rural	136	133	137
NI-Rural Gap	15%	15%	15%

SIR - Lung Cancer	2007-13	2008-14
Incidence per 100,000 population	All	All
NI	80	80
Rural	63	63
Urban	91	92
Mixed Urban/Rural	58	58
NI-Rural Gap	21%	22%

SDR - Lung Cancer Deaths per 100,000 population	2008-12 All	2009-13 All	2010-14 All
NI	67	66	66
Rural	51	50	50
Urban	77	77	76
Mixed Urban/Rural	43	43	46
NI-Rural Gap	24%	24%	24%

SAR - Drug Related Causes	09/10-11/12	10/11-12/13	11/12-13/14	12/13-14/15
Admissions per 100,000 population	All	All	All	All
NI	262	261	251	247
Rural	136	136	135	136
Urban	341	339	325	318
Mixed Urban/Rural	173	176	164	165
NI-Rural Gap	48%	48%	46%	45%

SDR - Drug Related Causes	2008-12	2009-13	2010-14
Deaths per 100,000 population	All	All	All
NI	5.3	5.5	5.8
Rural	2.3	2.5	2.7
Urban	7.2	7.5	7.8
Mixed Urban/Rural	2.8	2.8	2.7
NI-Rural Gap	57%	55%	54%

SDR - Drug Misuse	2008-12	2009-13	2010-14
Deaths per 100,000 population	All	All	All
NI	3.2	3.5	3.8
Rural	1.5	1.7	1.7
Urban	4.4	4.7	5.1
Mixed Urban/Rural	1.4	2.1	2.2
NI-Rural Gap	55%	52%	55%

Pregnancy & Early Years

Infant Mortality Rate	2008-12	2009-13	2010-14
Deaths per 1,000 live births	All	All	All
NI	4.7	4.7	4.6
Rural	4.8	4.5	4.1
Urban	4.8	4.9	5.0
Mixed Urban/Rural	3.1	3.1	3.7
NI-Rural Gap	-2%	3%	11%

Smoking During Pregnancy	2011	2012	2013	2014	2015
% of mother smoking	All	All	All	All	All
NI	17%	17%	16%	15%	14%
Rural	11%	10%	10%	10%	9%
Urban	21%	21%	20%	19%	18%
Mixed Urban/Rural	14%	12%	11%	10%	12%
NI-Rural Gap	35%	39%	37%	37%	37%

Teenage Birth Rate	2010	2011	2012	2013	2014
Births per 1,000 population	All	All	All	All	All
NI	14.7	13.7	13.0	11.3	10.3
Rural	9.0	7.5	7.7	6.0	6.4
Urban	18.3	17.6	16.6	14.9	13.0
Mixed Urban/Rural	11.9	10.5	8.4	6.8	6.7
NI-Rural Gap	39%	45%	41%	47%	38%

Low Birth Weight	2011	2012	2013	2014	2015
% of live births	All	All	All	All	All
NI	6.2%	6.1%	6.3%	6.3%	6.5%
Rural	5.2%	5.7%	5.6%	5.1%	5.8%
Urban	6.7%	6.3%	6.9%	7.0%	6.8%
Mixed Urban/Rural	6.1%	5.6%	5.2%	6.3%	7.1%
NI-Rural Gap	15%	6%	11%	19%	11%

Breastfeeding on Discharge	2011	2012	2013	2014	2015
% of mothers breastfeeding	All	All	All	All	All
NI	45%	42%	46%	46%	46%
Rural	46%	44%	47%	48%	47%
Urban	43%	40%	44%	45%	44%
Mixed Urban/Rural	48%	47%	51%	51%	50%
NI-Rural Gap	3%	5%	3%	4%	3%

Diet & Dental Health

Primary 1 BMI: Obese	2010/11	2011/12	2012/13	2013/14	2014/15
% Obese	All	All	All	All	All
NI	5.7%	5.1%	5.0%	5.0%	5.2%
Rural	5.1%	4.9%	4.3%	4.9%	4.9%
Urban	6.1%	5.3%	5.3%	5.0%	5.5%
Mixed Urban/Rural	5.5%	4.9%	5.6%	5.5%	4.6%
NI-Rural Gap	10%	5%	14%	2%	5%

Primary 1 BMI: Overweight or Obese	2010/11	2011/12	2012/13	2013/14	2014/15
% Overweight or Obese	All	All	All	All	All
NI	22.7%	20.9%	21.4%	21.6%	21.0%
Rural	22.6%	20.9%	20.8%	21.2%	20.9%
Urban	22.5%	21.0%	21.6%	21.7%	21.2%
Mixed Urban/Rural	23.8%	20.3%	22.8%	22.8%	20.1%
NI-Rural Gap	0%	0%	3%	2%	1%

Year 8 BMI: Obese	2010/11	2011/12	2012/13	2013/14	2014/15
% Obese	All	All	All	All	All
NI	7.5%	7.1%	7.3%	7.6%	7.1%
Rural	7.5%	6.7%	7.2%	7.8%	7.1%
Urban	7.5%	7.3%	7.4%	7.7%	7.3%
Mixed Urban/Rural	7.3%	7.1%	7.1%	6.1%	6.0%
NI-Rural Gap	0%	5%	1%	-3%	0%

Year 8 BMI: Overweight or Obese	2010/11	2011/12	2012/13	2013/14	2014/15
% Overweight or Obese	All	All	All	All	All
NI	29.2%	28.6%	28.6%	29.4%	27.8%
Rural	29.6%	28.3%	27.6%	29.6%	28.5%
Urban	29.2%	28.7%	29.5%	29.5%	27.7%
Mixed Urban/Rural	27.9%	29.8%	27.8%	27.8%	25.6%
NI-Rural Gap	-1%	1%	4%	-1%	-3%

Standardised Dental Registrations	2011	2012	2013	2014	2015
Indirectly Standardised Rate	All	All	All	All	All
NI	100	100	100	100	100
Rural	100	100	100	101	101
Urban	99	99	99	99	99
Mixed Urban/Rural	104	104	104	104	104
NI-Rural Gap	0%	0%	0%	1%	1%

Additional Indicators

Median Fire Response Times	2010/11	2011/12	2012/13	2013/14	2014/15
Time (Minutes:Seconds)	All	All	All	All	All
NI	07:57	08:10	07:00	06:20	06:26
Rural	13:49	14:44	12:19	11:48	12:07
Urban	06:44	06:42	06:07	05:15	05:21
Mixed Urban/Rural	09:20	09:54	08:53	07:58	08:23
NI-Rural Gap	74%	80%	76%	86%	88%

