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HEALTH AND SOCIAL CARE INEQUALITIES MONITORING SYSTEM: FIRST UPDATE BULLETIN 2004



Northern Ireland
**Statistics &
Research**
Agency

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1 KEY FINDINGS

- 1.1 This is the first update report from the Health and Social Care Inequalities Monitoring System. It details area differences in morbidity, utilisation of and access to health and social care services in Northern Ireland. Key findings from the report are:

Deprivation

- Health outcomes in deprived areas are generally worse than in Northern Ireland overall.
- Lung cancer incidence rates for all persons are 57% higher in deprived areas than in Northern Ireland overall;
- A person aged under 75 living in a deprived area is 34% more likely to die than a similar person in Northern Ireland overall;
- The teenage birth rate in deprived areas is 71% higher than in Northern Ireland as a whole.

Rural

- Health outcomes in rural areas are generally better than in Northern Ireland overall.
- Lung cancer incidence rates for all persons are 35% lower in rural areas than in Northern Ireland overall;
- The teenage birth rate in rural areas was almost half the Northern Ireland average.

Equality

- In the areas with the worst outcomes, there are higher proportions of Catholics, Nationalists and single people than in Northern Ireland as a whole;
- 67% of those living in those areas with the worst dental registration rates are Catholic whereas Catholics only make up 44% of the overall Northern Irish population;
- In the areas with the worst access to health and social care facilities, there are higher proportions of Catholics, Nationalists, married people and households with dependents than in Northern Ireland as a whole;

- 56% of those living in those areas with the worst access to Opticians are Catholic whereas Catholics only make up 44% of the Northern Irish population.

Baseline Comparisons

1.2 Although two sets of data are insufficient to determine a trend in inequalities in health over time and changes in outcomes over time tend to be very gradual, in the one year (or sometimes two) period since the baseline:

- Inequalities between deprived areas and Northern Ireland have decreased slightly overall for morbidity measures such as cancer incidence rates and admission rates but have increased slightly for mortality-based indicators such as life expectancy or premature mortality rates;
- Inpatient admissions rates for all persons in deprived areas were 25% higher in 2001-02 than in Northern Ireland overall whereas in 2002-03 they were 23% higher.
- The gap in life expectancy between males in deprived areas and males in Northern Ireland overall has increased from 3.1 years in 1999-2001 to 3.2 years in 2000-02;
- Differences between rural areas and Northern Ireland overall have neither increased nor decreased.

2 INTRODUCTION

- 2.1 The Inequalities Monitoring System comprises a basket of indicators which are monitored over time to assess area differences in morbidity, utilisation of and access to health and social care services in Northern Ireland. Inequalities between the 20% most deprived electoral wards and Northern Ireland as a whole are measured with deprived areas identified from an update of the Noble Income domain for current ward boundaries. Results for 20% most rural areas were also compared against Northern Ireland overall using population density from the 2001 Census of Population as a measure of rurality. This report is the first annual update of the baseline results presented in Chapter 8 of *Equality and Inequalities in Health and Social care in Northern Ireland – A Statistical Overview (DHSSPS 2004)* which focused on 2001/2002. The morbidity and utilisation data in this report are the latest available while the locations of services for the accessibility analysis will be updated in subsequent years.
- 2.2 All the original indicators are largely unchanged and are described in detail in the Appendix 1. However, there have been a number of enhancements:

The following indicators have been added:

- **Standardised admission rates for respiratory diseases** - A comparison of the respiratory disease admission rate in an area to Northern Ireland as a whole. This comparison takes account of the different age-sex profiles in different areas. All inpatient and day case admissions are included. Three years have been aggregated to provide robust results.
- **Standardised admission rates for circulatory diseases** - A comparison of the circulatory disease admission rate in an area to Northern Ireland as a whole. This comparison takes account of the different age-sex profiles in different areas. All inpatient and day case admissions are included except those for nephrology which tend to distort results due to individuals with large numbers of repeat admissions. Three years have been aggregated to provide robust results.
- **Mood/Anxiety disorders** - The number of individuals suffering from mood or anxiety disorders is estimated using prescription data broken down by GP practice. From the volume of anxiolytic and anti-depressant drugs prescribed in each practice, the number of patients taking this medication can be estimated. This data is then attributed to geographical area using the practice list.

- **Fire Response** – The Northern Ireland Fire Brigade has provided the time taken by the first appliance to respond to each fire incident in Northern Ireland for every incident in a given year. These are then used to provide a robust estimate of the average response time to each geographical area.

Some of the previous analyses have been improved:

- **Ambulance response** – The time taken by the first ambulance to respond to each incident is used as the basis of the analysis. The response times of all ambulances in attendance were analysed in the baseline report. Also the median i.e. midpoint value is now reported rather than the simple average as it is unaffected by atypically long or short response times. Both the baseline and the latest year have been updated to reflect the new definition.
- **Equality analysis of areas with worst access** – An analysis of the equality profile of areas with the worst morbidity/utilisation outcomes was included in the baseline report. This analysis has been expanded in this update report to also examine the equality profile of areas originally identified as having the worst access to health and social care services.
- **Equality categories: Political Opinion** – First preference votes for 2001 Local Government elections are available on the ARK Northern Ireland Social and Political Archive maintained by the Queen’s University of Belfast and the University of Ulster. This information is broken down by 101 district electoral areas and can be mapped to electoral ward level by assuming that all wards in each electoral area follow the same voting patterns. Although this assumption may be open to question particularly in mixed areas, results using this approach are consistent with other indicators of voting preference.

The inclusion of this data allows us to analyse the equality profile of wards with the worst morbidity, utilisation or accessibility for 8 out of the 9 equality categories. Details of data sources are given in Appendix 2. Small-area level data relating to sexual orientation are still not available.

3 COMPARISON OF DEPRIVED AREAS AND THE NORTHERN IRELAND AVERAGE FOR MORBIDITY AND UTILISATION INDICATORS

STANDARDISED MORTALITY RATES FOR PEOPLE AGED UNDER 75 (SMRU75)

- 3.1 In 1998-2002, a person aged under 75 living in a deprived area was 34% more likely to die than a similar person in Northern Ireland overall. Males aged under 75 living in deprived areas were 36% more likely to die than comparable Northern Irish males while females aged under 75 in deprived areas were 32% more likely to die than comparable Northern Irish females.

Table 1: Standardised mortality rates for people aged under 75

Area	1997-2001			1998-2002		
	Males	Females	All persons	Males	Females	All persons
Deprived wards	135	130	133	136	132	134
Non-deprived wards	91	92	91	91	91	91
NI	100	100	100	100	100	100

Source: General Register Office / Project Support Analysis Branch

Compared to the previous period (1997-2001), SMRs for people aged under 75 have slightly increased in deprived areas for males and females.

LIFE EXPECTANCY

- 3.2 In 2000-02, life expectancy for men and women in deprived areas was 72.0 years and 77.9 years compared to the Northern Ireland average for men and women of 75.2 and 80.2 years respectively. This represents a gap of 3.2 years for men and 2.3 years for women.

