

Yellow Card Centre Northern & Yorkshire

ANNUAL REPORT 2008

Regional Drug and Therapeutics Centre
Wolfson Unit of Clinical Pharmacology
Claremont Road
Newcastle upon Tyne
NE2 4HH

June 2009

1. Staff involved in the work of YCC Northern & Yorkshire

Prof SHL Thomas	Director RDTCC, Professor of Clinical Pharmacology and Therapeutics (YCCNY Director)
Mrs R Prior	Senior Pharmacist Pharmacovigilance
Dr E Williams	Senior Medical Information Scientist, Regional Drug and Therapeutics Centre
Ms S Byers	Medical Information Scientist, Regional Drug and Therapeutics Centre
Mrs P Martindale	Secretary, Regional Drug and Therapeutics Centre
Mrs J Metcalf	Secretary, Regional Drug and Therapeutics Centre
Dr A Dyker	Consultant Physician, Regional Drug and Therapeutics Centre
Mrs K Macfarlane	Principal Pharmacist, Regional Drug and Therapeutics Centre
Mrs A Makepeace	Secretary, Royal Victoria Infirmary
Ms B Reddy	Acting Director of Pharmacy, Regional Drug and Therapeutics Centre
Dr S Stephens	Assistant Head of Teratology, Regional Drug and Therapeutics Centre
Mrs J Wood	Business Manager, Regional Drug and Therapeutics Centre

* Please note that the previous Annual report from YCC Northern and Yorkshire was compiled using data from the 2007-08 financial year, whereas sections 2-5 of this report have been compiled using data from the 2008 calendar year. Figures and graphs labelled '2007-08' represent the financial year, whereas those labelled as '2008' represent the calendar year. Sections 6, 7 and 8 remain compiled by 2008-09 financial year.

* Please also note that in previous YCC annual reports, the data was also split by the severity of reaction, black triangle drugs, patient age and fatality; however these data are not available for 2008.

2. Summary

During 2008, 2,363 adverse drug reaction (ADR) reports were received from Northern and Yorkshire, a 4.3% increase in reporting over the previous recording period of 2007-8, continuing an upward reporting trend since April 2005. The most frequently reported suspect drug was varenicline ▼, for which 560 reports were received.

The number of reports from healthcare professionals has increased slightly since 2007-08. This includes a 58% increase in reporting from hospital nurses, continuing their improved reporting levels observed in the last recording period 2007-08. Reporting from community pharmacists has also increased, although numbers remain lower than for other healthcare professionals. Of concern, however, is that reporting from GPs has reduced during 2008, and reporting from hospital pharmacists has continued to decline.

Patients have been able to report adverse reactions since November 2005. During 2008, 329 reports were received from patients, carers and parents, an increase of 33% over the previous reporting period. The patient reporting scheme was re-launched by the MHRA in February 2008, with a 6-week promotional campaign in community pharmacies nationwide and media coverage of the scheme. The centre supported this initiative by liaising with local PCTs and area managers of the major community pharmacy multiples, to promote the campaign, offering support and training for community pharmacists. However, despite initial interest none of the pharmacies were able to arrange for training of their staff to take place. Hospital Chief Pharmacists were also contacted and encouraged to display promotional materials during the duration of the campaign. In addition, a number of initiatives have been undertaken to raise awareness of patient reporting, alerting healthcare professionals about patient reporting and to ensure they continue to report themselves.

The Northern & Yorkshire Yellow Card Centre (YCC) encourages ADR reporting from local health professionals by providing support and education, targeted according to local reporting patterns. The centre has promoted the Yellow Card scheme at nine local training events for healthcare professionals. Non-medical prescribers have been identified as a significant group of reporters to whom support has been directed, as part of a regional programme to promote non-medical prescribing.

The centre has continued to produce the bulletin series *Safer Medication Use* to highlight emerging or significant drug safety problems. This provides guidance to ensure safe, appropriate prescribing and raise awareness of ADR detection and reporting. In collaboration with the Newcastle Regional Drug and Therapeutics Centre, two of their published *New Drug Evaluation* documents on varenicline and rimonabant, which are widely circulated to GPs, pharmacists and other healthcare professionals, were updated following the provision of new safety information by the MHRA.

The YCC Northern and Yorkshire website has been further developed, to provide guidance and support to healthcare professionals completing a Yellow card and continues to be well-used. The site contains educational

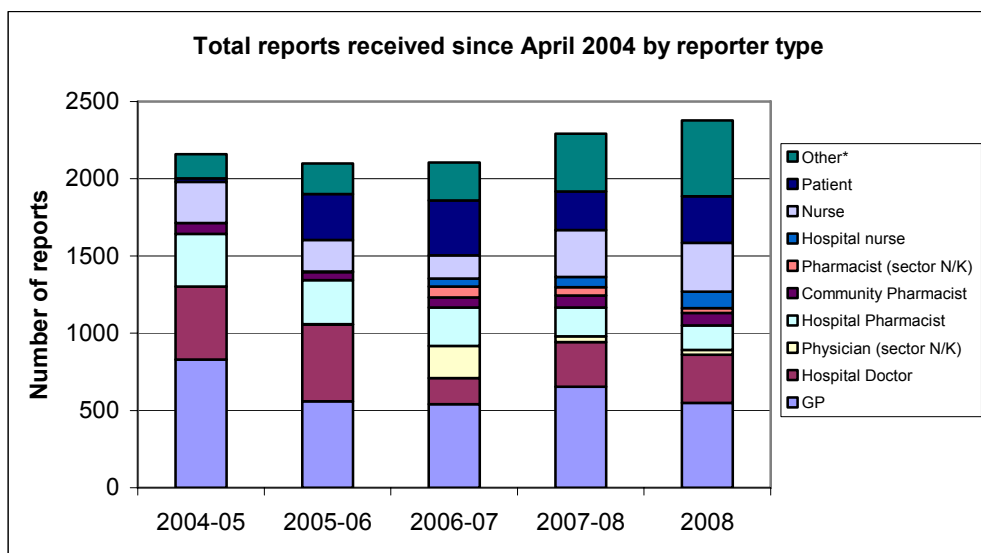
material on drug safety issues that have been developed by the centre, including information on adverse reactions, emerging safety issues and recently published papers in the field. In August 2007, when *Drug Safety Update* was launched, a link to this was created, with a news item on the homepage. The first few issues were circulated by e-mail to all PCT Medicine Management leads, Clinical Governance leads, trust Chief Pharmacists and Medicines Information pharmacists in YCC Northern and Yorkshire. In addition all talks and awareness sessions have included information about the bulletin.

3. Yellow Card Data

3.1 Overview

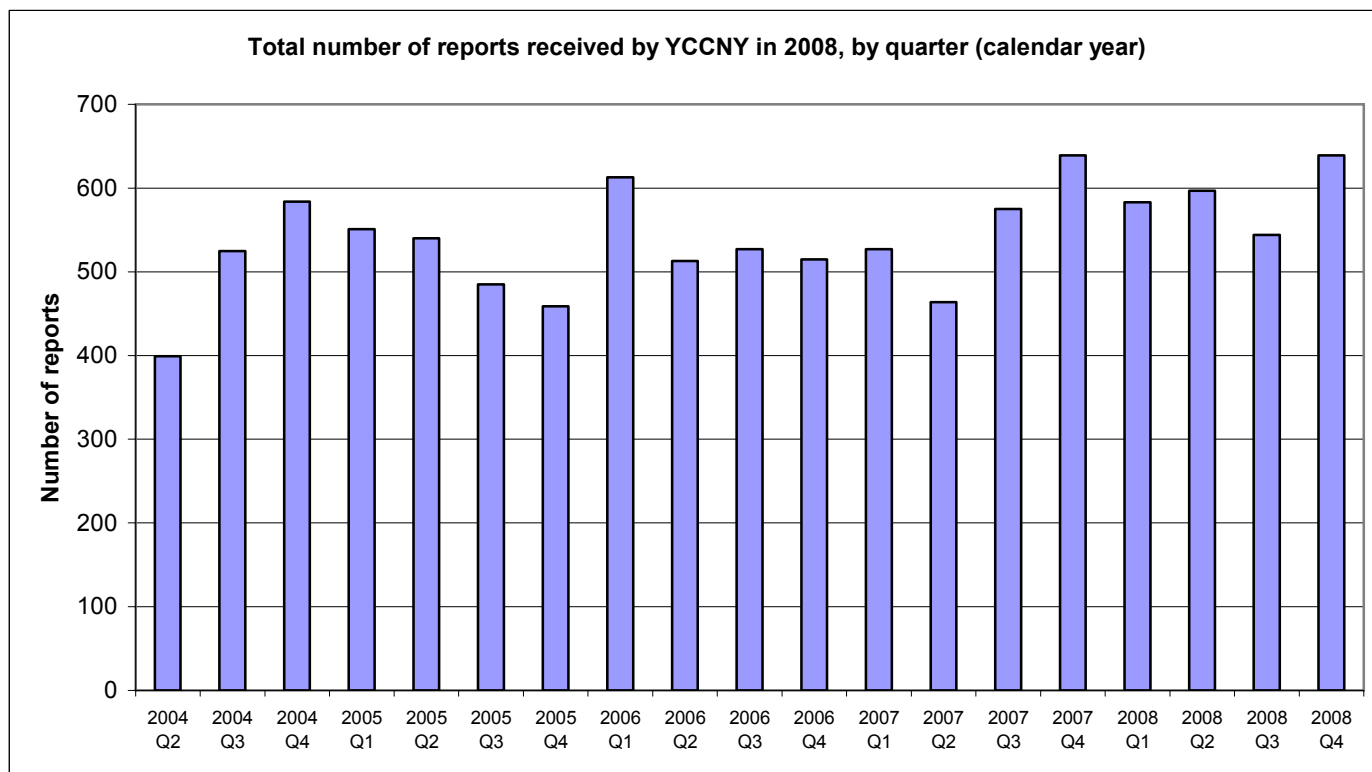
A total of 2,363 reports were received from Northern and Yorkshire during 2008, a 4.3% increase in reporting compared to the 2007-08 financial year. This increase continues an upward trend in reporting since 2006/7 (chart 1). This year has seen a 22% increase in the number of reports from patients, but a 16% reduction in reporting from GPs.

Chart 1



*coroner, dentist, hospital health professional, optometrist, other health professional, carer, consumer, parent

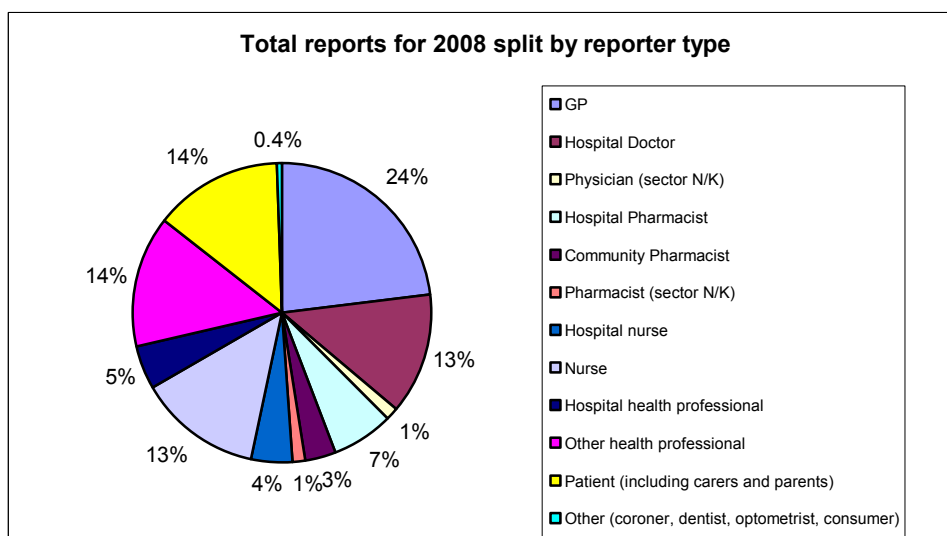
Chart 2



Despite a reduction in the reporting in quarter 3 of 2008, the overall trend in reporting from YCC Northern and Yorkshire this year is upwards (chart 2).