Median Ambulance Response Times	2011	2012	2013	2014	2015
Time (Minutes:Seconds)	All	All	All	All	All
NI	05:50	06:51	06:48	08:15	09:21
Rural	11:46	12:41	12:30	13:33	15:03
Urban	04:53	05:42	05:43	06:53	07:46
Mixed Urban/Rural	05:56	07:22	07:17	07:42	09:09
NI-Rural Gap	30%	30%	23%	27%	27%

SDR - All Age All Cause Mortality	2008-12	2009-13	2010-14
Deaths per 100,000 population	All	All	All
NI	1,090	1,068	1,048
Rural	987	965	950
Urban	1,152	1,129	1,105
Mixed Urban/Rural	1,024	1,027	1,041
NI-Rural Gap	9%	10%	9%

APPENDIX E: TECHNICAL NOTES & DEFINITIONS

Indicators

There are 45 indicators included in the current report, of which four have been introduced since the previous report of 2014; Life Expectancy at Age 65, Standardised Death Rate (SDR) Avoidable: Children and Young people, Primary 1 BMI: Overweight or Obese and Year 8 BMI: Overweight or Obese. It should also be noted that several indicators have been updated; the 'Healthy Life Expectancy and Disability Free Life Expectancy' indicators have been revised to exclude communal establishments, the 'Preventable, Amenable and Avoidable' standardised death rates have been updated to reflect the revised definitions of avoidable mortality published by ONS (2016)²⁶, the Primary 1 & Year 8 BMI: Obese indicators have been revised to include a broader age range to capture all pupils in the respective years, the 'All admissions' standardised admission rate figures have been revised due to a correction in the definition, and the 'Low Birth Weight' indicator is now presented as a single year. In addition, the SDR All Age All Cause Mortality indicator has been replaced with the indicator SDR All Cause Mortality (Under 75), which has the additional benefit of being a measure of premature mortality.

Due to random fluctuations in events over time, it is often necessary to aggregate more than one year of data for indicators, in order to ensure stability. The number of years of information that are required to aggregate for each indicator is informed by both the number of events and also an assessment of its annual variability. Detail regarding the reference years for each indicator, as well as the year the most recent figures available pertain to, is set out for all indicators in Table 5.

Standardisation Methods

A number of indicators included in this report have been age standardised to allow the comparison of rates between populations with different age structures by relating them to a standard population, in this case the 2013 European Standard Population (90+ version). In most circumstances direct standardisation is used which not only allows the comparison of disease and death rates across both areas and time, but also to assess the relative burden of disease in a population. It should be noted that standardised dental registrations have been indirectly standardised. Further detail on the standardisation methods can be found in the Regional report 2014.²⁷

Indicator Stability/Confidence Intervals

Confidence intervals are used to quantify the imprecision in the estimate of a particular value. Specifically it quantifies the imprecision that results from random variation in the estimation of the value. In many cases the source of this random variation is sampling, for example in Healthy Life Expectancy, as any measurement taken from a sample provides an imprecise estimate of the true population value. In public health many indicators are based on what can be considered to be complete data sets and not samples, e.g. age standardised mortality rates based on death registers. In these instances the imprecision arises not as a result of sampling variation but of 'natural' variation. The indicator is considered to be the outcome of a stochastic process, i.e. one which can be influenced by the random occurrences that are inherent in the world around us. In such instances the value actually observed is only one of the set that could occur under the same circumstances. Generally in public health, it is the underlying circumstances or process that is of interest and the actual value observed gives only an imprecise estimate of this 'underlying risk'. Table 6 presents confidence intervals, where possible, for the most recent year's data for each indicator at both the NI and deprivation quintile (average) levels.

26

²⁶https://www.ons.gov.uk/file?uri=/aboutus/whatwedo/statistics/consultationsandsurveys/allconsultationsandsurveys/reviewofavoidablemortalitydefinition/proposeddefinitionfinalversion.doc

²⁷https://www.health-ni.gov.uk/publications/ni-health-and-social-care-inequalities-monitoring-system-hscims-regional-2014

Table 5: HSCIMS Indicators

INDICATOR	Referen	ce Years	Most Recent Figures
Life Expectancy at Birth	Three	Calendar	2012-2014
Life Expectancy at Age 65 New	Three	Calendar	2012-2014
Healthy Life Expectancy	Three	Calendar	2012-2014
Disability Free Life Expectancy	Three	Calendar	2012-2014
Potential Years of Life Lost	Three	Calendar	2012-2014
Standardised Death Rate – Amenable Revised	Five	Calendar	2010-2014
Standardised Death Rate – Preventable Revised	Five	Calendar	2010-2014
Standardised Death Rate – Avoidable Revised	Five	Calendar	2010-2014
Standardised Death Rate – Avoidable: Children & Young People New	Five	Calendar	2010-2014
Standardised Death Rate - Circulatory (U75)	Five	Calendar	2010-2014
Standardised Death Rate - Respiratory (U75)	Five	Calendar	2010-2014
Standardised Death Rate - Cancer (U75)	Five	Calendar	2010-2014
Standardised Death Rate - All Cause Mortality (U75)	Five	Calendar	2010-2014
Standardised Admission Rate - Circulatory	Three	Financial	2012/13-2014/15
Standardised Admission Rate - Circulatory (U75)	Three	Financial	2012/13-2014/15
Standardised Prescription Rate - Antihypertensive	One	Calendar	2014
Standardised Prescription Rate - Statin	One	Calendar	2014
Standardised Admission Rate - Respiratory	Three	Financial	2012/13-2014/15
Standardised Admission Rate - Respiratory (U75)	Three	Financial	2012/13-2014/15
Standardised Incidence Rate - Cancer	Seven	Calendar	2008-2014
Standardised Admission Rate - All Admissions	One	Financial	2014/15
Standardised Admission Rate - Emergency Admissions	One	Financial	2014/15
Standardised Admission Rate - Elective Inpatient Admissions	One	Financial	2014/15
Standardised Admission Rate - Day Case Admissions	One	Financial	2014/15
Standardised Admission Rate – Self-Harm Admissions	Five	Financial	2010/11-2014/15
Crude Suicide Rate	Three	Calendar	2012-2014
Standardised Prescription Rate - Mood & Anxiety	One	Calendar	2014
Standardised Admission Rate - Alcohol Related Causes	Three	Financial	2012/13-2014/15
Standardised Death Rate - Alcohol Related Causes	Five	Calendar	2010-14
Standardised Death Rate - Smoking Related Causes	Five	Calendar	2010-14
Standardised Incidence Rate - Lung Cancer	Seven	Calendar	2008-2014
Standardised Death Rate - Lung Cancer	Five	Calendar	2010-2014
Standardised Admission Rate - Drug Related Causes	Three	Financial	2012/13-2014/15
Standardised Death Rate - Drug Related Causes	Five	Calendar	2010-14
Standardised Death Rate - Drug Misuse	Five	Calendar	2010-2014
Infant Mortality Rate	Five	Calendar	2010-2014
Smoking During Pregnancy	One	Calendar	2015
Teenage Birth Rate (U20)	One	Calendar	2014
Low Birth Weight	One	Calendar	2015
Breastfeeding on Discharge	One	Calendar	2015
Primary 1 BMI: Obese Revised	One	Financial	2014/15
Primary 1 BMI: Overweight or Obese New	One	Financial	2014/15
Year 8 BMI: Obese Revised	One	Financial	2014/15
Year 8 BMI: Overweight or Obese New	One	Financial	2014/15
Standardised Dental Registrations	One	Calendar	2015