Table 2: Life expectancy

Area	1999-01		2000-02	
	Males	Females	Males	Females
Deprived wards	71.9	77.6	72.0	77.9
Non-deprived wards	75.8	80.5	76.0	80.8
NI	74.9	79.9	75.2	80.2

Source: General Register Office/Project Support Analysis Branch

Life expectancy has improved in all areas from 1999-2001 to 2000-02. However, the gap in male life expectancy between deprived wards and the Northern Ireland average has increased from 3.0 years in 1999-2001 to 3.2 in 2000-02. The female life expectancy gap has remained the same at 3.3 years.

INFANT MORTALITY RATES

- 3.3 In 1998-2002, the infant mortality rate for the most deprived wards was 23% higher than the Northern Ireland average.

Table 3: Infant mortality rates per 1,000 live births.

Area	1997-01	1998-2002
Deprived wards	7.1	6.8
Non-deprived wards	5.3	5.1
NI	5.7	5.5

Source: General Register Office / Project Support Analysis Branch

Although infant mortality has decreased over the two periods in all areas, the rate in deprived areas relative to the Northern Ireland average was unchanged at 23% higher.

CANCER INCIDENCE RATES

- 3.4 In 1995-2001, cancer standardized incidence rates (SIRs) for people living in deprived areas were higher for males, females and all persons (13% higher for all persons) than the Northern Ireland average.

Table 4: Cancer standardised incidence rates

Area	1993-99			1995-2001		
	Males	Females	All persons	Males	Females	All persons
Deprived wards	118	111	115	116	111	113
Non-deprived wards	96	97	96	96	97	97
NI	100	100	100	100	100	100

Source: Northern Ireland Cancer Registry / Project Support Analysis Branch

Compared to the previous period (1993-99), cancer SIRs have decreased for males in deprived areas. They were 16% more likely to develop cancer than the average male in Northern Ireland in 1995-2001 as opposed to 18% more likely in 1993-1999. There was no change in cancer SIRs for females.

LUNG CANCER INCIDENCE RATES

- 3.5 In 1995-2001, lung cancer standardized incidence rates (SIRs) for people living in deprived areas were higher for males, females and all persons (57% higher for all persons) than the Northern Ireland average.

Table 5: Lung cancer standardised incidence rates

Area	1993-99			1995-2001		
	Males	Females	All persons	Males	Females	All persons
Deprived wards	158	160	159	155	160	157
Non-deprived wards	86	85	86	87	85	86
NI	100	100	100	100	100	100

Source: Northern Ireland Cancer Registry / Project Support Analysis Branch

Compared to previous period 1993-99, lung cancer SIRs have decreased for males in deprived areas. In 1995-2001 they were 55% more likely to develop lung cancer than the average male in Northern Ireland as opposed to 58% more likely in 1993-1999. There was no change in lung cancer SIRs for females.

TEENAGE BIRTH RATES

- 3.6 In 2002, the teenage birth rate in deprived areas (28.6 per 1,000 females aged 13-19) was 71% higher than in Northern Ireland as a whole (16.7 per 1,000 females aged 13-19).

Table 6: Teenage birth rates (births per 1,000 females aged 13-19)

Areas	2001	2002
Deprived wards	28.9	28.6
Non-deprived wards	12.9	12.7
Northern Ireland average	17.0	16.7

Source: General Register Office/Project Support Analysis Branch

Teenage birth rates have fallen in all areas. However, the rate in deprived areas relative to the Northern Ireland average has increased slightly from 70% higher in 2001 to 71% higher in 2002.

CHILDHOOD IMMUNISATION RATES

- 3.7 Immunisation rates at aged two for children born in 2001 in deprived areas were practically the same for all immunisations as in Northern Ireland overall.

Table 7: Immunisation uptake rates (%)

Areas	Children born in 1998					Children born in 2001				
	DPT	Pertussis	Hib	MenC	MMR	DPT	Pertussis	Hib	MenC	MMR
Deprived wards	95	93	94	79	90	97	96	97	96	88
Non-deprived wards	98	97	98	86	94	97	97	97	96	89
Northern Ireland average	97	96	97	84	93	97	97	97	96	88

Source: Child Health System/Project Support Analysis Branch

Comparing the most recent results with data for children born in 1998, it can be seen that although immunization rates for Diphtheria-Polio-Tetanus (DPT), Pertussis and Haemophilus Influenzae Type b (Hib) have changed little overall, the gap between rates in deprived areas and overall rates has almost disappeared. For Meningitis C, rates have dramatically improved in all areas with the result that there is now no gap between deprived areas and the Northern Ireland average. This improvement has taken place principally in the Northern and Eastern HSS boards with overall immunisation rates in these areas improving by 12% and 25% due to the phased introduction of this vaccine from November 1999 onwards. Measles, Mumps, Rubella (MMR) immunisation rates have decreased overall reflecting patterns occurring in other countries as a result of adverse publicity regarding this vaccine. It is interesting to note that this decrease has been more marked in non-deprived wards than in deprived wards.

DENTAL REGISTRATION RATES

- 3.8 In June 2004, people in deprived areas were less likely to be registered with a dentist than people in Northern Ireland as a whole (12% less likely for all persons).

Table 8: Standardised dental registration rates

Area	November 2002			June 2004		
	Males	Females	All persons	Males	Females	All persons
Deprived wards	86	88	87	87	89	88
Non-deprived wards	105	104	104	104	103	104
NI	100	100	100	100	100	100

Source: Central Services Agency / Project Support Analysis Branch

Comparing the most recent data with rates in November 2002, all persons in deprived areas were 13% less likely to be registered with a dentist in November 2002 as opposed to 12% less likely in June 2004.

ADMISSIONS

- 3.9 All types of admission rates were higher for people living in deprived areas in 2002-03 than the Northern Ireland average (23% higher overall for admissions). The difference is much more noticeable for emergency admissions than for elective.

Table 9: Standardised admission rates

		2001-02			2002-03		
	Area	Males	Females	All	Males	Females	All
All inpatient admissions	Deprived wards	127	123	125	127	120	123
	Non-deprived wards	93	94	93	93	95	94
	NI	100	100	100	100	100	100
Emergency admissions	Deprived wards	137	129	133	134	126	130
	Non-deprived wards	90	92	91	91	93	92
	NI	100	100	100	100	100	100
Elective admissions	Deprived wards	109	111	110	110	109	110
	Non-deprived wards	98	97	97	97	97	97
	NI	100	100	100	100	100	100

Source: Hospital Inpatients System / Project Support Analysis Branch

Comparing all inpatient admission rates in 2002-03 to the previous year's figures, it can be seen that the difference between deprived areas and Northern Ireland as a whole has decreased slightly. In 2001-02, admissions rates for all persons in deprived areas were 25% higher than in Northern Ireland overall whereas in 2002-03 they were 23% higher. This has been driven by a decrease in emergency admission rates in deprived areas compared to overall rates rather than any changes in elective admission patterns.

RESPIRATORY ADMISSIONS

- 3.10 In the period April 2000-March 2003, admission rates for respiratory diseases were higher in deprived areas than in Northern Ireland overall particularly for females (33% higher).

Table 10: Standardised admission rates for respiratory disease admissions

Area	April 1999- March 2002			April 2000-March 2003		
	Males	Females	All persons	Males	Females	All persons
Deprived wards	126	135	131	125	133	129
Non-deprived wards	93	90	91	93	90	92
NI	100	100	100	100	100	100

Source: Hospital Inpatients System / Project Support Analysis Branch

Compared to April 1999-March 2002, standardised admission rates for respiratory diseases in deprived wards have decreased slightly for males and females whilst the standardised admission rate for all persons in non-deprived wards has increased slightly.