The breakdown of reports by reporter group shows that doctors reported most adverse reactions (38%), but nurses (17%), healthcare professionals (19%) and patients [including patients and carers] (14%), also make important contributions (chart 3). More detailed discussion of reporting by reporter group is provided in section 3.3 onwards.

Chart 3



3.2 Reporting rates by geographical area

Reporting rates by geographical area, using the boundaries of the former Strategic Health Authorities (SHA) prior to re-organisation in 2006, show that Cumbria and Lancashire submitted the most reports (632) in 2008, whilst South Yorkshire submitted the fewest (247) (chart 4). During 2008, reporting has increased in all areas barring the former North and East Yorkshire and Northern Lincolnshire SHA, where reporting decreased by 8.5% (chart 5). Reporting in the former Northumberland Tyne and Wear SHA has seen the largest increase (14.7%). This is in contrast to the 2007-2008 financial year where this SHA was the only one that had shown a decrease in reporting.

Variations in reporting between SHAs are not accounted for by differences in population size (chart 10).

Data is analysed in this way to facilitate the prioritisation of educational initiatives, targeting these at those with low or falling reporting rates. As such trusts in South Yorkshire (which has low reporting rates across all professions) and North East Yorkshire and North Lincolnshire, will be priority areas for raising awareness of the Yellow Card Scheme, in the coming year. Further data on reporting by former SHA can be found in Appendix 2.

Chart 4

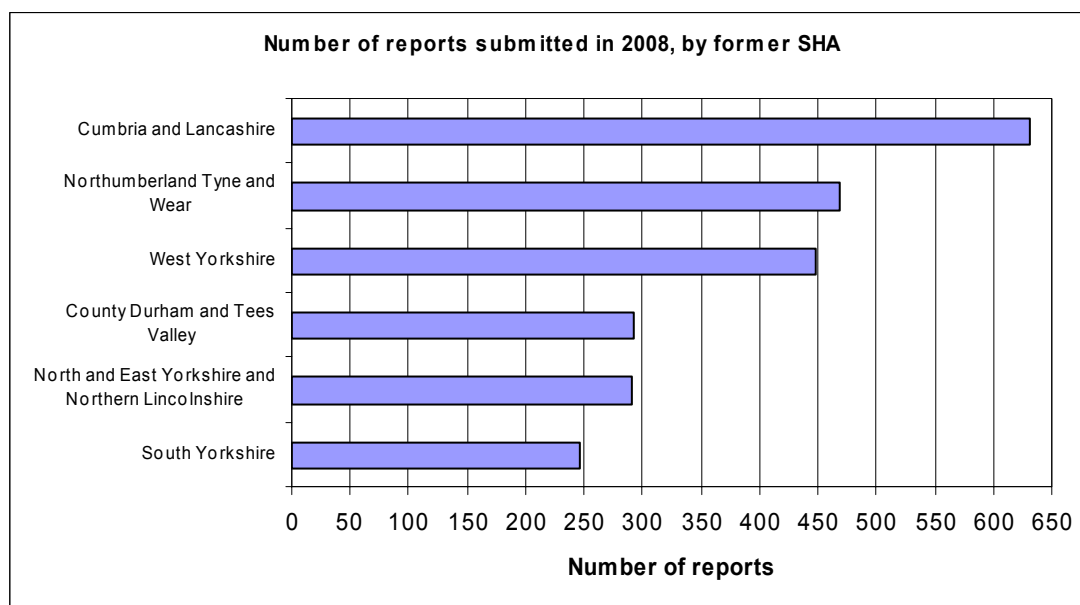
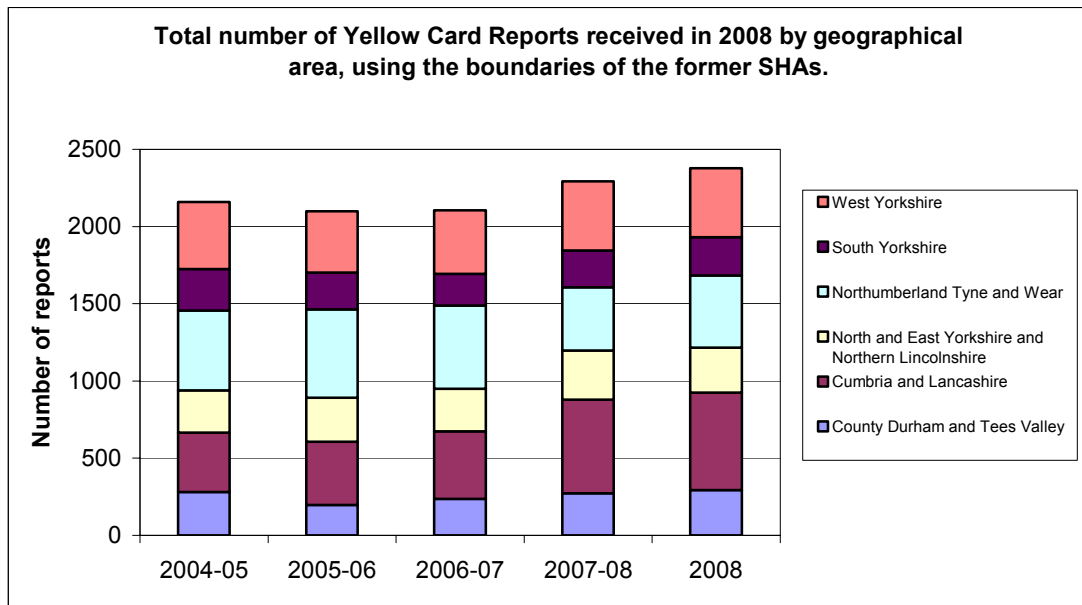


Chart 5



Yellow Card reporting varied widely by PCT (Chart 6), with the highest number of reports submitted from East Lancashire PCT (216) and the fewest from Hull Teaching PCT (9)