Table 6: HSCIMS Indicators with Confidence Intervals

INDICATOR	Units	Northern Ireland	Quintiles
Male Life Expectancy at Birth	Years	<u>+</u> 0.17	<u>+</u> 0.37
Female Life Expectancy at Birth	Years	<u>+</u> 0.15	<u>+</u> 0.33
Male Life Expectancy at Age 65	Years	<u>+</u> 0.11	<u>+</u> 0.25
Female Life Expectancy at Age 65	Years	<u>+</u> 0.11	<u>+</u> 0.24
Male Healthy Life Expectancy	Years	<u>+</u> 0.75	<u>+</u> 1.70
Female Healthy Life Expectancy	Years	<u>+</u> 0.68	<u>+</u> 1.52
Male Disability Free Life Expectancy	Years	<u>+</u> 0.72	<u>+</u> 1.61
Female Disability Free Life Expectancy	Years	<u>+</u> 0.67	<u>+</u> 1.52
Potential Years of Life Lost -All	Years	<u>+</u> 0.02	<u>+</u> 0.05
SDR - Amenable	Deaths per 100,000 population	<u>+</u> 2.17	<u>+</u> 4.83
SDR - Preventable	Deaths per 100,000 population	<u>+</u> 2.75	<u>+</u> 6.12
SDR - Avoidable	Deaths per 100,000 population	<u>+</u> 3.01	<u>+</u> 6.69
SDR - Avoidable: Children & Young People	Deaths per 100,000 population	<u>+</u> 2.09	<u>+</u> 4.62
SDR - Circulatory (U75)	Deaths per 100,000 population	<u>+</u> 3.05	<u>+</u> 6.82
SDR - Respiratory (U75)	Deaths per 100,000 population	<u>+</u> 2.15	<u>+</u> 4.80
SDR - Cancer (U75)	Deaths per 100,000 population	<u>+</u> 3.10	<u>+</u> 6.94
SDR - All Cause Mortality (U75)	Deaths per 100,000 population	<u>+</u> 5.81	<u>+</u> 13.02
SAR - Circulatory	Admissions per 100,000 population	<u>+</u> 11.72	<u>+</u> 26.21
SAR - Circulatory (U75)	Admissions per 100,000 population	<u>+</u> 11.72	<u>+</u> 26.21
SPR - Antihypertensive	Prescriptions per 100,000 population	<u>+</u> 0.64	<u>+</u> 1.43
SPR - Statin	Prescriptions per 100,000 population	<u>+</u> 0.55	<u>+</u> 1.23
SAR - Respiratory	Admissions per 100,000 population	<u>+</u> 11.39	<u>+</u> 25.41
SAR - Respiratory (U75)	Admissions per 100,000 population	<u>+</u> 11.39	<u>+</u> 25.41
SIR - Cancer	Incidence per 100,000 population	<u>+</u> 3.81	<u>+</u> 8.52
SAR - All Admissions	Admissions per 100,000 population	<u>+</u> 69.05	<u>+</u> 154.47
SAR- Emergency Admissions	Admissions per 100,000 population	<u>+</u> 42.55	<u>+</u> 94.99
SAR - Elective Inpatient Admissions	Admissions per 100,000 population	<u>+</u> 24.20	<u>+</u> 54.13
SAR - Day Case Admissions	Admissions per 100,000 population	<u>+</u> 46.01	<u>+</u> 102.99
SAR – Self-Harm Admissions	Admissions per 100,000 population	<u>+</u> 3.07	<u>+</u> 6.70
SPR - Mood & Anxiety	Prescriptions per 100,000 population	<u>+</u> 0.63	<u>+</u> 1.41
SAR - Alcohol Related Causes	Admissions per 100,000 population	<u>+</u> 6.91	<u>+</u> 15.01
SDR - Alcohol Related Causes	Deaths per 100,000 population	<u>+</u> 0.77	<u>+</u> 1.69
SDR - Smoking Related Causes	Deaths per 100,000 population	<u>+</u> 2.32	<u>+</u> 5.18
SIR - Lung Cancer	Incidence per 100,000 population	<u>+</u> 1.38	<u>+</u> 3.07
SDR - Lung Cancer	Deaths per 100,000 population	<u>+</u> 1.48	<u>+</u> 3.29
SAR - Drug Related Causes	Admissions per 100,000 population	<u>+</u> 4.24	<u>+</u> 9.25
SDR - Drug Related Causes	Deaths per 100,000 population	<u>+</u> 0.49	<u>+</u> 1.07
SDR - Drug Misuse	Deaths per 100,000 population	<u>+</u> 0.40	<u>+</u> 0.86
Primary 1 BMI: Obese	Percentage points	<u>+</u> 0.08	<u>+</u> 0.17%
Primary 1 BMI: Overweight or Obese	Percentage points	<u>+</u> 0.15%	<u>+</u> 0.32%
Year 8 BMI: Obese	Percentage points	<u>+</u> 0.21%	<u>+</u> 0.45%
Year 8 BMI: Overweight or Obese	Percentage points	<u>+</u> 0.36%	<u>+</u> 0.84%
SDR - All Age All Cause Mortality	Deaths per 100,000 population	+5.81	<u>+</u> 13.02

Mortality Rates

For simplicity of understanding, mortality figures are based on the single main underlying cause of death classification, but a death can be due to a variety of different causes. This can lead to an underestimation of the impact of common conditions associated with multiple causes of death (e.g. diabetes, influenza and pneumonia). All death figures used in the HSCIMS are based on the year that the death was registered and not necessarily the year in which the death occurred. While the vast majority of deaths are registered shortly after death, there may be a delay in registering some deaths. Events such as infant death or suicide are usually referred to a coroner and this legal process can take some time.

Population

Population is a vital part of rate calculations; a change to the size of a population or its age distribution will impact on rates and subsequently inequality gaps. For instance, overall yearly deaths in Northern Ireland remained between 14,000 and 15,000 from the turn of the century up to 2014, yet mortality rates have been falling – this can be partially explaining by the growing and ageing Northern Ireland population. Between 2004 and 2014 for example, the population grew from 1,714,042 to 1,840,498; an increase of 126,456 persons (7.4%). During this time the proportion of the population aged 65 and over increased from 13.5% (232,170 persons) in 2004 to 15.5% (285,916 persons) in 2014.