CIRCULATORY ADMISSIONS

- 3.11 Circulatory disease admission rates were higher in deprived areas than in Northern Ireland overall in the period April 2000-March 2003 (14% higher for all persons).

Table 11: Standardised admission rates for circulatory disease admissions

Area	April 1999-March 2002			April 2000-March 2003		
	Males	Females	All persons	Males	Females	All persons
Deprived wards	117	114	116	115	112	114
Non-deprived wards	96	96	96	96	97	97
NI	100	100	100	100	100	100

Source: Hospital Inpatients System / Project Support Analysis Branch

Compared to April 1999-March 2002, standardised admission rates for circulatory diseases in deprived wards have decreased slightly for males and females.

Standardised admission rates for circulatory diseases in non-deprived wards have increased slightly for females.

WAITING TIMES FOR INPATIENT ADMISSION

- 3.12 In 2002-03, a lower proportion of persons in deprived areas (1.7%) than in Northern Ireland overall (2.0%) had to wait excessivelyⁱ for elective admission.

Table 12: Proportion of inpatient elective admissions where the patient had waited more than 18 months (or 12 months for cardiac surgery)

Areas	2001-02	2002-03
Deprived wards	1.3%	1.7%
Non-deprived wards	1.4%	2.1%
Northern Ireland average	1.4%	2.0%

Source: Hospital Inpatients System / Project Support Analysis Branch

Comparing consecutive years, the proportions of 'excess waiters' admitted has increased everywhere but more noticeably outside of deprived areas. Whereas deprived areas had a slightly smaller proportion of excess waiters admitted (1.3%) in 2001-02 compared to Northern Ireland overall (1.4%), the difference in 2002-03 was much more noticeable.

MOOD AND ANXIETY DISORDERS

- 3.13 In April 2004, the estimated proportion of people in deprived wards on medication for mood and anxiety disorders was higher in deprived areas (10.5%) than in Northern Ireland as a whole (9.3%).

ⁱ More than 18 months for inpatient admission to hospital (or 12 months for cardiac surgery).

Table 13: Estimated proportion of people suffering from mood or anxiety disorders based on prescribing

Areas	April 2002	April 2004
Deprived wards	9.5%	10.5%
Non-deprived wards	8.4%	8.9%
Northern Ireland average	8.6%	9.3%

Source: Central Services Agency / Project Support Analysis Branch

Comparing the update with data for April 2002, it can be seen that overall levels of prescribing for mood and anxiety disorders have risen slightly in all areas. The gap between deprived areas and the rest of Northern Ireland has also widened.

AMBULANCE RESPONSE TIMES

- 3.14 In August 2004, the medianⁱⁱ ambulance response time in deprived areas (7.3 minutes) was slightly quicker than the response time in Northern Ireland overall (8.6 minutes).

Table 14: Median response times (minutes)

Areas	Sept 2002	Aug 2004
Deprived wards	6.8	7.3
Non-deprived wards	8.2	8.6
Northern Ireland average	7.6	8.1

Source: Northern Ireland Ambulance Service / Project Support Analysis Branch

There has been little change from 2002 with an increase in response times to all areas of approximately 0.5 minutes from September 2002 to August 2004.

ⁱⁱ If observations of a variable are ordered by value, the median value corresponds to the middle observation in that ordered list.

FIRE RESPONSE TIMES

- 3.15 In 2003, the average response time in deprived areas (6.1 minutes) was slightly quicker than in the rest of Northern Ireland (7.3 minutes in NI overall).

Table 15: Average response times (minutes)

Areas	2000	2001	2002	2003
Deprived wards	5.5	5.7	5.5	6.1
Non-deprived wards	7.1	7.2	7.2	7.9
Northern Ireland average	6.5	6.6	6.6	7.3

Source: Northern Ireland Fire Brigade / Project Support Analysis Branch

There has been little change over the four years analysed but response times have increased very slightly in deprived areas from 2002 (5.5 minutes) to 2003 (6.1 minutes).

OVERVIEW

- 3.16 In order to illustrate graphically the more recent results presented in this report, the difference between outcomes for deprived areas and the Northern Ireland average has been expressed as a percentage of the Northern Ireland figure. This percentage has then be made negative for unfavourable outcomes and positive for favourable outcomes. The results are displayed in Figure 1. In summary, outcomes in deprived areas are worse than in Northern Ireland as a whole for all indicators except waiting times for inpatient admission, ambulance response times and fire response times. Lung cancer incidence rates and teenage birth rates are considerably worse in deprived areas.
- 3.17 In Figure 2, the more recent results are compared against the earlier data with each indicator plotted on a different axis. If there were no difference between deprived areas and Northern Ireland for either the baseline or the update the red and blue lines would follow the 0% circle. All points inside of this circle reflect worse outcomes in deprived areas and points outside of this circle reflect better outcomes. Also, if results for deprived areas relative to Northern Ireland had improved between the first report and this update then the red line would be clearly outside of the blue line.
- 3.18 It can be seen that the only noticeable differences between the two sets of data are for immunization rates and hospital waiting times where outcomes in deprived areas have improved relative to the Northern Ireland average. In all, outcomes in deprived areas have improved relative to Northern Ireland for 15 out of these 21 indicators albeit very slightly in most cases.

Figure 1: Comparison between deprived areas and the N. Ireland average for the most recent data