Chart 6

Reports received by YCC Northern and Yorkshire in 2008, for each PCT

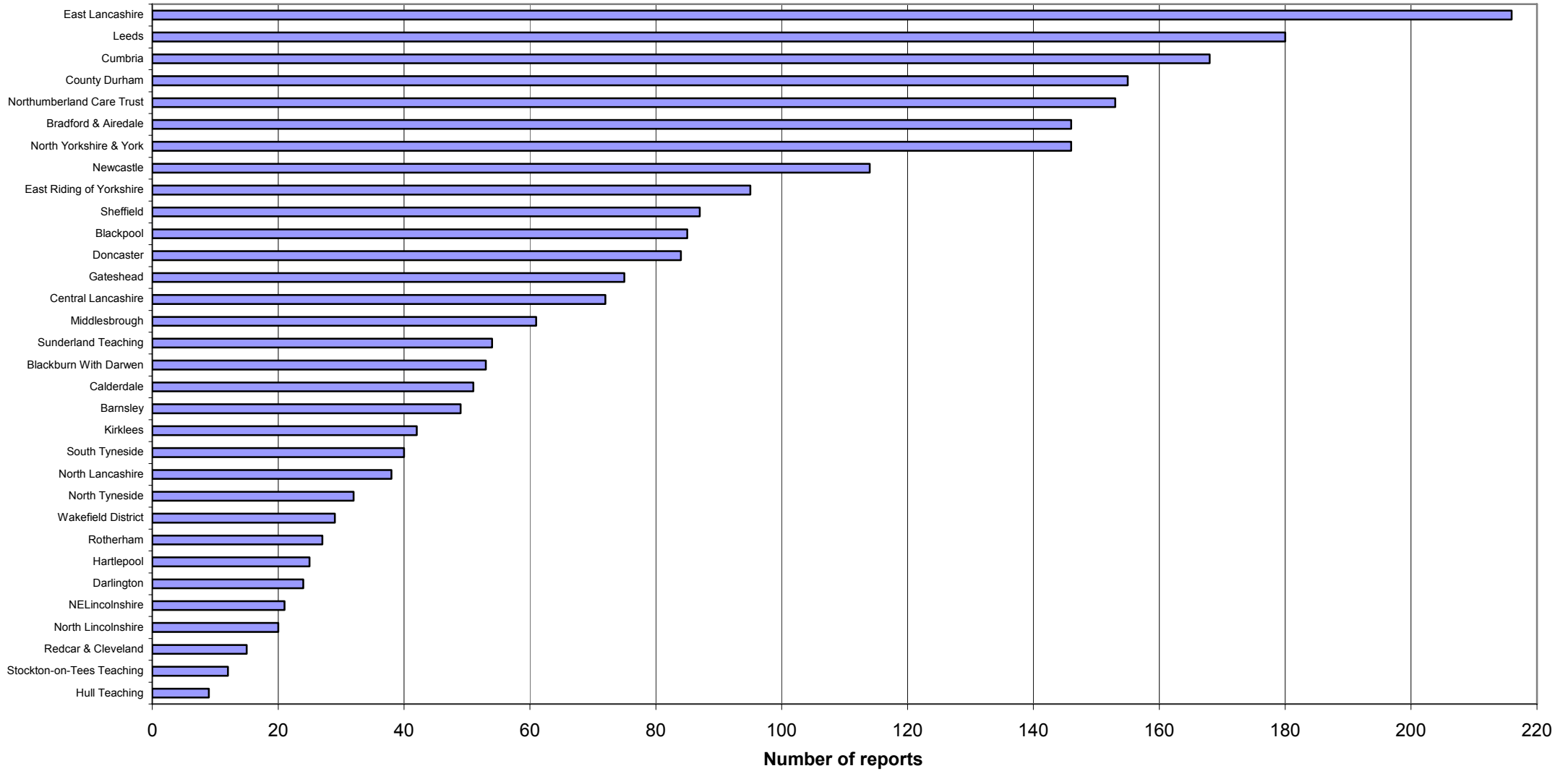


Chart 7

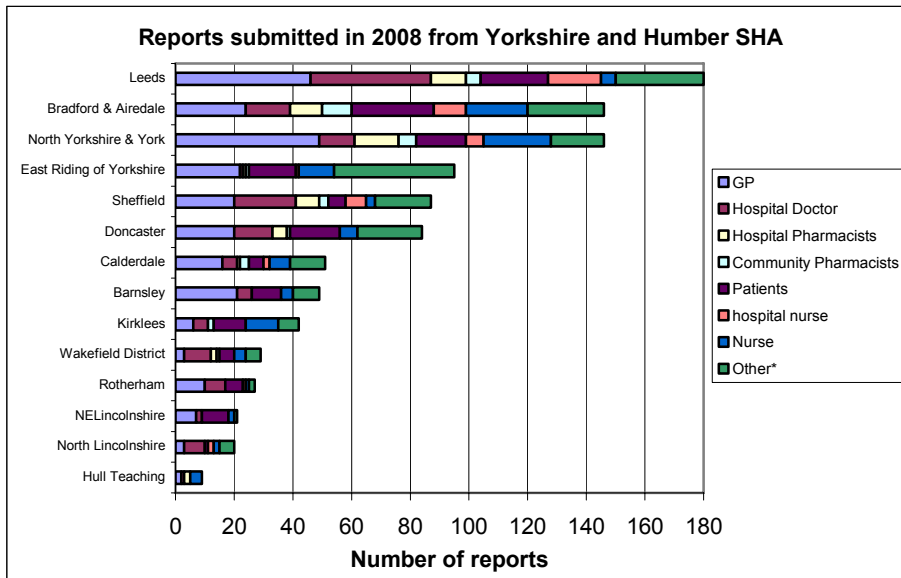


Chart 8

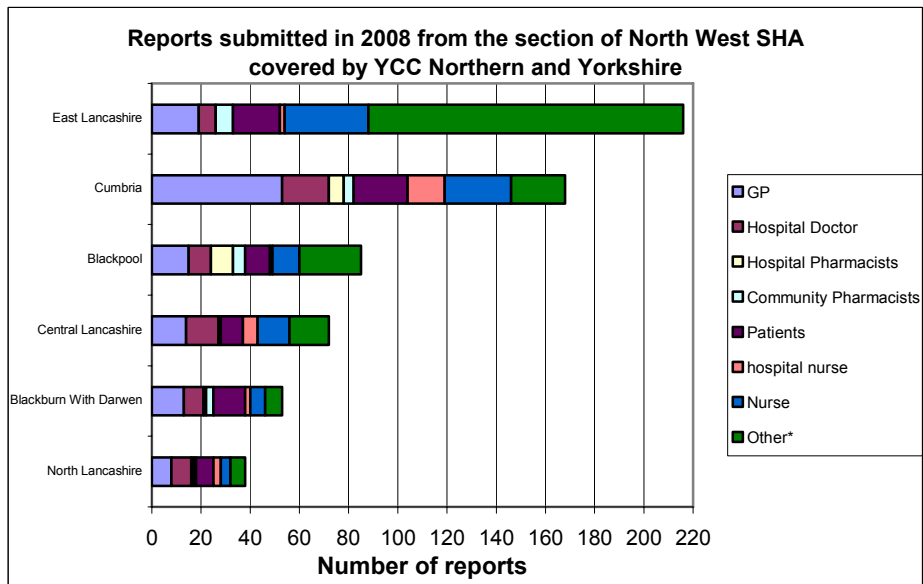


Chart 9

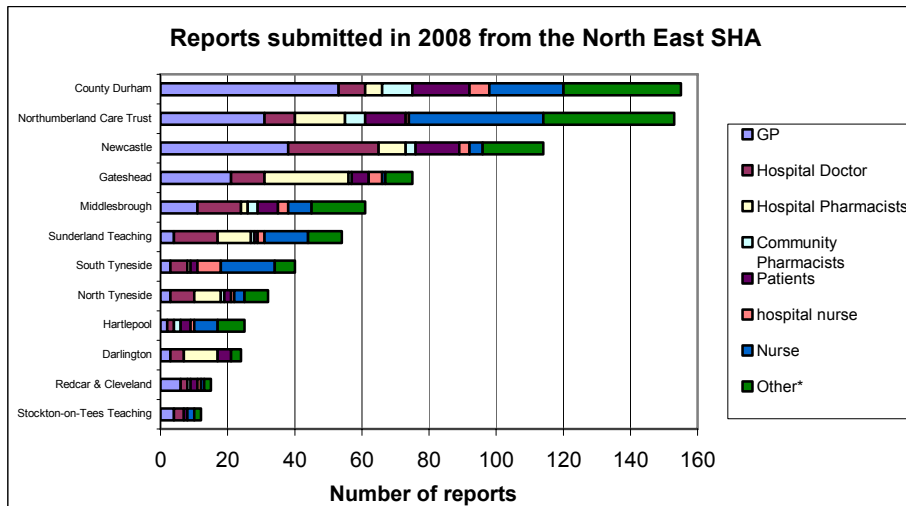
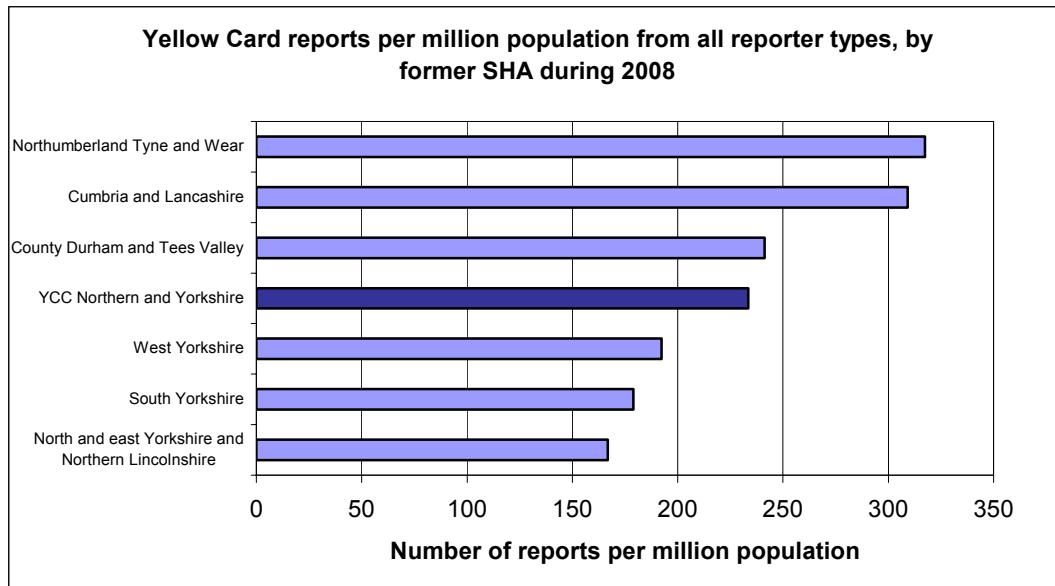


Chart 10



3.3 GP Reporting

There has been a 15.9% decrease in reporting from GPs in the 2008 calendar year compared to the previous recording period of 2007-08, with 550 reports submitted (chart 11). Reductions have occurred in every former SHA, reflecting the national trend in GP reporting. Reporting rates remain substantially lower than those seen in 2004-05. When data is split down to PCT level, County Durham and Cumbria PCTs submitted the highest number of reports from GPs, whilst Hartlepool and Hull Teaching PCTs submitted the fewest (chart 12).

Chart 11

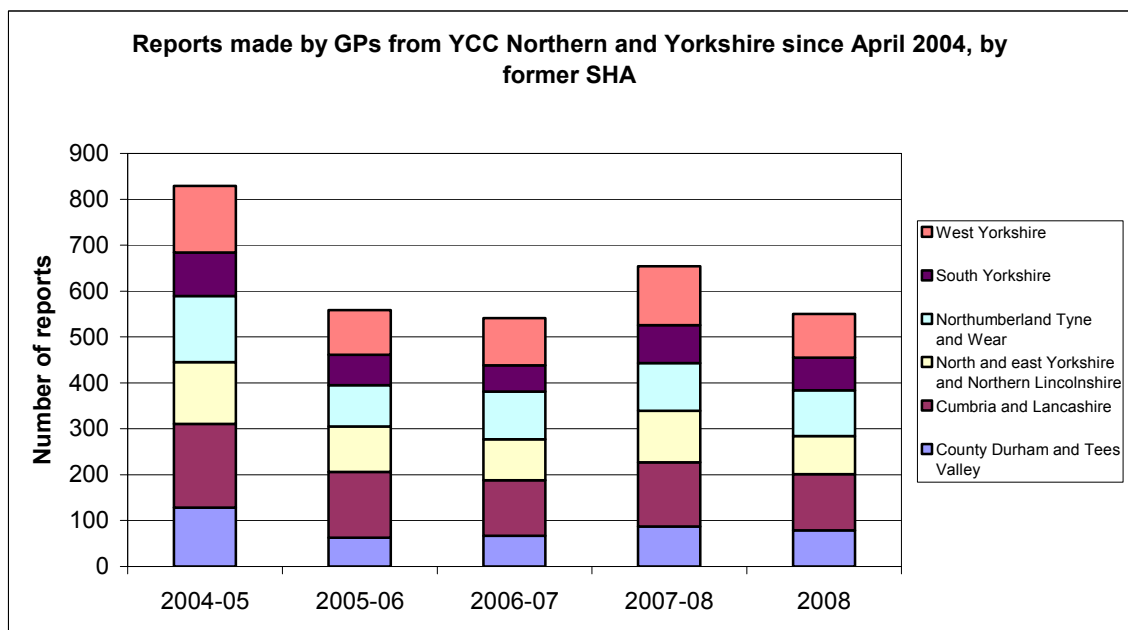
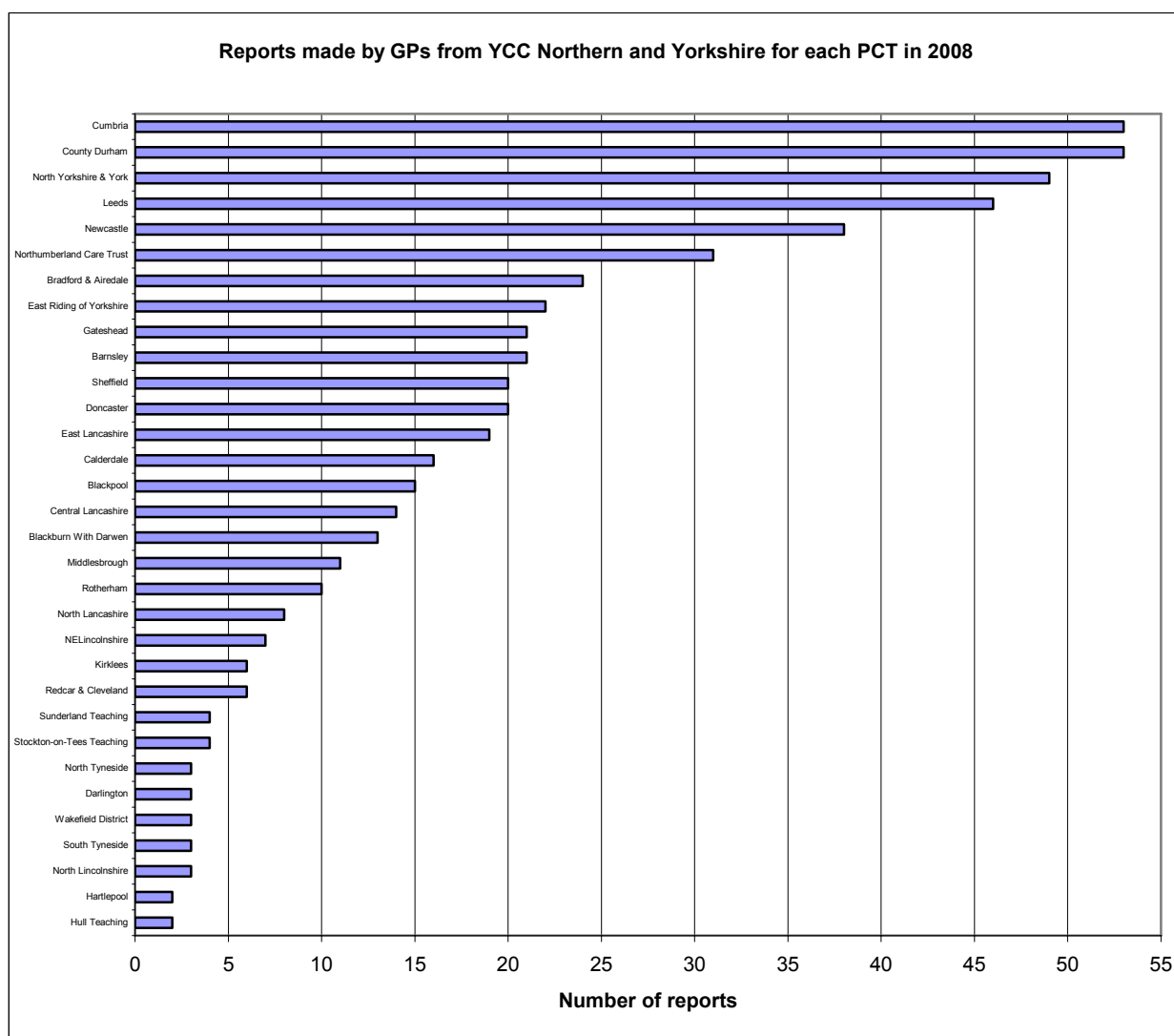


Chart 12



3.4 Hospital Doctor Reporting

Northern and Yorkshire hospital doctors submitted 311 ADR reports during 2008, a 8% increase over the previous recording period of 2007-08 (chart 13), in keeping with the national trend. Figures have previously shown an underestimate of hospital doctor reporting during 2006-07 as a significant proportion of reports (208) from physicians (sector N/K), could not be classified by their reporter type on the MHRA SENTINEL database. This problem has continued over the last 2 years but to a lesser extent (37 and 32 'physician unknown' reports in 2007-08 and 2008, respectively). Nonetheless, even if the unclassified reports originated from hospital doctors, then as per last year, the levels of hospital doctor reporting this year are considerably lower than in previous years. It is not known whether this trend is nationwide, nor whether other hospital healthcare professionals are reporting instead.