Small Area Population Estimates

Population estimates disaggregated to a relatively small geographic area level (i.e. Super Output Area (SOA) and Small Area (SA)) by age and gender are used to calculate many of the HSCIMS indicators for deprived and rural areas. However, as population estimates produced for NI are not available to the required level of detail, it is necessary to rework these estimates by proportioning out aggregated small area population estimates by gender and single year of age breakdowns from NISRA mid-year estimates. These reworked estimates are validated by a process of integrity checks with higher level age and geography population totals published by NISRA. Reworked estimates are calculated from unrounded population breakdown figures which may not match exactly with some of the population breakdowns published by NISRA which have been rounded to the nearest person.

Deprivation Classification

The deprivation classification used in this report is based on the Northern Ireland Multiple Deprivation Measure (NIMDM) produced by NISRA. The 2010 NIMDM²⁸ has been applied to all datasets for all years included within this report. The 2010 NIMDM is available at small area level for the first time which is based on smaller populations and should allow for better identification of "pockets of deprivation". However, it was decided to continue using the SOA classification within the HSCIMS to ensure continuity and comparability with the back series of data.

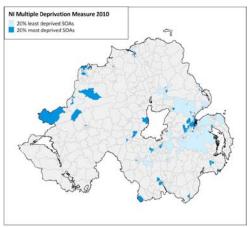


Chart 1 - Most and least deprived areas in Northern Ireland

²⁸ Further information on the 2010 NIMDM can be found at http://www.nisra.gov.uk/deprivation/nimdm 2010.htm

[©] Crown copyright and database rights NIMA MOU210

Rural Classification

Previous HSCIMS reports have applied the definition of urban and rural areas outlined in the "Report of the Inter-Departmental Urban-Rural Definition Group" (NISRA 2005)²⁹. In 2015 NISRA updated the Urban-Rural Classification using a similar approach as before but based on the 2011 Census population³⁰ and by grouping areas into three classifications; urban, rural and mixed urban-rural, as oppose to the previous classification 2005 which identified two; urban and rural. The urban-rural analysis presented in this report is based on the 2015 definition and has been applied to data from 2010 onwards³¹ (from 2010/11 onwards for financial years). For indicators which are based on a rolling average, all those which have 2010 (2010/11) or later as their mid-point, have been presented.

Analysis on data prior to 2010 is based on the previous 2005 classification but has not been presented as the two urban-rural classification systems are not directly comparable, however it can be made available on request.

Chart 2 – Urban and Rural Areas in NI using the 2005 Classification

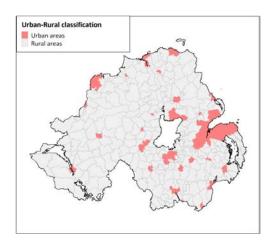
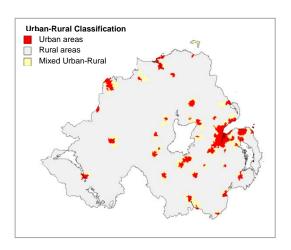


Chart 3 – Urban and Rural Areas in NI using the 2015 Classification



© Crown copyright and database rights NIMA MOU210

	2005 classification	2015 classification
	Reference years up to and including;	Reference years from the following years onwards;
Calendar	2009	2010
	2008-10	2009-11
	2007-11	2008-12
	2006-12	2007-13
Financial	2009/10	2010/11
	2008/09-2010/11	2009/10-2011/12
	2007/08-2011/12	2008/09-2012/13

Page | 50

²⁹ Further information on the Urban-Rural definition 2005 can be found at www.nisra.gov.uk/geography/UrbanRural.htm

³⁰ Further information on the Urban-Rural definition 2015 can be found at www.nisra.gov.uk/geography/UrbanRural.htm

³¹ Urban-rural analysis presented for HLE & DFLE is based on the 2005 urban-rural classifications due to data limitations.

Sources of Information

Table 7: Indicators and Supplementary Information

Information	Source
Deaths and births	General Register Office, Demography Branch, NI Statistics and Research Agency (NISRA)
Hospital Admissions	Hospital Information Branch, Information Analysis Directorate, DoH
Prescriptions/Dental Statistics	Business Services Organisation
Cancer Incidence	NI Cancer Registry
Smoking in pregnancy, breastfeeding, low birth weight and childhood overweight/obesity	Child Health System
Quality and Outcomes Framework Prevalence Data	Project Support Analysis Branch, Information Analysis Directorate, DoH
Fire response times	NI Fire and Rescue Service
Ambulance response times	NI Ambulance Service
NI Health Survey	Public Health Information & Research Branch, Information Analysis Directorate, DoH
Continuous Household Survey	NI Statistics and Research Agency (NISRA)
NI Small Area Population Estimates	NI Statistics and Research Agency (NISRA)
European Standard Population (ESP) 2013	Eurostat
Deprivation classification	NI Multiple Deprivation Measure 2010 (NISRA)
Urban-rural classification	NI Statistics and Research Agency (NISRA)
Looked after Children	Community Information Branch, Information Analysis Directorate, DoH
Children with Autism	Community Information Branch, Information Analysis Directorate, DoH

Indicator Definitions

Disease Classification - The indicators making up the HSCIMS are classified using the International Classification of Disease, 10th revision (ICD-10). This is the standard diagnostic tool for epidemiology, health management and clinical purposes, including the analysis of the general health situation of population groups.

A complete listing of ICD-10 codes can be found at the following web link: www.who.int/classifications/apps/icd/icd10online/

LIFE EXPECTANCY	
Life Expectancy Estimates	NISRA publish the official life expectancy estimates at NI, Local Government District and Parliamentary Constituency level. The HSCIMS publishes at further levels to allow for assessment of inequality gaps between different areas/population groups, including deprivation analysis.
Life Expectancy at Birth	The expected years of life at time of birth based on mortality patterns in the period in question. It is based on the average death rates over a three year period. Presented separately for males and females.
Life Expectancy at Age 65	The expected years of life at age 65 based on mortality patterns in the period in question. It is based on the average death rates over a three year period. Presented separately for males and females.
Healthy Life Expectancy (HLE)	This is the average number of years a person can expect to live in good health. HLE provides an estimate of lifetime spent in 'Very Good' or 'Good' health, calculated using respondents' perception of their own health according to the Health Survey Northern Ireland (HSNI). HLE excludes communal establishments. All urban/rural analysis is based on the 2005 urban-rural classification. 2015 urban-rural classification cannot currently be applied due to data limitations.
Disability Free Life Expectancy (DFLE)	This is the average number of years a person can expect to live disability free. DFLE provides an estimate of lifetime spent free from a limiting persistent (twelve months or more) illness or disability, based upon a self-rated functional assessment of health recorded in the HSNI. DFLE excludes communal establishments. All urban/rural analysis is based on the 2005 urban-rural classification. 2015 urban-rural classification cannot currently be applied due to data limitations.