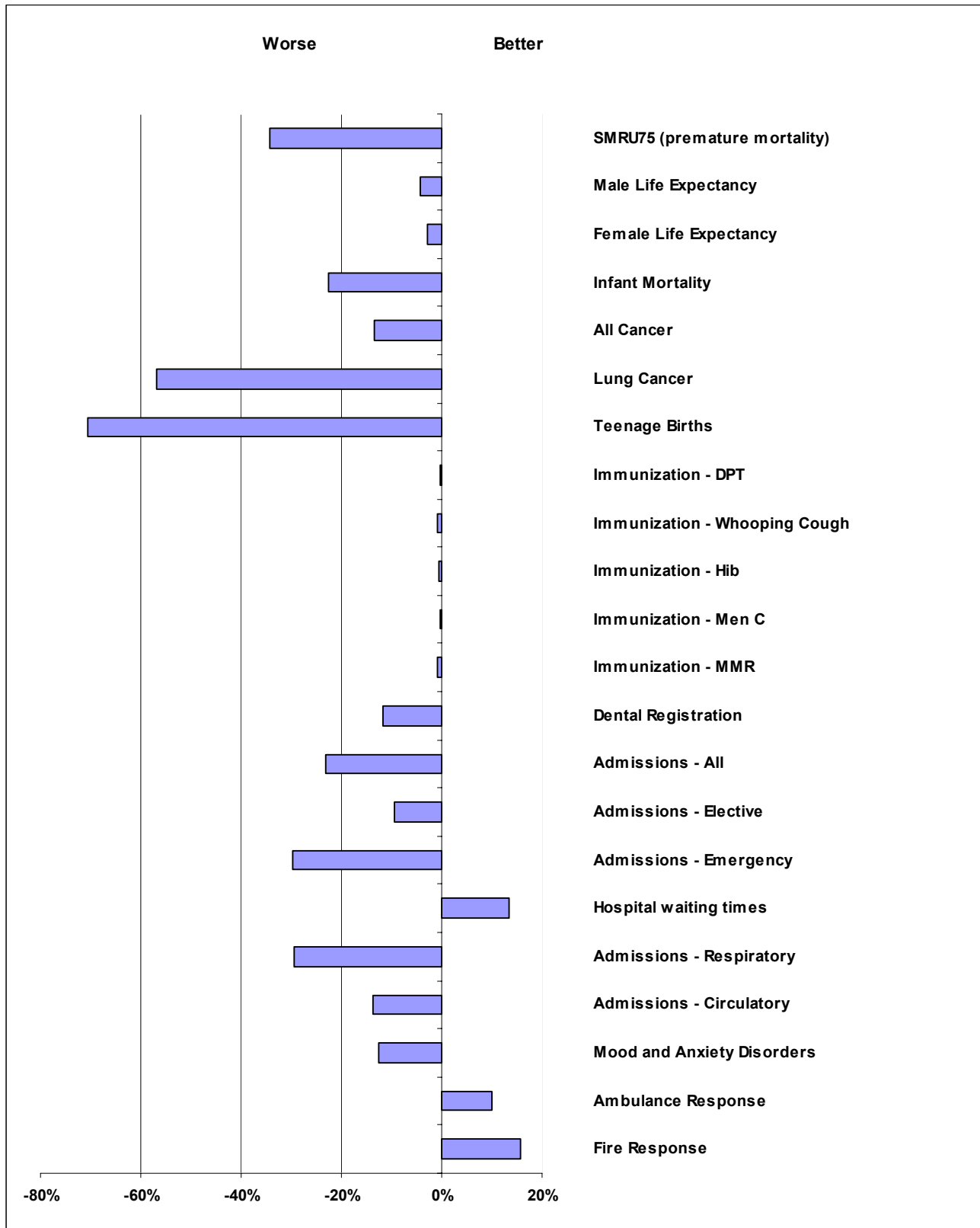
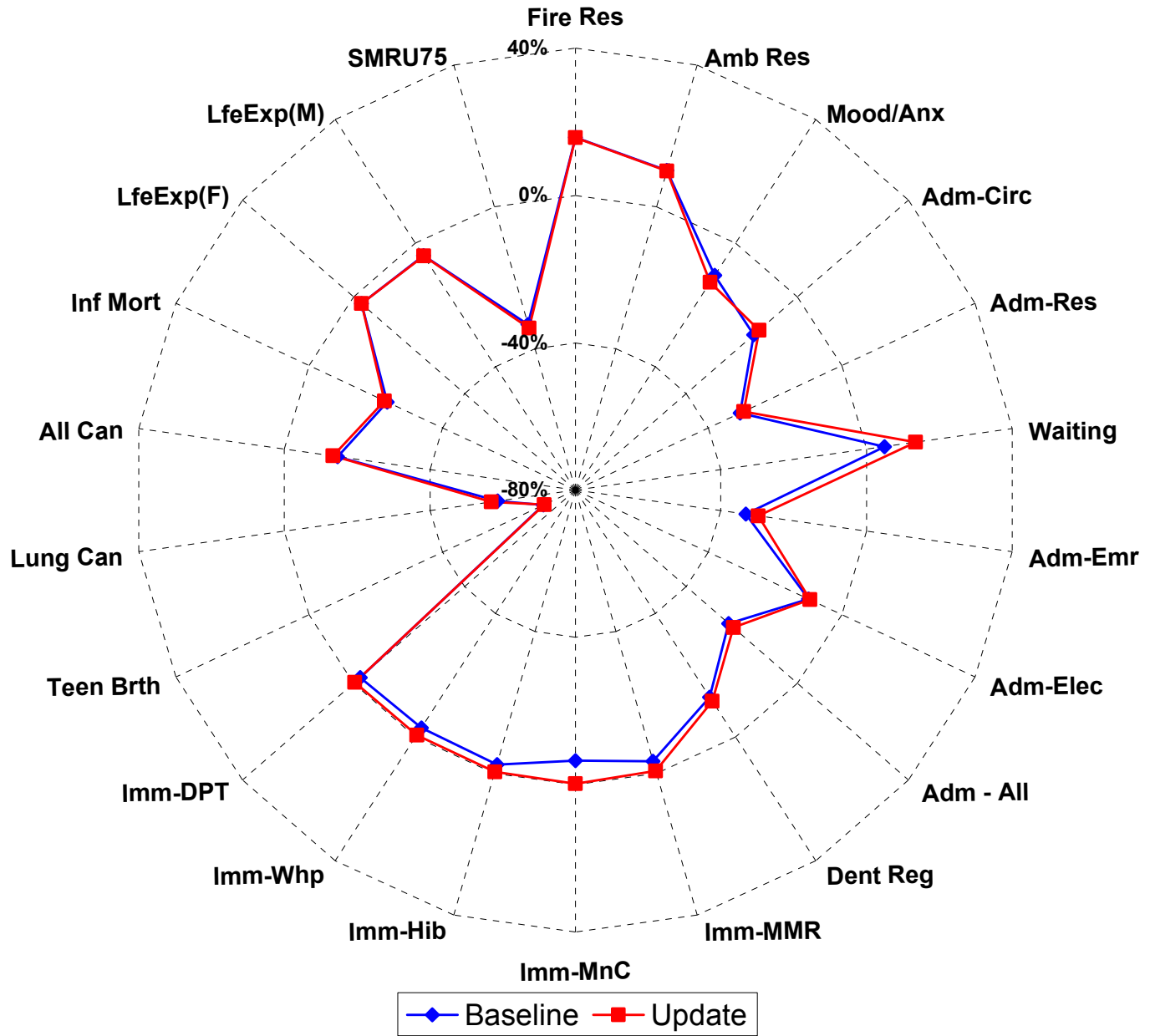


Figure 2 Comparison of earlier data with more recent data



4 COMPARISON OF RURAL AREAS AND THE NORTHERN IRELAND AVERAGE FOR MORBIDITY AND UTILISATION INDICATORS

STANDARDISED MORTALITY RATES FOR PEOPLE AGED UNDER 75 (SMR)

- 4.1 The results for 1998-2002 show that a person aged under 75 in rural areas is less likely to die than a similar person in Northern Ireland overall (12% less likely). Males aged under 75 in rural areas have worse mortality rates than females when compared to the average.

Table 16: Standardised mortality rates for people aged under 75

Area	1997-2001			1998-2002		
	Males	Females	All persons	Males	Females	All persons
Rural wards	89	89	89	87	89	88
Non-rural wards	102	102	102	102	102	102
NI	100	100	100	100	100	100

Source: General Register Office / Project Support Analysis Branch

Males aged under 75 in rural areas were 13% less likely to die than comparable Northern Irish males in 1998-2002 as opposed to 11% less likely in 1997-2001. There has been no change in standardised mortality rates for females aged under 75.

LIFE EXPECTANCY

- 4.2 The results for 2000-02 show that life expectancy for people living in rural areas is higher than for Northern Irish people generally. The gap in life expectancy between rural wards and Northern Ireland overall is slightly greater for males than females (0.6 years and 0.4 years respectively).