When the data is examined at PCT level, the highest number of reports from hospital doctors came from Leeds PCT, whilst East Riding of Yorkshire and Hull Teaching PCTs submitted the fewest (chart 14).

Chart 13

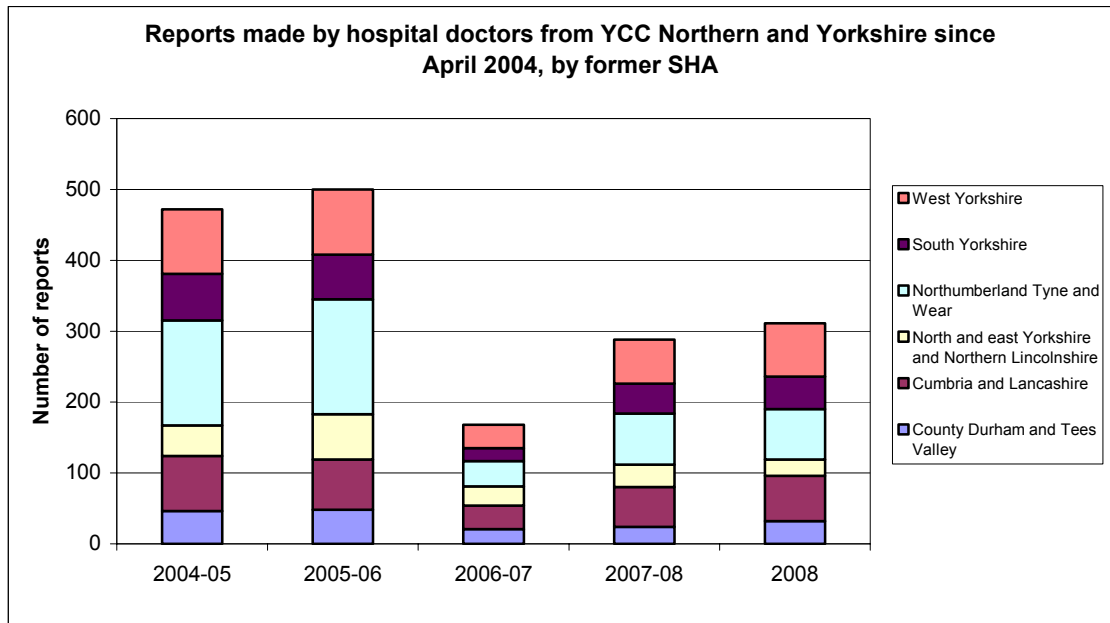
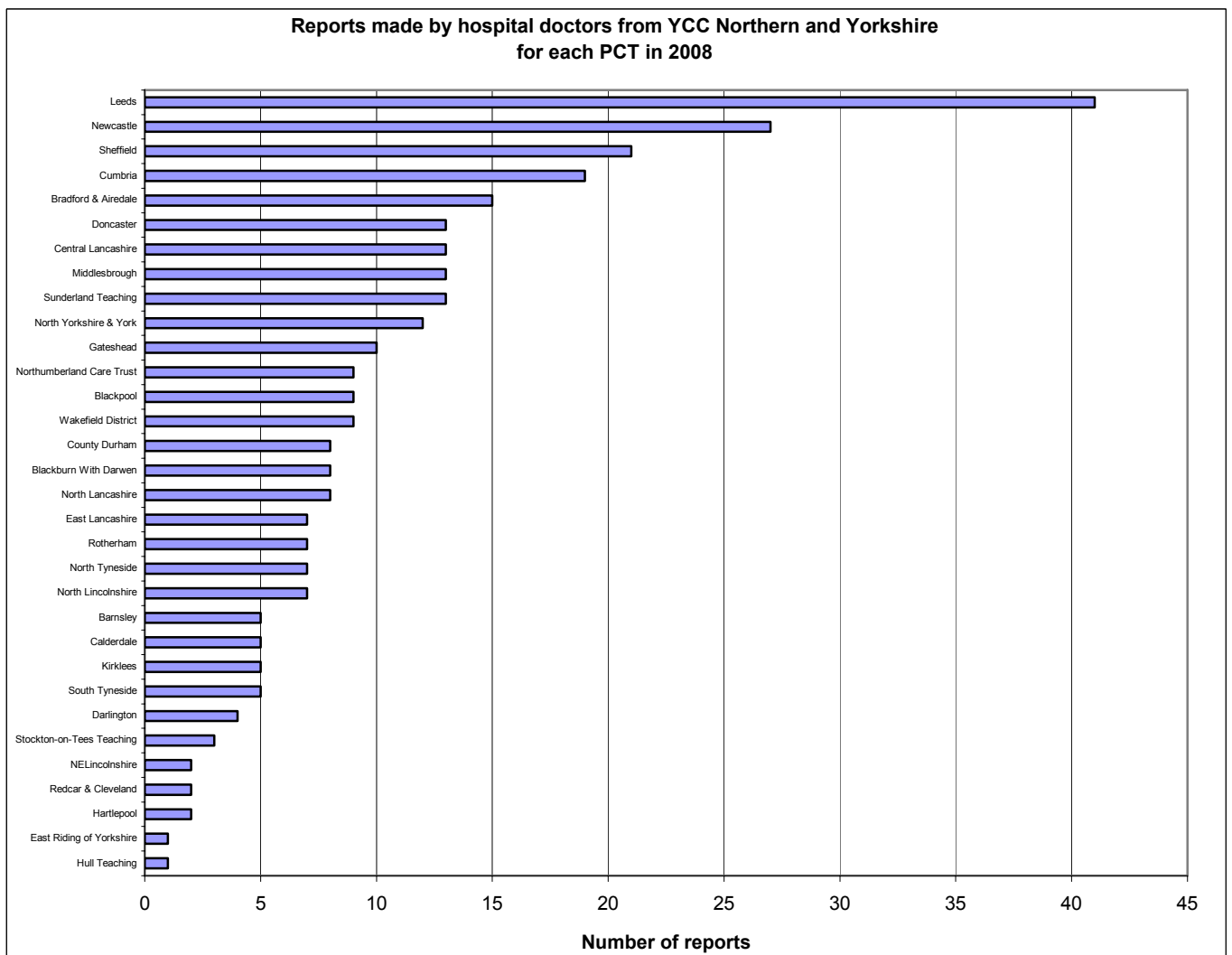


Chart 14



3.5 Hospital Pharmacist Reporting

A total of 158 reports were received from hospital pharmacists in Northern and Yorkshire during 2008, a decrease of 16% over the previous recording period 2007-08 (chart 15). This continues a downward trend since 2004-05. Hospital pharmacist reporting has also been declining in the UK as a whole.

A larger number of hospital pharmacist reports have been received from the former Northumberland Tyne and Wear SHA than other geographical areas. County Durham and Tees Valley former SHA showed the biggest reduction in reporting rates (52%) compared with 2007-08.

When the data is examined at PCT level, Gateshead PCT shows the highest level of reporting by hospital pharmacists. No hospital pharmacist reports were received from hospitals within 11 PCTs (chart 16).

Chart 15

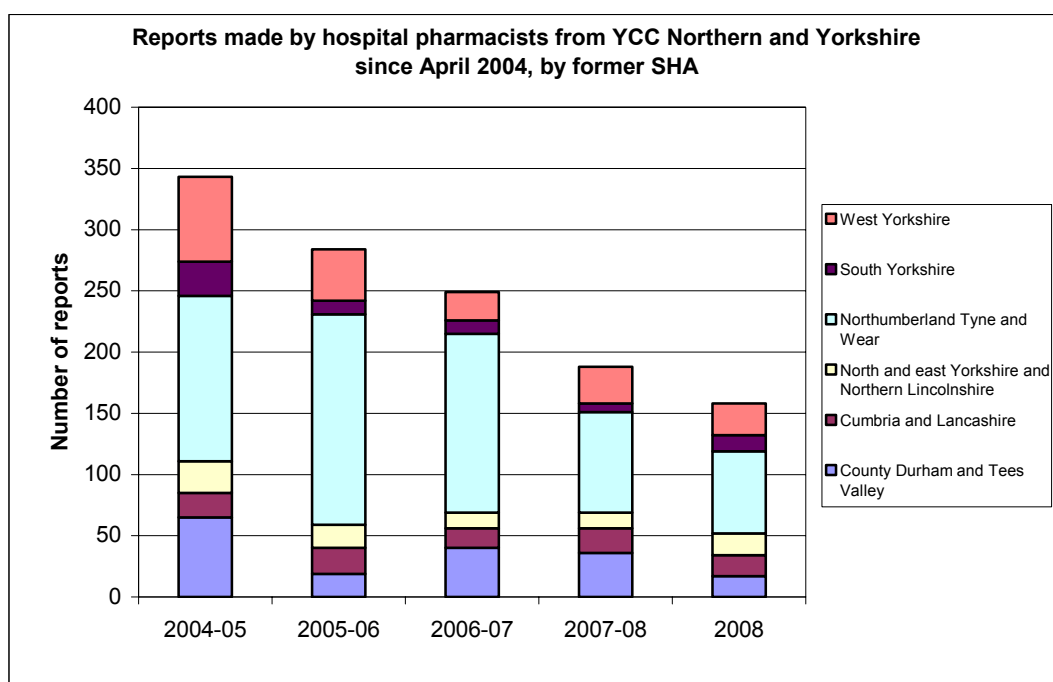
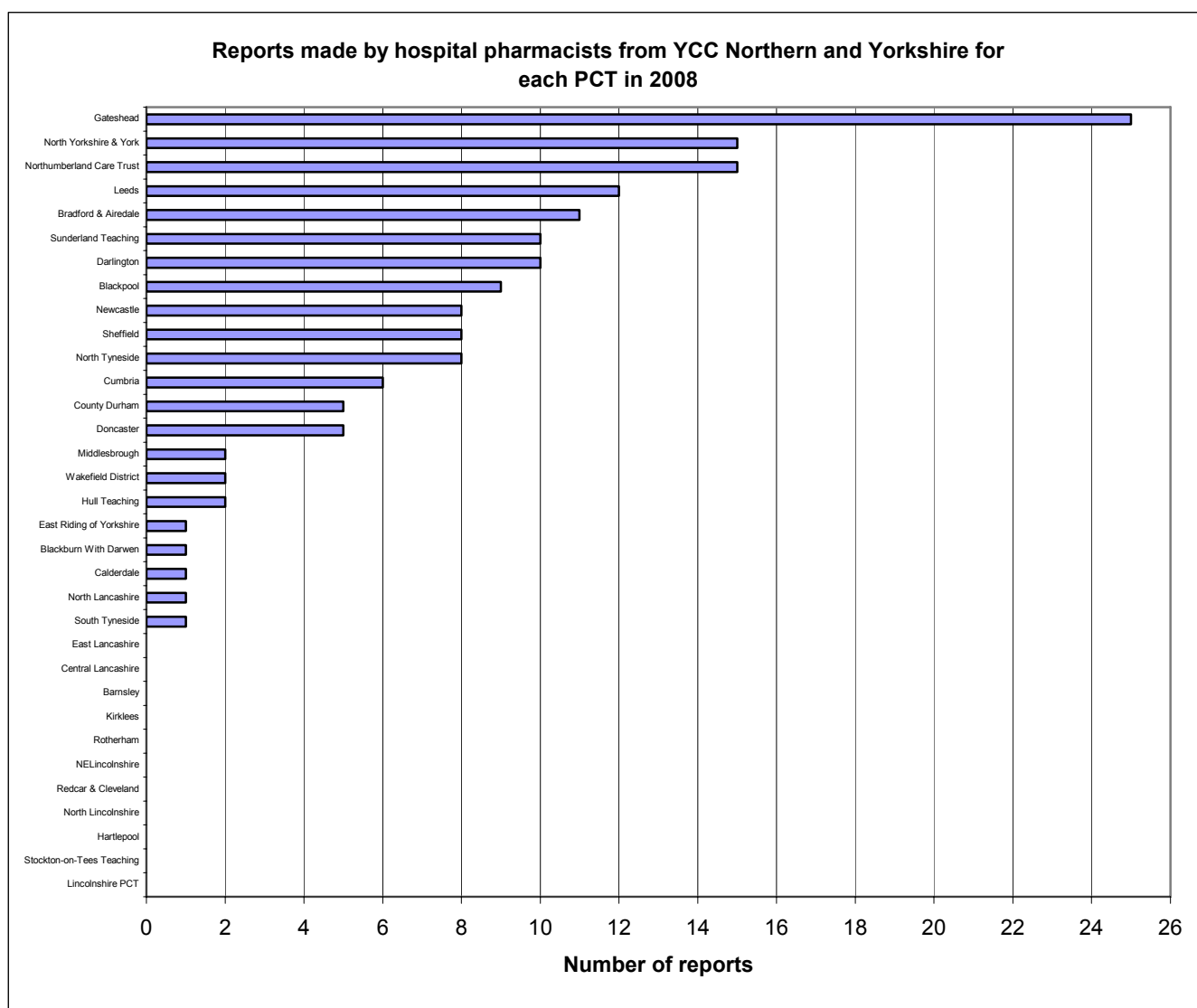