Pregnancy & Early Years	
Teenage Birth Rate (U20)	The number of births in an area to teenage mothers (i.e. Between 13 and 19 years of age) expressed per 1,000 females. Time period is over three years.
Child Health System (CHS) The CHS is maintained by the Public Health Agency (PHA). Data is extracted based on the postcode of residence of the mother	
Indicator Name	CHS Data
- Smoking during Pregnancy	The proportion of all live births that were to mothers that reported smoking during pregnancy. Information is gathered at the 'booking in' appointment and therefore represents mothers at the end of the first trimester. As this indicator is self-reported, it may be subject to a degree of under-reporting. Time period: One year
- Low Birth Weight	The proportion of all live births where the birth weight of the child was less than 2500g. Time period: One year, previously presented as a five year rolling average.
- Breastfeeding on Discharge	The proportion of mothers that were breastfeeding their child on discharge from hospital. Figures include mothers' breastfeeding their child as well as using complementary feeding. Time period: One year

ADMISSIONS	
Hospital Information System (HIS)	Admissions are extracted from the Hospital Information System (HIS). Admissions are from within the Acute Services Programme of Care. All mental health specialities have been excluded.
Standardised Admission Rate (SAR) This is calculated by standardising (using the direct method) admission rate in NI (over a predefined period) due to spec classification codes (may also be age specific) to the 2013 Europe Population (ESP).	
Indicator Name	
Time Period: One Year	ICD-10 classification
- All Admissions	Includes all inpatients and day cases (excluding regular day and night attenders, hospital transfers and other (maternity/delivery episodes)). Figures presented in the current report may not match previously published figures due to data revision.
- Emergency Admissions	Non-elective admissions; excluding maternity, other and not known
- Elective Inpatient Admissions Does not include daycases, not to be confused with elective admis (which include daycases)	
- Day Case Admissions	Does not include inpatients
Time Period: Three Years	ICD-10 classification
- Circulatory	100-199
- Circulatory U75	100-199, under 75 years of age
- Respiratory	J00-J99
- Respiratory U75	J00-J99, under 75 years of age
- Alcohol Related Causes	Alcohol related causes Table 10
- Drug Related Causes	Drug related causes Table 12
Time Period: Five Years	ICD-10 classification
- Self-Harm Admissions	X60-84 and Y87.0. This indicator was developed to complement the suicide information, however it does not provide a complete picture of the problem of self-harm (or parasuicide) as in many instances, self-harm does not result in admission to hospital.

MORTALITY	
	The number of infant deaths per 1,000 live births.
Infant Mortality Rate	ICD-10 classification: Infant deaths refer to all deaths in the first year of life. Time Period: One year
Potential Years of Life Lost (PYLL)	This is calculated by summing the deaths occurring at each age and multiplying this with the number of years a person of that age could have been expected to live. It is a summary measure of premature mortality, weighting deaths occurring at younger ages, which are, a priori, preventable. It uses the average age-specific life expectancy for each five year age band as the age to which a person in that age band might be expected to live.
Crude Suicide Rate	The number of deaths by suicide per 100,000 population ICD-10 Classification: Suicide deaths in NI are defined using the UK definition
Not age standardised as it was found to make little or no difference whilst introducing a new confidence interval	which includes Self-inflicted Injury X60-84 and Y87.0, as well as Events of Undetermined Intent Y10-Y34, Y87.2 Time Period: Three years
Standardised Death Rate (SDR)	This is calculated by standardising (using the direct method) the average death rate in NI over a five year period, due to specific causes of death (ICD-
	10 classification, may be age specific) to the 2013 European Standard Population (ESP).
Indicator Name	· · · · · · · · · · · · · · · · · · ·
	Population (ESP).
Indicator Name	Population (ESP). ICD-10 Classification
Indicator Name - All Cause U75	Population (ESP). ICD-10 Classification All causes, under 75 year of age
Indicator Name - All Cause U75 - All Age All Cause	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes
Indicator Name - All Cause U75 - All Age All Cause - Amenable	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes Amenable to medical intervention Table 8
Indicator Name - All Cause U75 - All Age All Cause - Amenable - Preventable	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes Amenable to medical intervention Table 8 Preventable by broad public health intervention Table 8
Indicator Name - All Cause U75 - All Age All Cause - Amenable - Preventable - Avoidable - Avoidable: Children & Young	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes Amenable to medical intervention Table 8 Preventable by broad public health intervention Table 8 Avoidable Table 8
Indicator Name - All Cause U75 - All Age All Cause - Amenable - Preventable - Avoidable - Avoidable: Children & Young People	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes Amenable to medical intervention Table 8 Preventable by broad public health intervention Table 8 Avoidable Table 8 Avoidable in children and young people Table 9
Indicator Name - All Cause U75 - All Age All Cause - Amenable - Preventable - Avoidable - Avoidable: Children & Young People - Circulatory U75	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes Amenable to medical intervention Table 8 Preventable by broad public health intervention Table 8 Avoidable Table 8 Avoidable in children and young people Table 9 IOO-I99, under 75 year of age
Indicator Name - All Cause U75 - All Age All Cause - Amenable - Preventable - Avoidable - Avoidable: Children & Young People - Circulatory U75 - Respiratory U75	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes Amenable to medical intervention Table 8 Preventable by broad public health intervention Table 8 Avoidable Table 8 Avoidable in children and young people Table 9 IOO-I99, under 75 year of age JOO-J99, under 75 year of age
Indicator Name - All Cause U75 - All Age All Cause - Amenable - Preventable - Avoidable - Avoidable: Children & Young People - Circulatory U75 - Respiratory U75 - Cancer U75	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes Amenable to medical intervention Table 8 Preventable by broad public health intervention Table 8 Avoidable Table 8 Avoidable in children and young people Table 9 IOO-I99, under 75 year of age JOO-J99, under 75 year of age COO-C97, under 75 year of age
Indicator Name - All Cause U75 - All Age All Cause - Amenable - Preventable - Avoidable - Avoidable: Children & Young People - Circulatory U75 - Respiratory U75 - Cancer U75 - Lung Cancer	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes Amenable to medical intervention Table 8 Preventable by broad public health intervention Table 8 Avoidable Table 8 Avoidable in children and young people Table 9 IOO-I99, under 75 year of age JOO-J99, under 75 year of age COO-C97, under 75 year of age C33-C34
Indicator Name - All Cause U75 - All Age All Cause - Amenable - Preventable - Avoidable - Avoidable: Children & Young People - Circulatory U75 - Respiratory U75 - Cancer U75 - Lung Cancer - Alcohol	Population (ESP). ICD-10 Classification All causes, under 75 year of age All causes Amenable to medical intervention Table 8 Preventable by broad public health intervention Table 8 Avoidable Table 8 Avoidable in children and young people Table 9 IOO-I99, under 75 year of age JOO-J99, under 75 year of age COO-C97, under 75 year of age C33-C34 Alcohol related causes Table 11