Table 17: Life expectancy

Area	1999-01		2000-02	
	Males	Females	Males	Females
Rural wards	75.5	80.3	75.8	80.6
Non-rural wards	74.8	79.8	75.1	80.1
NI	74.9	79.9	75.2	80.2

Source: General Register Office/ Project Support Analysis Branch

Male and female life expectancy has improved in all areas from 1999-01 to 2000-02. The gap in life expectancy between rural wards and the Northern Ireland average remained unchanged.

INFANT MORTALITY RATES

- 4.3 In the period 1998-02, infant mortality rates in rural areas were greater than the Northern Ireland average.

Table 18: Infant mortality rates per 1,000 live births

Area	1997-01	1998-2002
Rural wards	6.0	5.7
Non-rural wards	5.7	5.5
NI	5.7	5.5

Source: General Register Office / Project Support Analysis Branch

Infant mortality has decreased over the two periods in all areas. However, the rates in rural areas relative to the Northern Ireland average have remained unchanged at 4% higher.

CANCER INCIDENCE RATES

- 4.4 In 1995-2001, cancer standardized incidence rates (SIRs) for people living in rural areas were lower for males, females and all persons (8% lower for all persons) compared to the Northern Ireland average.

Table 19: Cancer standardised incidence rates

Area	1993-99			1995-2001		
	Males	Females	All persons	Males	Females	All persons
Rural wards	94	92	93	93	92	92
Non-rural wards	101	101	101	101	101	101
NI	100	100	100	100	100	100

Source: Northern Ireland Cancer Registry / Project Support Analysis Branch

Compared to 1993-99, cancer SIRs have changed very little in the areas considered.

LUNG CANCER INCIDENCE RATES

- 4.5 In 1995-01, lung cancer standardized incidence rates (SIRs) for people living in rural areas were lower for males, females and all persons (35% lower for all persons) compared to the Northern Ireland average.

Table 20: Lung cancer standardised incidence rates

Area	1993-1999			1995-2001		
	Males	Females	All persons	Males	Females	All persons
Rural wards	69	60	66	69	57	65
Non-rural wards	106	106	106	106	107	106
NI	100	100	100	100	100	100

Source: Northern Ireland Cancer Registry / Project Support Analysis Branch

Compared to the previous period, lung cancer SIRs have improved for females in rural areas implying that in 1995-2001 they were 43% less likely to develop lung cancer than the average female in Northern Ireland as opposed to 40% less likely in 1993-1999. There was no change in lung cancer SIRs for males.

TEENAGE BIRTH RATES

- 4.6 In 2002, the teenage birth rate in the most rural areas was almost half the Northern Ireland average.

Table 21: Teenage birth rates (births per 1,000 females aged 13-19)

Areas	2001	2002
Rural wards	9.1	9.0
Non-rural wards	18.5	18.3
Northern Ireland average	17.0	16.7

Source: General Register Office//Project Support Analysis Branch

Teenage birth rates have fallen in all areas. The rate in rural areas relative to the Northern Ireland average has decreased slightly from being 46% lower in 2001 to 47% lower in 2002.

CHILDHOOD IMMUNISATION RATES

- 4.7 Immunisation rates at aged two for children born in 2001 in rural areas were slightly better than in Northern Ireland overall particularly for the MMR immunisation (91% in rural areas and 88% overall).

Table 22: Immunisation uptake (%)

Areas	Children born in 1998					Children born in 2001				
	DPT	Pertussis	Hib	MenC	MMR	DPT	Pertussis	Hib	MenC	MMR
Rural wards	98	97	98	89	95	98	98	98	98	91
Non-rural wards	97	96	96	83	93	97	97	97	96	88
Northern Ireland average	97	96	97	84	93	97	97	97	96	88

Source: Child Health System/Project Support Analysis Branch

Comparing the most recent data with the baseline data, it can be seen that there has been little change in immunization rates for Diphtheria, Tetanus & Polio (DPT), Pertussis and Haemophilus Influenzae Type b (Hib). The dramatic improvement in Meningitis C immunisation rates in all areas has been already noted in Section 1. It should be noted also that this improvement has impacted more on non-rural wards than rural wards though the latter still have slightly better rates than the Northern Ireland average. Although Measles, Mumps and Rubella (MMR) immunisation rates have decreased in rural areas, rates overall have dropped by a similar amount.

DENTAL REGISTRATION RATES

- 4.8 In June 2004, there was no real difference in the likelihood of people in rural areas being registered with a dentist compared to people in Northern Ireland overall. Females in rural areas are 1% more likely to be registered with a dentist than the average female while males in rural areas are 1% less likely to be registered with a dentist than the average male.

Table 23: Standardised dental registration rates

Area	November 2002			June 2004		
	Males	Females	All persons	Males	Females	All persons
Rural wards	99	101	100	99	101	100
Non-rural wards	100	100	100	100	100	100
NI	100	100	100	100	100	100

Source: Central Services Agency / Project Support Analysis Branch

The most recent results are identical to those for November 2002.

ADMISSIONS

- 4.9 All inpatient admission rates were lower for people living in rural areas in 2002-03 than the Northern Ireland average (4% lower overall for all persons). This is due to lower emergency rates in rural areas relative to overall rates (6% lower for all persons) as elective admission rates in rural areas were almost identical to overall rates (1% lower for males and 1% higher for females).

Table 24: Standardised admission rates

	Area	2001-02			2002-03		
		Males	Females	All	Males	Females	All
All inpatient admissions	Rural wards	93	96	94	94	97	96
	Non-rural wards	101	101	101	101	100	101
	NI	100	100	100	100	100	100
Emergency admissions	Rural wards	89	94	91	93	96	94
	Non-rural wards	102	101	102	101	101	101
	NI	100	100	100	100	100	100
Elective admissions	Rural wards	98	101	99	99	101	100
	Non-rural wards	100	100	100	100	100	100
	NI	100	100	100	100	100	100

Source: Hospital Inpatients System / Project Support Analysis Branch

Comparing all inpatient admission rates in 2002-03 to the previous year's figures, it can be seen that the difference between rural areas and Northern Ireland as a whole has decreased slightly. In 2001-02 overall admission rates for all persons in rural areas were 6% lower than the Northern Ireland rate, whereas in 2002-03 they were 4% lower. This has been driven by an increase in emergency admission rates in rural areas relative to overall rates rather than any changes in elective admission patterns.

RESPIRATORY DISEASE ADMISSIONS

- 4.10 In April 2000- March 2003, admission rates for respiratory diseases were lower in rural areas than in Northern Ireland overall particularly for females (14% lower).

Table 25: Standardised admission rates for respiratory diseases

Area	April 1999- March 2002			April 2000- March 2003		
	Males	Females	All persons	Males	Females	All persons
Rural wards	94	86	90	94	86	90
Non-rural wards	101	102	102	101	102	102
NI	100	100	100	100	100	100

Source: Hospital Inpatients System / Project Support Analysis Branch

Standardised admission rates for respiratory disease admissions have remained unchanged compared to April 1999- March 2002.

CIRCULATORY DISEASE ADMISSIONS

- 4.11 In April 2000- March 2003, admission rates for circulatory diseases were lower in rural areas than in Northern Ireland overall more noticeably for males (12% lower) than for females (6% lower).