Chart 16



3.6 Community Pharmacist Reporting

Community pharmacists in Northern and Yorkshire submitted 80 reports during 2008, an increase of 5% over the previous reporting period 2007-08, continuing the upwards trend observed since 2005-06 (chart 17), although overall numbers remain small. Ongoing work with Local Pharmacy Committees to raise the profile of the Yellow Card scheme was initiated at the end of this year with the intention of ensuring that this growth continues.

When the data is examined at PCT level, Bradford and Airedale PCT submitted the most reports from community pharmacists, but no reports at all were received from 9 PCTs (chart 18).

Chart 17

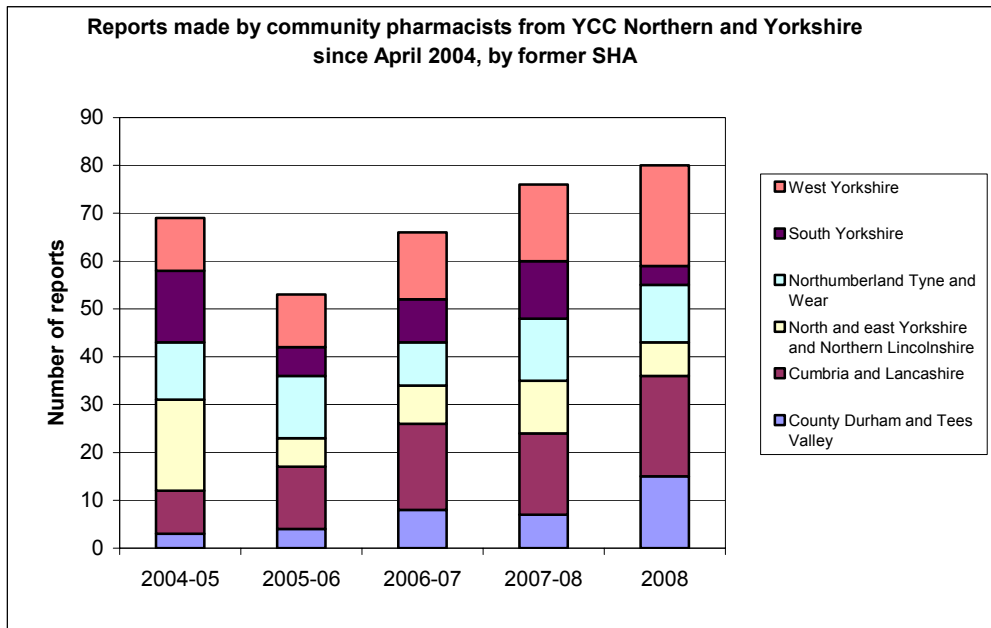
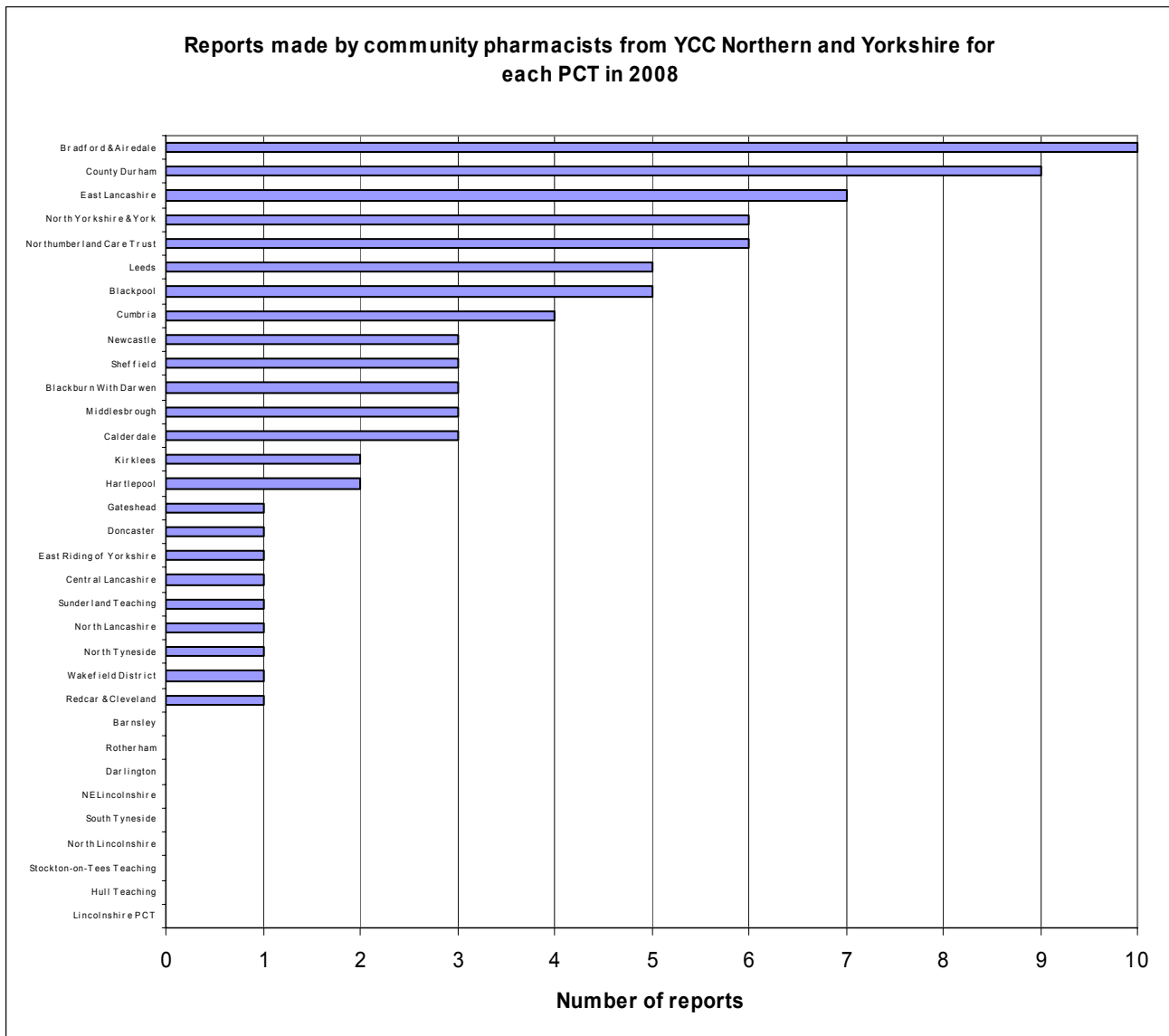


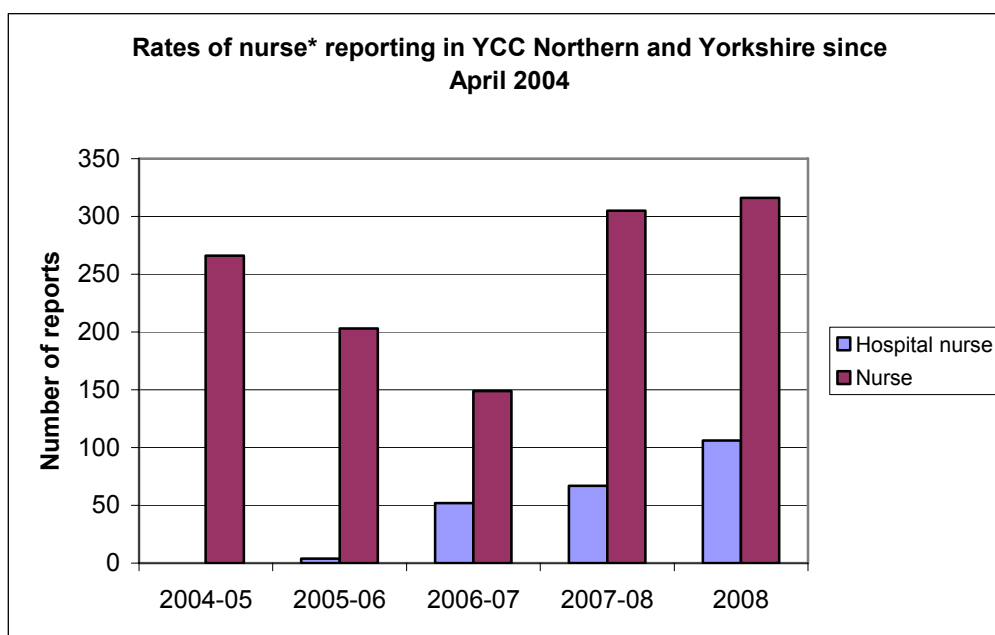
Chart 18



3.7 Nurse reporting

Nurses continue to make an important contribution to ADR reporting (chart 19) and are now the second largest reporter group nationally. In Northern and Yorkshire, reporting increased by 13.4% this year, mirroring the national trend. This increase is mainly due to a rise in the number of reports submitted from hospital nurses (58%). However, as per previous years, community nurses made significantly more reports than their hospital counterparts.