Cancer Incidence	
Northern Ireland Cancer Registry (NICR)	Cancer incidence numbers are extracted from the NICR's "live" database, and hence are continuously updated. As a result, an earlier extract taken at a later date may supply slightly different results. Therefore, although the overall trend will be the same, previously published data and data published elsewhere may have rates that vary slightly to what is published is here.
	NICR publish official Standardised Incidence Rates (SIRs), however the HSCIMS publishes at further levels to allow for assessment of inequality gaps between different areas/population groups, including deprivation analysis.
Standardised Incidence Rate (SIR)	This is calculated by standardising (using the direct method) the average incidence rate in NI (over seven years) due to specified ICD-10 classification codes to the 2013 European Standard Population (ESP).
Indicator Name	ICD-10 Classification
- Cancer	C00-C97, excluding C44 (non-melonoma skin cancer) which is quite common, in most cases easily treated and rarely fatal.
- Lung Cancer	C33 and C34

Prescriptions	
Electronic Prescribing Eligibility System (EPES)	Prescription data is extracted from the EPES which is maintained by Business Services Organisation (BSO). The data provided covers drugs dispensed in primary care only, and includes prescriptions issued by all types of prescribers including doctors, nurses and dentists, and all those issued and dispensed by pharmacists, dispensing doctors and appliance suppliers. Drugs prescribed and dispensed in hospital cannot be captured centrally due to the use of different IT systems.
Standardised Prescription Rate (SPR)	This is calculated by standardising (using the direct method) the average prescription rate (over one year) in NI for people dispensed predefined prescription drugs, to the 2013 European Standard Population (ESP).
Indicator Name	British National Formulary (BNF) code
- Antihypertensive	Drugs included are coded 2.2.1, 2.4, 2.5.5.1, 2.5.5.2 and 2.6.2
- Statin	Drugs included are coded 2.12
- Mood & Anxiety Disorders	Drugs included are coded 4.1.2 and 4.3

Diet & Dental Health	
Standardised Dental Registration	This is a measure of how much more (or less) likely an individual is to be registered with a dentist in a specific geographic area compared with the NI average having taken into account the area's age and gender profile. This is standardised to the Medical Registration population using the indirect method. Time period is over one year.
Childhood Overweight and Obese	Height and weight information is extracted from the Child Health System (CHS) and converted into a Body Mass Index (BMI) score for each pupil. The BMI can be categorized using International Growth Charts which consider age and gender, allowing the identification of those who are overweight or obese. Records are analysed based on two criteria: Date of Exam within the Primary 1 or Year 8 school year: 01/09/XX-31/08/XX Date of Birth for Primary 1 or Year 8 pupils: 02/07/XX - 01/07/XX
Indicator Name	CHS Data
-Primary 1 BMI: Obese	The proportion of children in Primary 1 classified as obese.
-Primary 1 BMI: Overweight or Obese	The proportion of children in Primary 1 classified as overweight or obese.
-Year 8 BMI: Obese	The proportion of children in Year 8 classified as obese.
-Year 8 BMI: Overweight or Obese	The proportion of children in Year 8 classified as overweight or obese.

Additional Indicators	
Median Fire Response Time	The median response time taken by the Northern Ireland Fire and Rescue Service (NIFRS) to respond to an incident. The 'response time' is measured as the 'time of the call to NIFRS Regional Control Centre' to 'the time the 1st Appliance books in attendance' at the incident. Calculations are based on the time taken for NIFRS to respond to each incident within a one year time period. The median i.e. midpoint value is reported rather than the simple average as it is unaffected by atypically long or short response times.
Median Ambulance Response Time	The median time taken by the first ambulance to respond to an incident. Calculations are based on the time taken to respond to each incident within a one month time period (August). This data refers to Categories A, B and C emergency responses, excluding Healthcare Professionals (HCP) calls. The median i.e. midpoint value is reported rather than the simple average as it is unaffected by atypically long or short response times.
Looked after Children	The number of looked after children per 100,000 population (under 18 years of age) by location prior to last entering care. Data was extracted from the annual OC2 Community Information Return, which includes children who have been in care continuously for twelve months or longer at 30th September.
Autism Prevalence in School Age Children	The number of children with Autism or Asperger Syndrome per 100, 000 children in compulsory grant-aided education. Data extracted from the NI School Census.

ICD-10 Classification Tables

Table 8: Amenable, Preventable & Avoidable Causes

The table below lists the revised ICD-10 classification codes of all causes of death considered avoidable, with indication as to which are considered amenable, preventable or both.

Condition Group & Cause	ICD-10 Codes	Age	Amenable	Preventable
Infections				
Tuberculosis	A15-A19, B90	0-74	•	•
Selected invasive bacterial and	A38-A41, A46, A48.1, B50-B54,	0-74	•	
protozoal infections	G00, G03, J02, L03		••••	
Hepatitis C	B17.1, B18.2	0-74	•	•
Pertussis (whooping cough)	A37	0-14	•	•
Measles	B05	1-14	•	•
Rubella	B06	0-14		•
Other infections (Diphtheria, Tetanus, Poliomyelitis and Varicella)	A35, A36, A80, B01	0-19	•	•
Intestinal infections	A00-A09	0-14	•	
HIV/AIDS	B20-B24	All	•	•
Neoplasms				
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	0-74		•
Malignant neoplasm of oesophagus	C15	0-74		•
Malignant neoplasm of stomach	C16	0-74		•
Malignant neoplasm of colon and rectum	C18-C21	0-74	•	•
Malignant neoplasm of liver	C22	0-74		•
Malignant neoplasm of trachea, bronchus and lung	C33-C34	0-74		•
Malignant melanoma of skin	C43	0-74	•	•
Mesothelioma	C45	0-74		•
Malignant neoplasm of breast	C50	0-74	•	•
Malignant neoplasm of cervix uteri	C53	0-74	•	•
Malignant neoplasm of bladder	C67	0-74	•	
Malignant neoplasm of thyroid gland	C73	0-74	•	
Hodgkin's disease	C81	0-74	•	
Leukaemia	C91, C92.0	0-44	•	
Malignant neoplasm of testis	C62	0-74	•	
Malignant neoplasm of unspecified parts of uterus and body of uterus	C54-C55	0-44	•	
Benign neoplasms	D10-D36	0-74	•	
Nutritional, endocrine and metabolic				
Diabetes mellitus	E10-E14	0-74	•	•
Diseases of Thyroid	E00-E07	0-74	•	
Addison's Disease	E27.1	0-74	•	