Table 26: Standardised admission rates for circulatory diseases

Area	April 1999- March 2002			April 2000- March 2003		
	Males	Females	All persons	Males	Females	All persons
Rural wards	88	95	91	88	94	91
Non-rural wards	102	101	102	102	101	102
NI	100	100	100	100	100	100

Source: Hospital Inpatients System / Project Support Analysis Branch

Standardised admission rates for circulatory disease admissions have remained almost unchanged with only a small fall in the rate for females in rural wards relative to overall rates from 5% lower than overall in April 1999- March 2002 to 6% lower than overall in April 2000- March 2003 .

WAITING TIMES FOR INPATIENT ADMISSION

- 4.12 In 2002-03, there was very little difference between the proportions of 'excess waiters' ⁱ admitted in rural areas and in Northern Ireland overall.

Table 27: Proportion of inpatient elective admissions where the patient had waited more than 18 months (or 12 months for cardiac surgery)

Areas	2001-02	2002-03
Rural wards	1.5%	1.9%
Non-rural wards	1.4%	2.0%
Northern Ireland average	1.4%	2.0%

Source: Hospital Inpatients System / Project Support Analysis Branch

Comparing consecutive years, the proportion of excess waiters admitted in rural areas has gone from being slightly more than the Northern Ireland average in 2001-02 to slightly less in 2002-03.

MOOD AND ANXIETY DISORDERS

- 4.13 In April 2004, the estimated proportion of people in rural wards taking medication for mood and anxiety disorders was lower in rural areas (8.3%) than in Northern Ireland as a whole (9.3%).

ⁱ More than 18 months for inpatient admission to hospital (or 12 months for cardiac surgery).

Table 28: Estimated proportion of people suffering from mood or anxiety disorders based on prescribing

Areas	April 2002	April 2004
Rural wards	7.9%	8.3%
Non-rural wards	8.8%	9.5%
Northern Ireland average	8.6%	9.3%

Source: Central Services Agency / Project Support Analysis Branch

Compared to the baseline data there has been an increase in all areas in the proportion of people suffering from mood or anxiety disorders. However, the increase in rural areas has been less than elsewhere.

AMBULANCE RESPONSE TIMES

- 4.14 In August 2004, the median ⁱⁱ ambulance response time to incidents in rural areas was 6.5 minutes slower than the Northern Ireland average.

Table 29: Average response times (minutes)

Areas	Sept 2002	Aug 2004
Rural wards	13.8	14.6
Non-rural wards	7.3	7.8
Northern Ireland average	7.6	8.1

Source: Northern Ireland Ambulance Service / Project Support Analysis Branch

There has been an increase of approximately 0.5 minutes in response times in all areas since September 2002.

FIRE RESPONSE TIMES

- 4.15 In 2003, the average response time in rural areas (12.4 minutes) was substantially slower than the overall response time (7.3 minutes).

ⁱⁱ If observations of a variable are ordered by value, the median value corresponds to the middle observation in that ordered list.

Table 30: Average response times (minutes)

Areas	2000	2001	2002	2003
Rural wards	11.2	11.5	11.3	12.4
Non-rural wards	6.1	6.1	6.1	6.6
Northern Ireland average	6.5	6.6	6.6	7.3

Source: Northern Ireland Fire Brigade / Project Support Analysis Branch

There was little change in response times from 2000 to 2003. From 2002 to 2003, response times increased by over a minute in rural areas and by 0.7 minutes overall.

OVERVIEW

- 4.16 In order to illustrate graphically the most recent results above, the difference between outcomes for rural areas and the Northern Ireland average has been expressed as a percentage of the Northern Ireland figure. This percentage has then been made negative for unfavourable outcomes. The results are displayed in Figure 3. Outcomes in rural areas are generally better than in Northern Ireland as a whole particularly for teenage birth rates and lung cancer incidence rates. Infant mortality rates, ambulance response times and fire response times are worse in rural areas with the latter two indicators being over 60% worse.
- 4.17 The more recent results are compared below against the earlier data in Figure 4 with each indicator plotted on a different axis. If there were no difference between rural areas and Northern Ireland for either the baseline or the update the red and blue lines would follow the 0% circle. All points inside of this circle reflect worse outcomes in rural areas and points outside of this circle reflect better outcomes. Also, if results for rural areas relative to Northern Ireland had improved between the baseline report and this update then the red line would be clearly outside of the blue line.
- 4.18 It can be seen that the only noticeable difference between the two sets of data is for hospital waiting times where the proportion of 'excess waiters' admitted in rural areas has gone from being slightly worse than the Northern Ireland average in 2001-02 to slightly better in 2002-03. Overall, there is no clear sign of improvement or deterioration in rural areas relative to Northern Ireland as a whole.