Chart 19



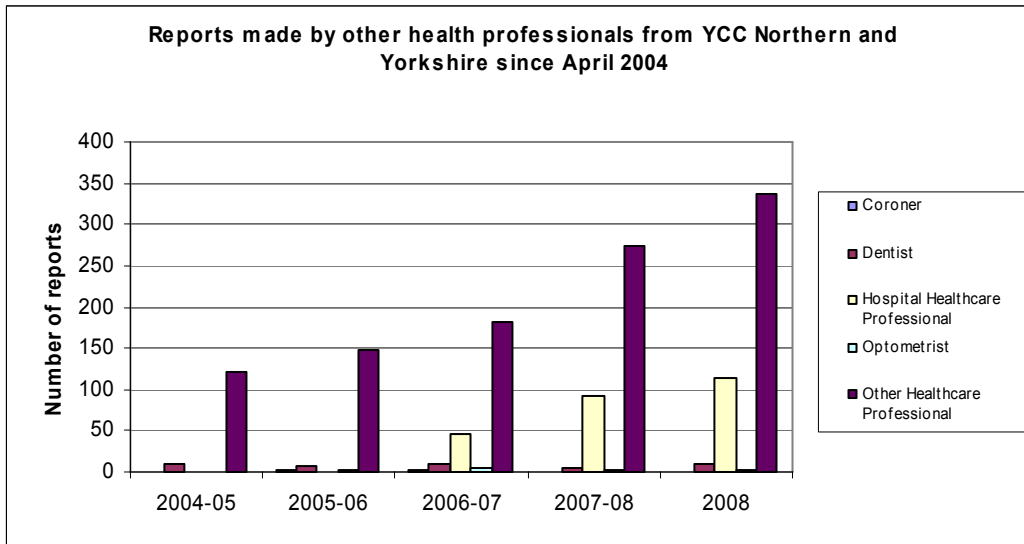
* Prior to May 2006 all reports from community and hospital nurses were classified on the MHRA ADROIT database as 'nurse'. Following the introduction of the SENTINEL database, reports from nurses are classified as 'Hospital nurse' and 'nurse' the latter covering those nurses based in primary care.

3.8 Other healthcare professionals

Reporting from 'other healthcare professionals' has increased progressively over the last five years (chart 20), although the numbers of reports from coroners and dentists has remained static and account for very few reports (chart 20).

The increases in reporting from 'other health professionals' may be explained in part by the increase in reporting adverse events related to varenicline from smoking cessation clinics (see top 10). Some of these reports may have been made by nurses and pharmacists, when their status has not been included in the report.

Chart 20



3.9 Patient reporting

Since November 2005 patients or their carers in the UK have been encouraged to report suspected adverse drug reactions to the MHRA, using a patient Yellow Card. The scheme was re-launched to the public in February 2008, with a 6-week promotional campaign in community pharmacies nationwide and media coverage of the scheme. In 2008, 329 reports were received from patients, a 33% increase compared with the previous reporting period 2007-8 (chart 21), again in keeping with national trends. Patients themselves continue to submit the vast majority of reports (chart 22).

The contribution from patients to the Yellow Card Scheme is increasingly important and should continue to be encouraged. Ongoing work with local patient support groups to raise the profile of the Yellow Card scheme, initiated at the end of this year, is intended to ensure that this growth continues.

When the data is split down to PCT level, the highest level of patient reporting is from the Bradford and Airedale PCT, followed by Leeds PCT (chart 23).

Chart 21

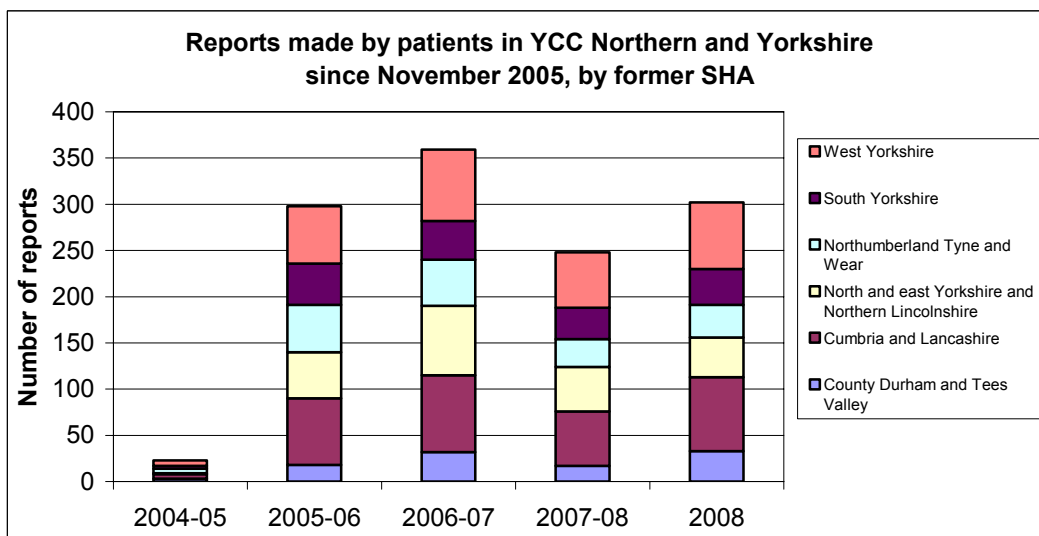


Chart 22

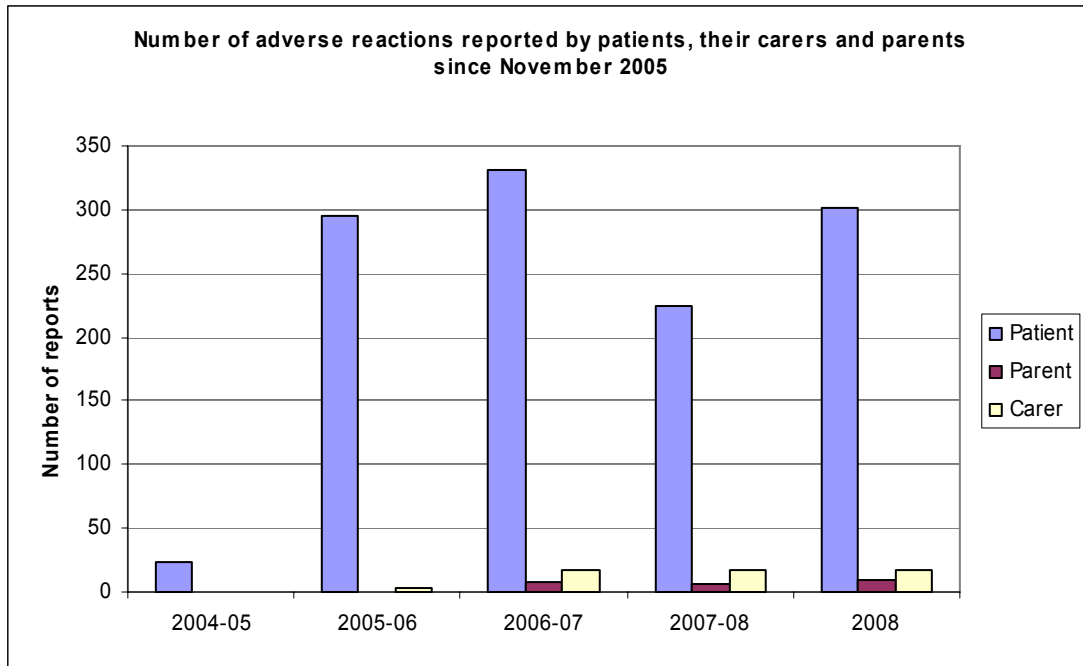
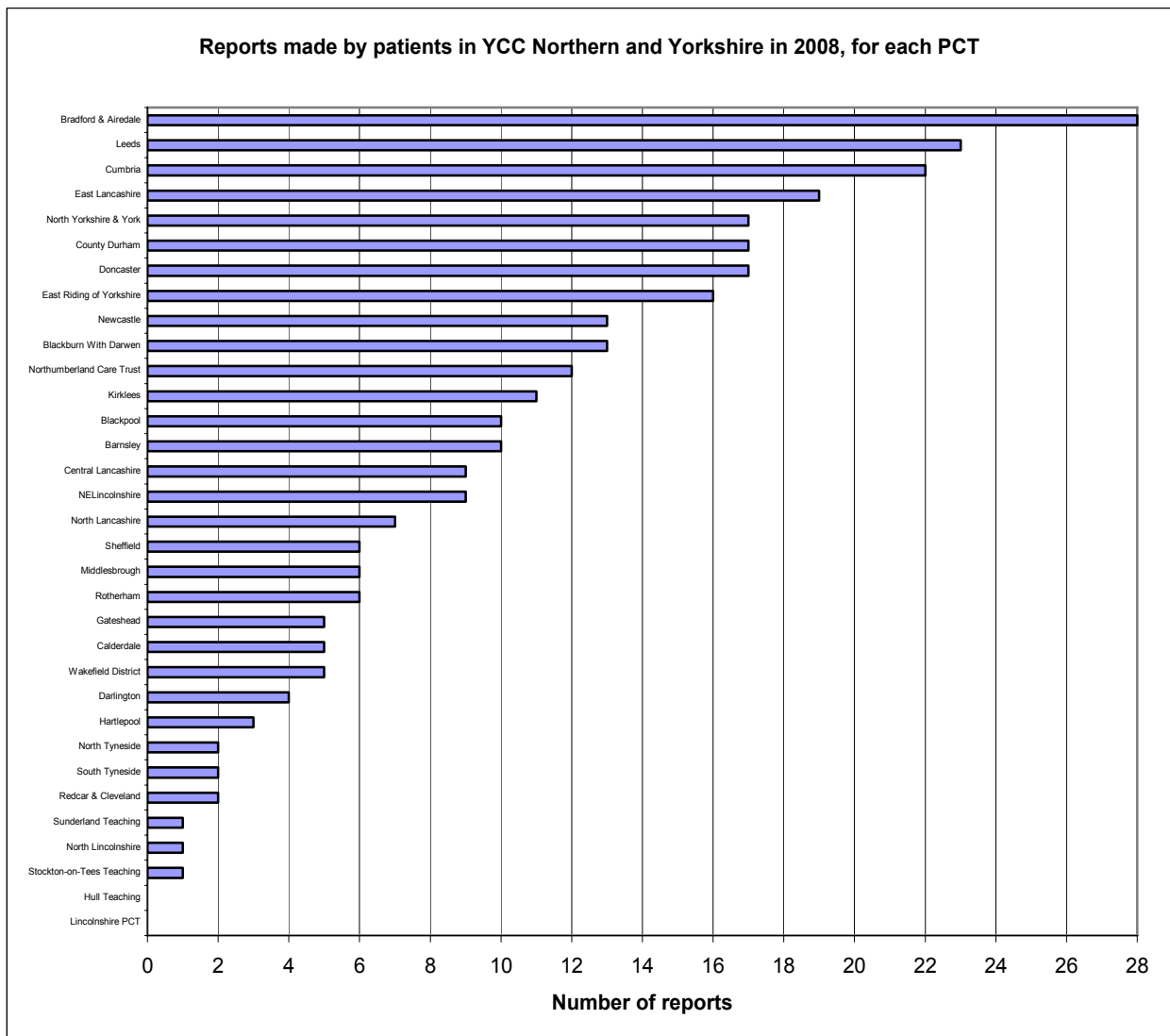


Chart 23



4. 'Top 10' suspect drugs

The ten most frequently reported suspect drugs during 2008 are shown in table 1. During this time period varenicline was the most reported drug in Northern and Yorkshire, contributing 24% of reporting.