Condition Group & Cause	ICD-10 Codes	Age	Amenable	Preventable
Drug use disorders				
Alcohol related diseases, excluding external causes	F10, G31.2, G62.1, I42.6, K29.2, K70, K73, K74 (excl. K74.3-	0-74		•
Illicit drug use disorders	K74.5), K86.0 F11-F16, F18-F19	0-74		•
Neurological disorders	111110,110113	0 7 1		
Epilepsy and status epilepticus	G40-G41	0-74	•	
Cardiovascular diseases	0.0 0.1			
Rheumatic and other valvular heart disease	I01-I09	0-74	•	1111
Hypertensive diseases	l10-l15	0-74	•	
Ischaemic heart disease	120-125	0-74	•	•
DVT with pulmonary embolism	126, 180.1-180.3, 180.9, 182.9	0-74		•
Cerebrovascular diseases	160-169	0-74	•	
Aortic aneurysm and dissection	I71	0-74		•
Respiratory diseases		-		
Influenza (including swine flu)	J09-J11	0-74	•	•
Pneumonia	J12-J18	0-74	•	
Chronic obstructive pulmonary	J40-J44	0-74	•	•
disorder	310 311	0 7 1		
Asthma	J45-J46	0-74	•	
Selected respiratory diseases	J00-J06, J20-J22, J30-J39	1-14	•	
Digestive disorders				
Gastric and duodenal ulcer	K25-K28	0-74	•	
Acute abdomen, appendicitis,	K35-K38, K40-K46, K80-K83,	0-74	•	
intestinal obstruction,	K85, K86.1-K86.9, K91.5			
cholecystitis/lithiasis, pancreatitis,				
hernia				
Genitourinary disorders				
Nephritis and nephrosis	N00-N07, N17-N19, N25-N27	0-74	•	
Obstructive uropathy and prostatic	N13, N20-N21, N35, N40, N99.1	0-74	•	
hyperplasia Maternal and infant				
Complications of perinatal period	P00-P96, A33	All		
	·	0-74		
Congenital malformations of the circulatory system	Q20-Q28	0-74	•	
Spina Bifida	Q05	0-74		•
Unintentional injuries				
Transport Accidents	V01-V99	All		•
Accidental Injury	W00-X59	All		•
Intentional injuries				
Suicide and self inflicted injuries	X60-X84, Y10-Y34	All		•
Homicide/Assault	X85-Y09, U50.9	All		•
Misadventures to patients during surgical and medical care	Y60-Y69, Y83-Y84	All	•	•

Table 9: Avoidable Children & Young People

Condition Group & Cause	ICD-10 Codes	Age
Infections		
Tuberculosis	A15-A19, B90	0-19
Selected invasive bacterial and protozoal infections	A38-A41, A46, A48.1, B50-B54, G00, G03, J02, L03	0-19
Hepatitis C	B17.1, B18.2	0-19
Pertussis (whooping cough)	A37	0-14
Measles	B05	1-14
Rubella	B06	0-14
Other infections (Diphtheria, Tetanus, Poliomyelitis and Varicella)	A35, A36, A80, B01	0-19
Intestinal infections	A00-A09	0-14
HIV/AIDS	B20-B24	0-19
Neoplasms		
Malignant neoplasm of lip, oral cavity and pharynx	C00-C14	0-19
Malignant neoplasm of oesophagus	C15	0-19
Malignant neoplasm of stomach	C16	0-19
Malignant neoplasm of colon and rectum	C18-C21	0-19
Malignant neoplasm of liver	C22	0-19
Malignant neoplasm of trachea, bronchus and lung	C33-C34	0-19
Malignant melanoma of skin	C43	0-19
Mesothelioma	C45	0-19
Malignant neoplasm of breast	C50	0-19
Malignant neoplasm of cervix uteri	C53	0-19
Malignant neoplasm of bladder	C67	0-19
Malignant neoplasm of thyroid gland	C73	0-19
Hodgkin's disease	C81	0-19
Leukaemia	C91, C92.0	0-19
Malignant neoplasm of testis	C62	0-19
Malignant neoplasm of unspecified parts of uterus and body of uterus	C54-C55	0-19
Benign neoplasms	D10-D36	0-19
Nutritional, endocrine and metabolic		
Diabetes mellitus	E10-E14	0-19
Diseases of Thyroid	E00-E07	0-19
Addison's Disease	E27.1	0-19
Drug use disorders	_	
Alcohol related diseases, excluding external causes	F10, G31.2, G62.1, I42.6, K29.2, K70, K73, K74 (excl. K74.3-K74.5), K86.0	0-19
Illicit drug use disorders	F11-F16, F18-F19	0-19
Neurological disorders		
Epilepsy and status epilepticus	G40-G41	0-19

Condition Group & Cause	ICD-10 Codes	Age
Cardiovascular diseases		
Rheumatic and other valvular heart disease	101-109	0-19
Hypertensive diseases	l10-l15	0-19
Ischaemic heart disease	120-125	0-19
DVT with pulmonary embolism	126, 180.1-180.3, 180.9, 182.9	0-19
Cerebrovascular diseases	160-169	0-19
Aortic aneurysm and dissection	l71	0-19
Respiratory diseases		
Influenza (including swine flu)	J09-J11	0-19
Pneumonia	J12-J18	0-19
Chronic obstructive pulmonary disorder	J40-J44	0-19
Asthma	J45-J46	0-19
Selected respiratory diseases	J00-J06, J20-J22, J30-J39	1-14
Digestive disorders		
Gastric and duodenal ulcer	K25-K28	0-19
Acute abdomen, appendicitis, intestinal obstruction,	K35-K38, K40-K46, K80-K83, K85, K86.1-	0-19
cholecystitis/lithiasis, pancreatitis, hernia	K86.9, K91.5	
Genitourinary disorders		
Nephritis and nephrosis	N00-N07, N17-N19, N25-N27	0-19
Obstructive uropathy and prostatic hyperplasia	N13, N20-N21, N35, N40, N99.1	0-19
Maternal and infant		
Complications of perinatal period	P00-P96, A33	0-19
Congenital malformations of the circulatory system	Q20-Q28	0-19
Spina Bifida	Q05	0-19
Unintentional injuries		
Transport Accidents	V01-V99	0-19
Accidental Injury	W00-X59	0-19
Intentional injuries		
Suicide and self inflicted injuries	X60-X84, Y10-Y34	0-19
Homicide/Assault	X85-Y09, U50.9	0-19
Misadventures to patients during surgical and medical care	Y60-Y69, Y83-Y84	0-19