Figure 3: Comparison between rural areas and the Northern Ireland average

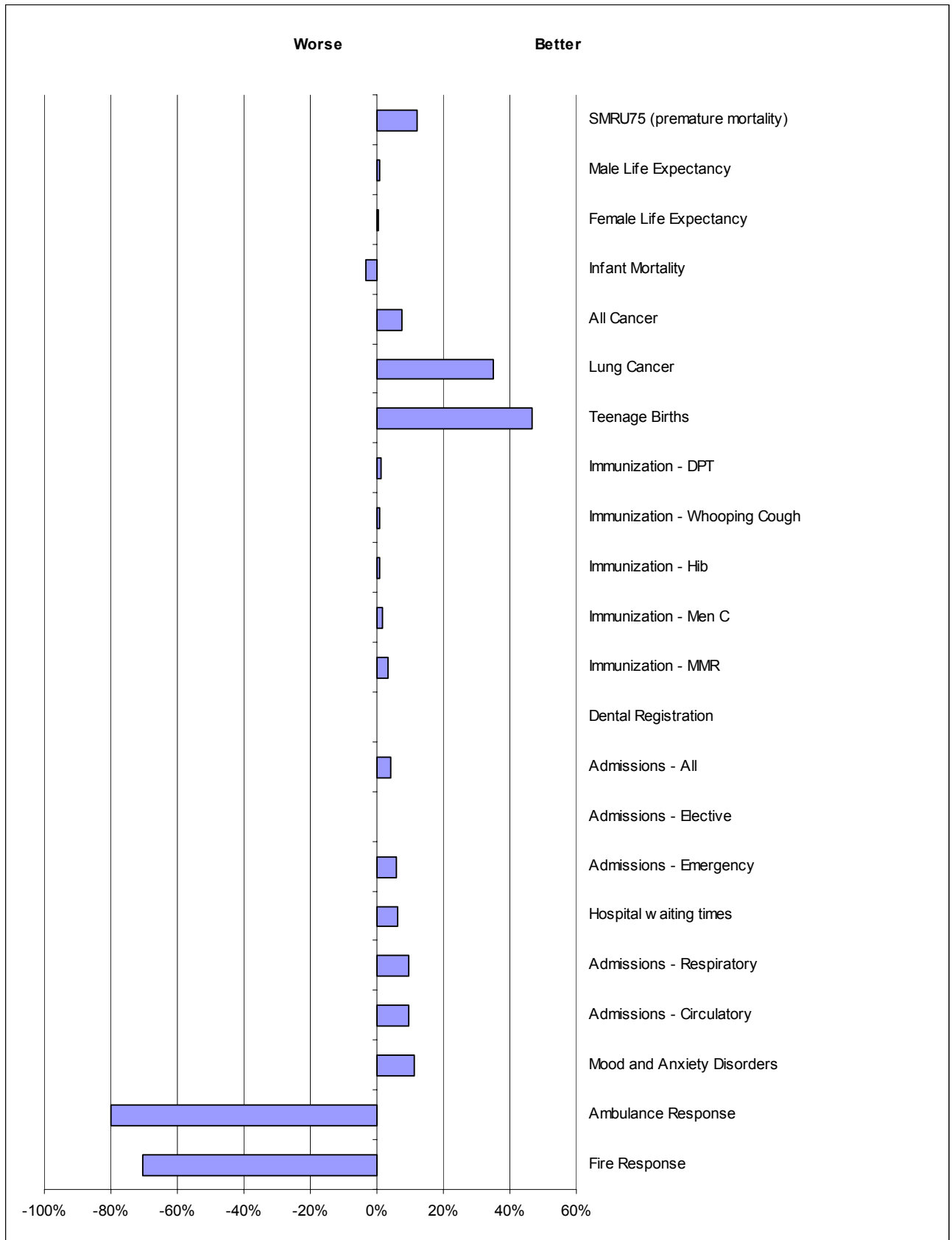
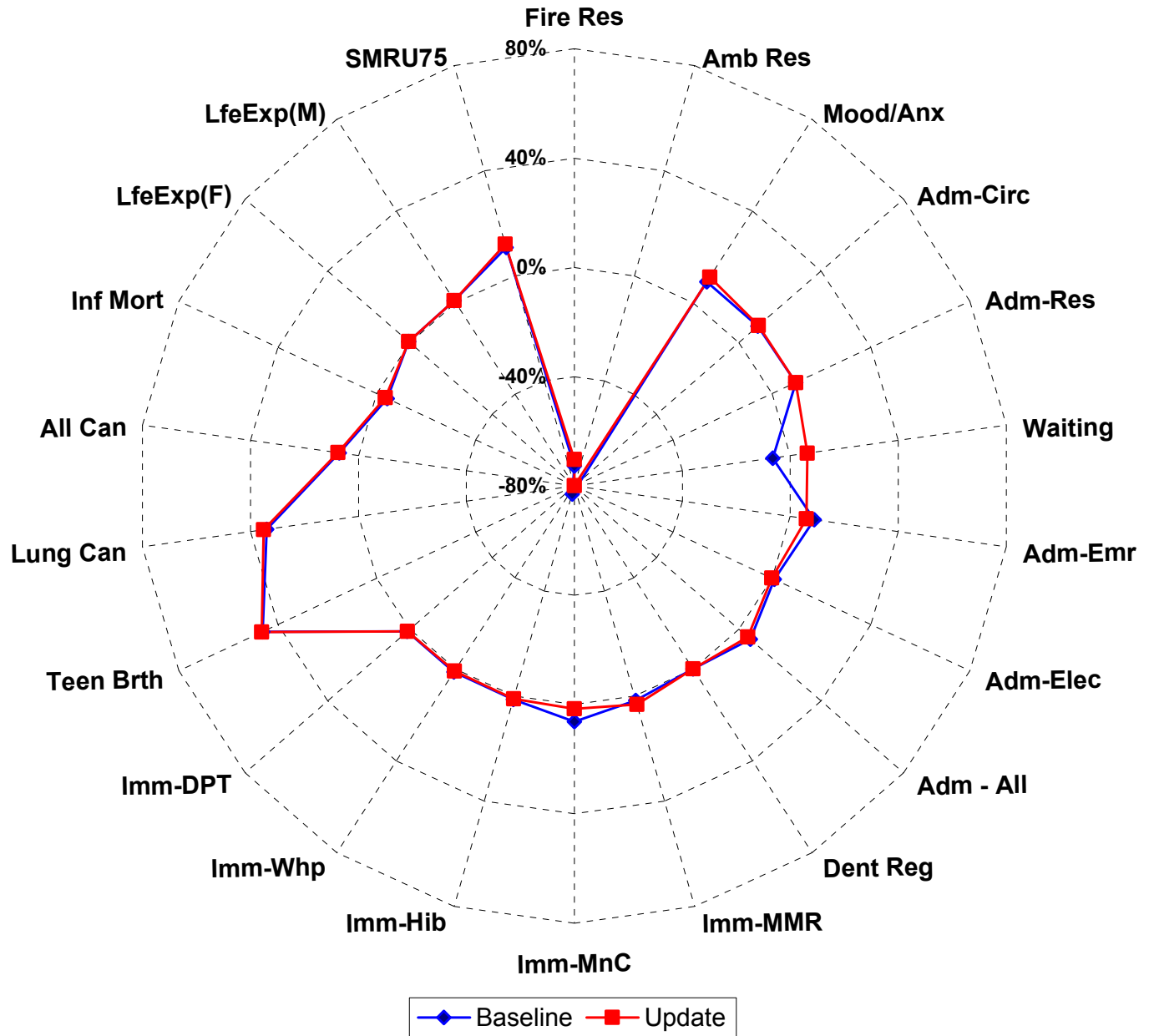


Figure 4: Comparison of earlier data with most recent data



5 COMPARISON OF THE EQUALITY GROUP PROFILE OF THE 20% OF WARDS WITH WORST OUTCOMES TO THE NORTHERN IRELAND EQUALITY GROUP PROFILE

- 5.1 Table 31 summarises the comparison between the statutory equality category composition of people living in the wards with the worst outcomes and the composition of the equality categories in Northern Ireland as a whole for the most recent data.
- 5.2 For all indicators considered except waiting times for inpatient admission and MMR immunisation rates, the proportions of the population of the wards with worst outcomes who are Catholic or who are Nationalist are higher than the proportion of the Northern Irish population who are Catholic or Nationalist. The proportion of Protestants in areas with the worst MMR immunisation rates is higher than the proportion of the Northern Irish population who are Protestant. Although the proportion of Unionists in these areas is not much higher than the overall proportion of Unionists in Northern Ireland the proportion of Nationalists is 5% lower than the equivalent overall proportion.
- 5.3 There are generally more single people in wards with the worst outcomes than expected although for fire response times the difference highlighted is due to a higher proportion of married people than expected.

Table 31 Differences in equality category profile between areas with the worst outcomes and Northern Ireland overall

	Gender	Age	Marital status	Ethnic group	Community b'ground	Disability DLA & AA	Disability Limiting LTI	Dependants Carers	Dependants Children	Political Opinion
Premature Mortality (SMR U75)	N	N	**	N	**	*	*	N	N	*
Immunisation rates (MMR)	N	N	N	N	*	N	N	N	N	*
Dental registrations	N	N	*	N	***	N	N	N	N	**
All admissions	N	N	*	N	***	*	*	N	N	**
Elective admissions	N	N	*	N	**	N	N	N	N	*
Emergency admissions	N	N	*	N	***	*	N	N	N	**
Respiratory admissions	N	N	*	N	***	*	*	N	N	**
Circulatory admissions	N	N	*	N	*	N	N	N	N	N
Mood/anxiety disorders	N	N	*	N	**	N	N	N	N	*
Waiting times	N	N	N	N	N	N	N	N	N	N
Fire Response	N	N	*	N	**	N	N	N	N	**
Notes:										
None or < 5% points			N							
Between 5 and 9% points			*							
Between 10 and 19% points			**							
20% points and over			***							

Note: The table above summarises comparisons between the equality category composition of people living in the wards with the worst outcomes and the composition of the equality categories in N. Ireland as a whole for the most recent data. For example, 55% of those living in the fifth of wards with the worst premature mortality rates have a Catholic community background whereas 44% of the Northern Irish population are from this community. As this difference (11%) is over 10 percentage points it is indicated by “***” in the table.