Table 1 : 'Top 10' drugs

	Drug	Number of reports
1	Varenicline (Champix®) ▼	560
2	HPV vaccine (Cervarix® and Gardasil®) ▼	144
3	Simvastatin	57
4	Rimonabant (Acomplia®) ▼	31
5	Citalopram	29
6=	Exenatide (Byetta®) ▼	28
6=	Prevanar	28
8=	Omeprazole	21
8=	Ezetimibe (Ezetrol® and Inegy®) ▼	21
10=	Amlodipine	20
10=	Atorvastatin	20

5. Follow up of reports

Between January – December 2008 further information was requested by the centre, at the request of the MHRA, for 149 reports (6.3% of the total), an increase on the previous reporting period of 2007-08. To date, follow-up information has been received in 65% of cases; this number is also increased compared with previous reporting periods. The implementation of a revised follow up procedure in October 2007 will have contributed to the improved number of reports followed up successfully.

Table 2: Yellow Card follow up

Year	Followed up by	Number of reports followed up	Number of reports successfully followed up
2006-07	YCCNY	59 (2.8%)	19 (32%)
	MHRA	62	Data not supplied
2007-08	YCCNY	84 (3.7%)	51 (61%)
	MHRA	38	Data not supplied
2008	YCCNY	149 (6.3%)	97 (65%)

6. Promotional Activities

The main activities of the YCC Northern and Yorkshire this year have been to promote the Yellow Card scheme to healthcare professionals and raise awareness of the centre within the region, building on initiatives started during 2007-08, and against the objectives agreed with the MHRA (see appendix 3).

Staff at the centre have contributed to educational programs provided to all reporter types within the region, with the aim of alerting health professionals and patients to the Yellow Card scheme. Eight such sessions have been provided this year, including a presentation at a national conference of dispensing doctors. Non-medical prescribers continue to be a high priority for the Centre, as a significant group of reporters to whom support is directed. The centre has been unable to provide data on reporting rates at trust level since 2005, which limits engagement with Medical Directors, Trust Chief Pharmacists, Trust Clinical Governance leads and Primary Care Medicines Management Leads, but it is anticipated that this will resume once data becomes available. In the meantime, reporting data at Strategic Health Authority level has been used to identify geographic areas for targeting of initiatives. Across Northern and Yorkshire, reporting rates by community pharmacists are low, echoing the national picture. To this end the 2 regional co-ordinators of our Local Pharmacy Committees (LPCs) have been contacted to discuss the low reporting rates amongst their colleagues and meetings with local LPC branches are to be arranged. A previous initiative to contact the regional managers of large community pharmacy multiples has not resulted in any educational sessions being delivered.

We continued to work closely with Newcastle University this year, supporting undergraduate and postgraduate teaching. In addition, all universities in our region providing undergraduate and postgraduate studies for healthcare professionals, were contacted to establish the level of teaching regarding the Yellow Card scheme in their syllabuses. The services of YCC Northern and Yorkshire were offered to teach on courses, provide professional support or educational materials, or review their ADR teaching material. Two-thirds of those contacted replied and of these three-quarters were teaching students about the Yellow Card scheme. Those that were not (physiotherapy and some nursing courses) expressed an interest in involving the YCC in their teaching. Half of the responders are in discussions with the centre regarding the YCC supporting teaching in this subject.

Patients have been able to report adverse reactions since November 2005, with the scheme being re-launched nationally in February 2008 with a six-week promotional campaign. To further support the patient reporting scheme after this period hospital chief pharmacists were asked to display promotional materials in their outpatient pharmacy waiting areas. A number of trusts have supported this initiative, which has contributed to the increase in patient reporting seen in Northern and Yorkshire in the last 12 months. Following discussions with senior hospital pharmacists a number of other potential methods to promote the scheme to patients and their carers whilst they are in hospital, have been identified. It is hoped in the coming year that one or more of these will be developed and piloted in a local trust. In addition the patient reporting scheme is mentioned in all the centres educational sessions, to

ensure that healthcare professionals are aware that patients can report and that they continue to report themselves.

Work has also been undertaken to engage with local expert patient support groups to promote the Yellow Card scheme directly to patients and their carers. The Northern regional office of the British Lung Foundation produce an 2-monthly newsletter which has a circulation of 1100 copies locally; the centre produced an article on patient reporting for the March 2009 issue. In addition, training sessions are being arranged for patients with epilepsy in the region. Unfortunately despite contacting regional offices of Parkinson's Disease Society, Arthritis Care and Diabetes UK, we have been unable to perform any promotional activities for the Yellow Card scheme to these groups of patients.

The centre has continued to publish the bulletin series *Safer Medication Use* which promotes safer prescribing, highlights emerging or significant drug safety problems, and raises awareness of adverse drug reaction detection and reporting. The bulletin is aimed at prescribers and healthcare professionals who can report ADRs. However, it is also of value to Drug and Therapeutics Committees, Medicines Management Groups, clinical governance leads and non-medical prescribing leads to inform policy decisions and risk management strategies. During the 2008-09 financial year, a bulletin has been published discussing drug-induced *clostridium difficile* infection. Future editions are planned to discuss current and emerging drug safety issues.

The YCC Northern and Yorkshire has also worked collaboratively with the Newcastle Regional Drug and Therapeutic Centre (RDTC). Information from *Drug Safety Update* is included in the RDTC monthly horizon scanning document which is available to pharmacists and doctors in primary and secondary care, particularly those involved with commissioning and providing services to patients. Indeed all YCC Northern and Yorkshire training materials include reference to this publication. The RDTC publication reviewing the evidence for newly marketed drugs *New Drug Evaluation*, continue to include information regarding reporting of suspected reactions to black triangle drugs.

The YCC Northern and Yorkshire website, continues to be updated regularly with information regarding emerging safety issues and recently published papers in the field of pharmacovigilance. The site also contains educational materials developed by the centre. All users accessing the site for information on the completion of a Yellow Card are encouraged to use the electronic form. In addition the website address of the electronic Yellow Card appears on all YCCNY publications and correspondence. The centre collects statistics regarding the use of the website. During 2008 the site received 17,843 visitors; the *Safer Medication Use* page was the most visited (Chart 24). The Yellow Card logo was the most frequently downloaded image from the website (see chart 25).

The YCC Northern and Yorkshire has continued to work closely with the MHRA and other YCCs to develop training materials for use nationally.

A number of initiatives have been undertaken to support the national work of the MHRA in promoting drug safety.

Chart 24: Most Popular Pages visited on the YCCNY website during 2008

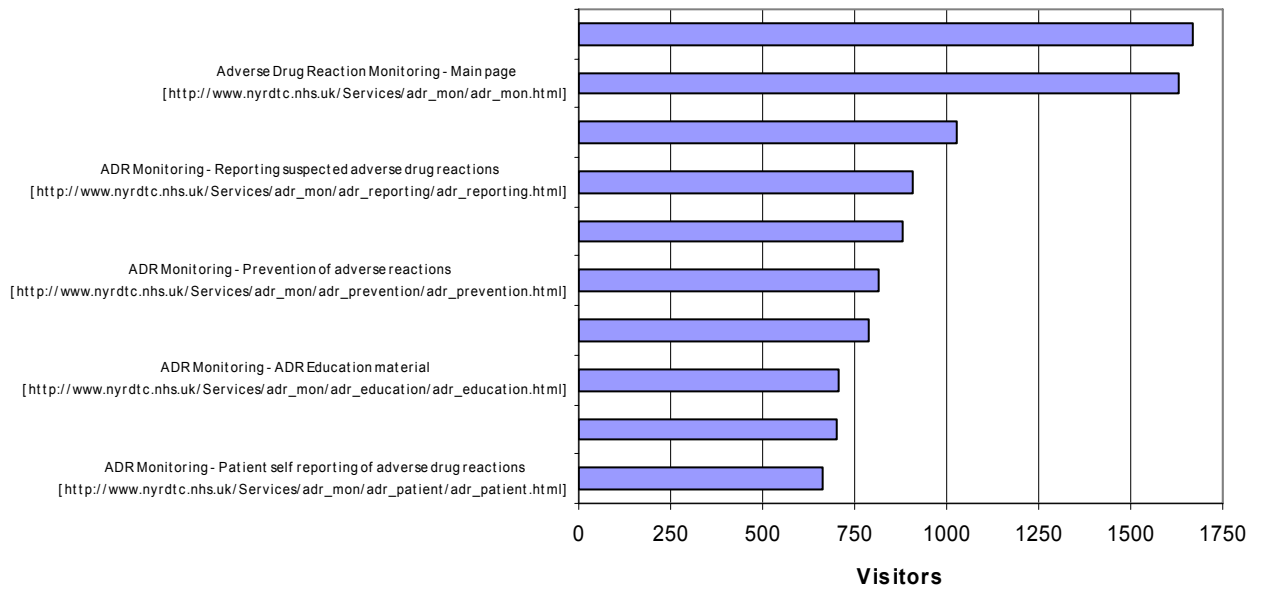
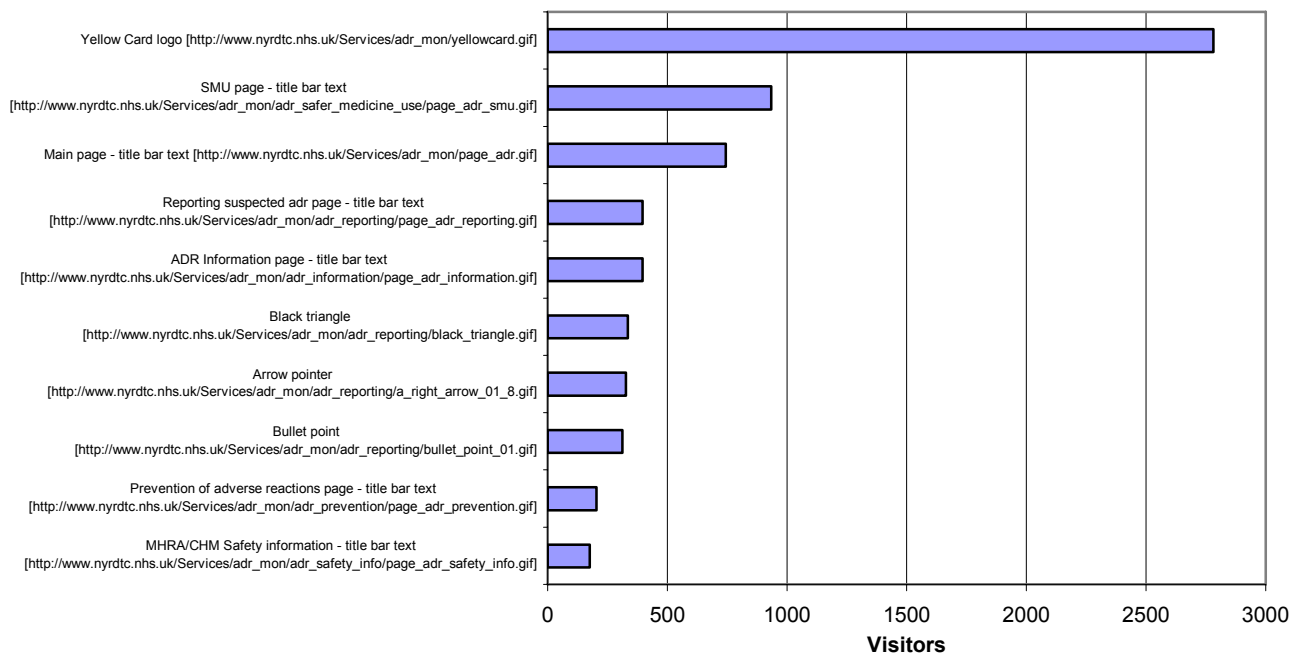


Chart 25: Most Requested Images on the YCCNY website during 2008



During 2008 the centre answered 177 enquiries about adverse reactions to specific drug(s). It is policy with such enquiries that the callers (including patients contacting us via NHS direct) are encouraged to complete a Yellow Card report where appropriate.