Table 10: Admissions – Alcohol Related Causes

ICD-10 code	Description
E24.4	Alcohol induced Pseudo-Cushing's syndrome
E51.2	Wernicke's Encephalopathy
F10	Mental and Behavioural disorders due to use of alcohol
G31.2	Degeneration of the nervous system due to alcohol
G62.1	Alcoholic polyneuropathy
G72.1	Alcoholic myopathy
142.6	Alcoholic cardiomyopathy
K29.2	Alcoholic gastritis
K70	Alcoholic liver disease
K86.0	Alcohol-induced chronic pancreatitis
O35.4	Maternal care for (suspected) damage to foetus from alcohol
P04.3	Foetus and newborn affected by maternal use of alcohol
Q86.0	Foetal alcohol syndrome (dysmorphic)
T51.0	Toxic effect of ethanol
T51.1	Toxic effect of methanol
T51.9	Toxic effect of alcohol, unspecified
X45	Accidental poisoning by and exposure to alcohol
X65	Intentional self-poisoning by and exposure to alcohol
Y15	Poisoning by and exposure to alcohol, undetermined intent
Y57.3	Alcohol deterrents
Y90	Evidence of alcohol involvement determined by blood alcohol level
Y91	Evidence of alcohol involvement determined by level intoxication
Z50.2	Alcohol rehabilitation
Z71.4	Alcohol abuse counselling and surveillance
Z72.1	Alcohol use

Table 11: Deaths – Alcohol Related Causes

ICD-10 code	Description
F10	Mental and Behavioural disorders due to use of alcohol
G31.2	Degeneration of the nervous system due to alcohol
G62.1	Alcoholic polyneuropathy
142.6	Alcoholic cardiomyopathy
K29.2	Alcoholic gastritis
K70	Alcoholic liver disease
K73	Chronic hepatitis, not elsewhere defined
K74	Fibrosis and cirrhosis of liver (Excluding K74.3-K74.5-Bilary cirrhosis)
K86.0	Alcohol induced chronic pancreatitis
X45	Accidental poisoning by and exposure to alcohol
X65	Intentional self-poisoning by and exposure to alcohol
Y15	Poisoning by and exposure to alcohol, undetermined intent

Table 12: Admissions and Deaths – Drug Related Causes

ICD-10 code	Description
F11-16, F18-F19	Mental and Behavioural disorders due to drug use (excluding alcohol and tobacco)
X40-44	Accidental poisoning by drugs, medicaments and biological substances
X60-X64	Intentional self-poisoning by drugs, medicaments and biological substances
X85	Assault by drugs, medicaments and biological substances
Y10-14	Poisoning by drugs, medicaments and biological substances, undetermined intent

Table 13: Deaths – Drugs Misuse

ICD-10 code	Description			
F11-16, F19	Mental and Behavioural disorders due to drug use (excluding alcohol, tobacco and volatile substances)			
Deaths due to the following categories <i>and</i> where a drug controlled under the Misuse of Drugs Act 1971 was mentioned;				
X40-44	Accidental poisoning by drugs, medicaments and biological substances			
X60-X64	Intentional self-poisoning by drugs, medicaments and biological substances			
X85	Assault by drugs, medicaments and biological substances			
Y10-14	Poisoning by drugs, medicaments and biological substances, undetermined intent			

Table 14: Deaths – Smoking Related Causes³²

		Attributable	Attributable Percentage	
Cause of Death	ICD-10 code	Men	Women	
Cancer				
Lung	C33 – C34	90%	79%	
Upper respiratory	C32, C14.0	77%	58%	
Oesophagus	C15	70%	72%	
Bladder	C67	49%	20%	
Kidney	C64	41%	7%	
Stomach	C16	35%	10%	
Pancreas	C25	26%	30%	
Unspecified site	C80	33%	7%	
Myeloid Leukaemia	C92	19%	10%	
Respiratory				
Chronic obstructive lung disease	J44	87%	83%	
Pneumonia 35-64	J18	33%	53%	
Pneumonia 65+	J18	23%	13%	
Circulatory				
Ischaemic heart disease 35-54	120-125	55%	63%	
Ischaemic heart disease 55-64	120-125	41%	36%	
Ischaemic heart disease 65-74	120-125	25%	18%	
Ischaemic heart disease 75+	120-125	9%	5%	
Cerebrovascular disease 35-54	160-169	56%	53%	
Cerebrovascular disease 55-64	160-169	33%	38%	
Cerebrovascular disease 65-74	160-169	16%	31%	
Cerebrovascular disease 75+	160-169	4%	2%	
Aortic Aneurysm	l71	64%	66%	
Myocardial Degeneration	l51.5	27%	18%	
Atherosclerosis	170	21%	21%	
Digestive				
Stomach/Duodenum Ulcer	K25-K26	53%	59%	
Disease Prevented by Smoking				
Parkinson's Disease	G20	-51%	-30%	
Endometrial Cancer	C54	N/A	-16%	

_

³²It should be noted that this definition is specific to the death rates in NI and therefore differs from those used in other parts of the UK and other countries, meaning it is not directly comparable.

Also available for the Health & Social Care Inequalities Monitoring System (HSCIMS)

Health Inequalities

Sub-regional Report

Sub-regional analysis at HSC Trust and Council levels examining health inequality gaps within each area as well as compared with the Northern Ireland average (Biennial).

http://www.health-ni.gov.uk/publications/health-and-social-care-inequalities-monitoring-system-hscims-sub-regional-inequalities

Health Inequalities

Life Expectancy Decomposition

Analysis of changes in life expectancy and life expectancy gaps by cause of death and age, for NI overall, by deprivation and rurality as well as within each Trust and compared with other countries (Biennial). http://www.health-ni.gov.uk/publications/health-and-social-care-inequalities-monitoring-system-hscims-life-

expectancy-0

Making Life Better

Monitoring the Wider Social Determinants of Health & Wellbeing Key Indicators

Monitoring of the key indicators of the wider social determinant of health & wellbeing set out against each of the themes contained in the making life better strategic framework (Annual).

http://www.health-ni.gov.uk/articles/social-determinants-health-statistics

Produced by:

Public Health Information & Research Branch, Information Analysis Directorate

Department of Health, Social Services and Public Safety
Castle Buildings, Belfast BT4 3SQ
Tel: 02890522501

Email: healthinequalities@health-ni.gov.uk

http://www.health-ni.gov.uk/topics/dhssps-statistics-and-research/health-inequalities-statistics