- 5.4 The percentage of the population of the wards with the worst premature mortality rates (SMRU75) who are (a) single (b) Catholic was higher in the present report than for the earlier data. This suggests that increasingly wards with higher concentrations of these equality categories have the worst premature mortality rates. It should be noted that the equality category data with which the baseline analysis was carried out was the same as that used for the updated analysis.
- 5.5 The community background profile of wards with the worst MMR immunisation rates has changed from being more Catholic than expected to being more Protestant than expected. Unlike for the earlier data, there is now no difference in the marital status profile.
- 5.6 The Disability benefit profile of wards with the worst dental registration rates is now the same as for Northern Ireland unlike in the baseline analysis.
- 5.7 There are some differences between the update and the baseline in the equality profile of wards with the worst admission rates, which although they appear significant, are in fact very slight.
- 5.8 The update data showed a higher proportion of Catholics in areas with the highest percentages of people taking medication for mood and anxiety disorders than in Northern Ireland overall. In the earlier data the differences in community background were also significant but not as great. In contrast to the most recent data, the baseline data showed little difference in political opinion profile between areas with highest proportions of people using this medication and Northern Ireland overall.
- 5.9 The proportions of those wards with the worst fire response times who are Catholic or who are Nationalist are higher than in Northern Ireland overall but the differences are more substantial in the present report.
- 5.10 The equality category profile of those wards with the worst waiting times for inpatient admission, respiratory disease admission rates and circulatory disease admission rates have not changed from the present report.

6 COMPARISON OF THE EQUALITY CATEGORY PROFILE OF THE 20% OF WARDS WITH WORST ACCESS TO THE NORTHERN IRELAND EQUALITY CATEGORY PROFILE

- 6.1 Table 32 summarises the comparison between the equality category compositions of people living in the wards with the worst access to health and social care facilities and the composition of the equality categories in Northern Ireland as a whole. It should be noted that the locations of facilities reflect configurations in 2001/2002 and will be updated in subsequent reports. Also, the access times considered were unweighted for need.
- 6.2 For all facilities considered except GPs and Day Centres, the proportion of the population of the wards with the worst access who are Catholic is higher than the proportion of the Northern Irish population who are Catholic. Apart from day centres, the proportion of Nationalists in the wards with the worst access is higher than in Northern Ireland as a whole for all facilities. Also, the proportions of adults in these wards who are married and the proportions of households in these wards with dependent children are generally higher than in Northern Ireland overall.

Table 32 Differences in section 75 Equality Categories

	Gender	Age	Marital status	Ethnic group	Community b'ground	Disability DLA & AA	Disability Limiting LTI	Dependants Carers	Dependants Children	Political Opinion
Pharmacies	N	N	*	N	*	N	N	N	*	**
Dentists	N	N	*	N	*	N	N	N	N	*
Opticians	N	N	*	N	**	N	N	N	N	**
GP	N	N	*	N	N	N	N	N	*	*
Children's Homes	N	N	N	N	**	N	N	N	N	**
Day Centres	N	N	*	N	N	N	N	N	N	N
Nursing Homes	N	N	*	N	*	N	N	N	N	*
Resdtl homes (elderly)	N	N	*	N	**	N	N	N	*	**
Resdtl Homes (other)	N	N	*	N	**	N	N	N	N	*
Inpatient Hospitals	N	N	N	N	***	N	N	N	N	**
Outpatient Hospitals	N	N	N	N	**	N	N	N	N	**
Maternity Units	N	N	N	N	**	N	N	N	N	**
A&E	N	N	N	N	**	N	N	N	N	*
A&E and MIU	N	N	N	N	**	N	N	N	N	*
Mental Health Inpatient services	N	N	N	N	***	N	N	N	N	**
Mental Health Outpatient services	N	N	N	N	**	N	N	N	N	**
Learning Disability inpatient services	N	N	N	N	*	N	N	N	N	*
Learning Disability outpatient services	N	N	N	N	*	N	N	N	N	*
Notes:										
None or < 5% points			N							
Between 5 and 9% points			*							
Between 10 and 19% points			**							
20% points and over			***							

APPENDIX 1

Morbidity and utilisation indicators used in baseline report

- **Standardised mortality rates for people aged under 75 (SMR U75)** – A measure of how much more (or less) likely a person under aged 75 is to die in a geographic area compared to the Northern Ireland average, having taken account of that area's age/gender profile.
- **Life expectancy** – The expected years of life at birth based on the mortality rates of the period in question.
- **Infant mortality rate** – The number of infant deaths per 1,000 live births in each area. Infant deaths refer to all deaths in the first year of life.
- **Standardised cancer incidence rates** – A measure of how much more (or less) likely a person is to develop (i) any cancer (ii) lung cancer in a geographic area compared to the Northern Ireland average, having taken account of that area's age/gender profile.
- **Teenage birth rates** – Number of births in an area to teenage mothers aged 13-19 per 1,000 live births.
- **Childhood immunisation rates** – Percentage of children receiving immunisation for Diphtheria, Polio, Tetanus (DPT), Pertussis (Whooping cough), Haemophilus Influenzae Type b (Hib), Meningitis C (Men C), Measles, Mumps, Rubella (MMR) before reaching their second birthday.
- **Standardised dental registration rates** – A measure of how much more (or less) likely a person is to be registered with a dentist in a geographic area compared to the Northern Ireland average, having taken account of that area's age/gender profile.
- **Standardised admission rates to acute hospitals** – A measure of how many more (or less) admissions a person would make to acute hospitals in a geographic area compared to the Northern Ireland average, having taken account of that area's age/gender profile for (i) all admissions (ii) emergency

admissions only (iii) elective admissions only. (Day cases and regular day and night admissions have been excluded from this analysis.)

- **Waiting times for hospital inpatient admission** – The proportion of patients in an area who have waited more than 18 months for inpatient admission to hospital (or 12 months for cardiac surgery).
- **Ambulance response times** – average ambulance response time for each area from the time of the call to the arrival of the ambulance at the incident. (Note: this indicator has been amended in the update report)

APPENDIX 2

Equality Category	Data Source
Gender	Usually resident population (2001 Census of Population)
Age	Age structure (2001 Census of Population)
Marital Status	Marital status – all persons aged 16 and over (2001 Census of Population)
Religious Belief	Community background: Religion or religion brought up in (2001 Census of Population)
Persons with/without a disability	Persons with limiting long-term illness (2001 Census of Population) Attendance Allowance and Disability Living Allowance claimant counts from DSD (February 2003)
Persons with/ without dependants	Households with dependent children (2001 Census of Population) Persons who provide unpaid care (2001 Census of Population)
Racial Group	Ethnic group (2001 Census of Population)
Political Opinion	2001 Local Government election data from ARK Northern Ireland Social and Political Archive
Sexual Orientation	N/A