Educational sessions

Dyker A. Adverse Drug Reactions. Junior Doctor (F1) Induction. Newcastle upon Tyne Hospitals Foundation NHS Trust. August 2008

Dyker A. Adverse Drug Reactions. Undergraduate Medicine Newcastle University. October 2008

Macfarlane K. Patient Safety. NHS County Durham & NHS Darlington – Non-medical Prescribing Conference. Hardwick Hall Hotel, County Durham, 31 March 2009

Prior R. Adverse Reactions and the Yellow Card Scheme. Northern Region Pre-registration Pharmacist Training Scheme, Morpeth, 23 May 2008

Prior R. Adverse Drug Reactions. Diploma in Therapeutics. Newcastle University, 16 October 2008

Prior R. The Yellow Card Scheme – an important patient safety tool. Dispensing Doctors Association Conference. Harrogate 1-2nd November 2008

Prior R. The Yellow Card Scheme – workshop. Gateshead Health NHS Foundation Trust, Pharmacy Department. 13 January 2009

Prior R. The Yellow Card Scheme – workshop. North Cumbria Acute Hospitals NHS Trust, Pharmacy Department. (session cancelled by trust due to internal pressures, to be re-arranged)

Prior R. The Yellow Card Scheme – workshop. Tees, Esk and Wear Valleys NHS Foundation Trust, Pharmacy Department. March 2009

Safer Medication Use published on the YCCNY website

Drug induced *Clostridium difficile* infection. *Safer Medication Use*, No. 4 January 2009.

Articles written by YCCNY for externally published bulletins / newsletters in collaboration with the Regional Drug and Therapeutics Centre

North East SHA Safety Watch. The Yellow Card Scheme September 2008

Parkinson's newsletter Feb 2009

Non MHRA meetings attended in YCC capacity

New Drugs Meeting, Regional Drug and Therapeutics Centre. 15th May 2008. Agreement for details of the latest Drug Safety Update to be included in the monthly horizon scanning document sent out to General Practitioners, PCT advisors and Hospital Chief Pharmacists.

North East SHA Clinical Governance Forum Newcastle, 11th September 2008

Northern Regional Medicines Information Pharmacists Network meeting. Newcastle 23rd October 2008. Update on the Yellow Card scheme – improved electronic reporting, Drug Safety Update, Drug Analysis Prints, patient reporting. Training for local hospitals offered. Pharmacist from North Cumbria enquired about the availability from the MHRA of local Yellow Card reporting data for their organisation, as his Chief Pharmacist had requested data a few months ago.

Yorkshire and Humber Medicines Management Leeds, 14th October 2008. Local Yellow Card reporting rates by GPs and community pharmacists – discussion of initiatives to increase reporting rates. (item deferred.)

County Durham PCT and Darlington PCT Drug and Therapeutics Committee. Durham 18th November 2008 to promote Yellow Card reporting by Community Pharmacists, highlighting vital contribution by reporting OTC and herbal medicines. (DSU)

North East SHA Patient Safety Associates. Wynyard County Durham, 21 November 2008. Discussion of medicine related safety themes – opioids, insulin, anticoagulants.

North East SHA Clinical Governance Forum. Newcastle, 8 January 2009

Northern Regional Medicines Information Pharmacists Network meeting. Newcastle, 22nd January 2009. Update on the Yellow Card scheme – availability of local reporting data.

7. Research

The Centre is interested in local reporting rates of suspected adverse reactions to varenicline. During the year posters were presented describing the reporting rates locally, which indicated that reporting rates may be related to the volume of items prescribed and the amount and timing of both national and local publicity regarding varenicline adverse drug reactions.

Because of its close ties with the UK Teratology information Service, staff at YCC Northern & Yorkshire continue to be active in pharmacovigilance relating to medicines use in pregnancy. During the year 2008-9 data have been published or presented on the adverse fetal effects of lithium, statins, ACE inhibitors and zopiclone.

The centre has continued its collaboration with the European Medicines Agency as part of the ENCePP group. It has been involved in the 'PROTECT' consortium which has secured funding from the European Union Innovative Medicines Initiative. The Centre will support the development of aggregated data sets from the UK and another European teratology service and will develop and evaluate a website for on-line reporting by patients of medicines use in pregnancy, with subsequent prospective follow up of pregnancy outcome.

A further grant has been obtained from the EU FP7 programme to study the prevalence of ECG abnormalities and the risk factors for these amongst psychiatric patients taking antipsychotic drugs.

8. Publications

Reviews

Hill S, Thomas SHL. Recreational drug toxicity. *Clinical Medicine* 2008;8:99-103

Jefferson RD, Goans RE, Blain PG, Thomas SHL. Diagnosis and treatment of polonium poisoning. *Clinical Toxicology* 2009; 47: 379-92

Papers

Newham JJ, Thomas SHL, MacRitchie K, McElhatton P, McAllister-Williams RH. Birth weight of infants after maternal exposure to typical and atypical antipsychotics: prospective comparison study. *Brit J Psychiatry* 2008; 192: 333-337

Mohteshamzadeh M, Wong C, Whitarcar R, Thomas S. Is there a link between insulin resistance and chronic kidney disease in men with treated hypertension? Analysis of 5 year data. *Am J Nephrol* 2009;29:116-122

Eaton S, Brent S, Shah N and Masters G. Expenditure on diabetes treatments and achievement of glycaemic control: retrospective analysis. *Diabetic Medicine* 2008; 25: 738-42

Sally Stephens, Ken Hodson. Drugs in pregnancy: Evaluating drug use in pregnancy. *Pharmacy in Practice*. March/April 2009. pg 50-52.

Stephens S, Hodson K, Thomas SHL. What's new in prescribing in pregnancy? *Medicine* (in press).

Other publications

Prior R, Thomas S, Masters G, White S. Which factors influence spontaneous reporting of adverse reactions to varenicline in Northern and Yorkshire? Poster presented at 34th UKMi Practice Development Seminar, Warwick, 18-19th September 2008.

Prior R, Thomas S, Horsley W, Masters G. Which factors influence spontaneous reporting of adverse reactions to varenicline in Greater

Manchester? Poster presented at 2nd National Conference Medication Safety in Practice, Manchester (alongside the British Pharmaceutical Conference), 9th September 2008.

Prior R, Thomas S, Masters G, White S. Which factors influence spontaneous reporting of adverse reactions to varenicline in Northern and Yorkshire? Poster presented at National [German] Medicines Information Conference, Cologne, Jan 2009. (Abstract published in *krankenhauspharmazie*.)

Galal H, Thomas SHL. Heart rate corrected QT intervals in patients taking chronic tricyclic antidepressant therapy. *Brit J Clin Pharmacol* 2008; in press

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9. Conclusions

This year YCC Northern and Yorkshire has continued to support the Yellow Card scheme by following up reports as necessary and providing education to healthcare professionals, in line with the objectives set by the MHRA. It is encouraging that the total number of reports has increased from the Northern and Yorkshire region by 4%, as a result of increased hospital doctor, nurse, community pharmacists and patient reporting. However, significant reductions in reporting from General Practitioners and hospital pharmacists is of concern, as both these groups were significant contributors to the scheme. Work in the coming year will address the reduction in reporting from these two key groups through educational initiatives and by raising awareness of the scheme. Also we will continue to build on the momentum gained in previous years, in particular by continuing to raise awareness of patient reporting for both healthcare professionals and patients, and to support local NHS organisations where the rates of Yellow Card reporting are not as high as we would hope.

Appendix 1: YCC Northern and Yorkshire data for the year 2008

Number of yellow card reports from each former SHA by reporter qualification, in 2008

*reports may have multiple reporters so the total will not necessarily equal the total number of reports received from the region.

Former SHAs	GP	Hospital Doctor	Hospital Pharmacists	Community Pharmacists	Patients	hospital nurse	Nurse	Coroner	Dentist	Hospital Health Professional	Optometrist	Other Health Professional	Pharmacist	PHYSICIAN NK	carer	consumer	parent	TOTAL
County Durham and Tees Valley	79	32	17	15	33	11	39	0	3	16	0	38	3	1	2	0	3	292
Cumbria and Lancashire	122	64	17	21	80	29	95	1	3	19	0	163	10	5	2	0	1	632
North East Yorkshire and North Lincolnshire	83	23	18	7	43	9	43	0	1	8	0	43	1	7	4	1	0	291
Northumberland Tyne and Wear	100	71	67	12	35	18	77	0	0	25	0	48	7	5	3	0	0	468
South Yorkshire	71	46	13	4	39	8	14	0	0	17	0	20	4	4	4	0	3	247
West Yorkshire	95	75	26	21	72	31	48	0	2	28	2	26	6	10	2	1	3	448
TOTAL	550	311	158	80	302	106	316	1	9	113	2	338	31	32	17	2	10	2378

Total number of yellow card reports from Northern and Yorkshire region in 2008 = 2378*

* reports may have multiple reporters so the total will not necessarily equal the total number of reports received from the region.

Reports per quarter (calendar year)

Number of reports per quarter in 2008

January - March 08	(Q1)	583
April - June 08	(Q2)	597
July - September 08	(Q3)	544
October - December 08	(Q4)	639
TOTAL		2363

Follow-ups

Follow-ups by YCCNY in 2008	149
Number of successful follow-ups	97

Appendix 2:
Number of Yellow Card reports by reporter type for each former SHA since April 2004

Total reports by reporter type for County Durham and Tees Valley

	GP	Hospital Doctor	Hospital Pharmacist	Community Pharmacist	Hospital nurse	Nurse	Patient	Other*	Total
2004-05	128	46	65	3	n/a	26	3	10	281
2005-06	63	48	19	4	0	27	18	18	197
2006-07	67	42	40	8	8	16	32	24	237
2007-08	87	28	36	7	15	43	17	40	273
2008	79	32	17	15	11	39	33	66	292

* coroner, dentist, Hospital Health Professional, Optometrist, Other Health Professional, pharmacist [sector N/K], physician [sector N/K], carer, consumer, parent

Total reports by reporter type for Cumbria and Lancashire

	GP	Hospital Doctor	Hospital Pharmacist	Community Pharmacist	Hospital nurse	Nurse	Patient	Other*	Total
2004-05	128	46	65	3	n/a	26	3	10	281
2005-06	63	48	19	4	0	27	18	18	197
2006-07	67	42	40	8	8	16	32	24	237
2007-08	87	28	36	7	15	43	17	40	273
2008	79	32	17	15	11	39	33	66	292

* coroner, dentist, Hospital Health Professional, Optometrist, Other Health Professional, pharmacist [sector N/K], physician [sector N/K], carer, consumer, parent

Total reports by reporter type for Cumbria and Lancashire

	GP	Hospital Doctor	Hospital Pharmacist	Community Pharmacist	Hospital nurse	Nurse	Patient	Other*	Total
2004-05	183	78	20	9	n/a	65	5	23	383
2005-06	143	71	21	13	2	45	72	42	409
2006-07	121	76	16	18	10	43	83	69	436
2007-08	140	62	20	17	8	99	59	202	607
2008	122	64	17	21	29	95	80	204	632

* coroner, dentist, Hospital Health Professional, Optometrist, Other Health Professional, pharmacist [sector N/K], physician [sector N/K], carer, consumer, parent

Total reports by reporter type for North and East Yorkshire and Northern Lincolnshire

	GP	Hospital Doctor	Hospital Pharmacist	Community Pharmacist	Hospital nurse	Nurse	Patient	Other*	Total
2004-05	134	43	26	19	n/a	32	1	21	276
2005-06	99	64	19	6	0	21	50	27	286
2006-07	89	46	13	8	5	13	75	31	280
2007-08	112	36	13	11	11	32	48	55	318
2008	83	23	18	7	9	43	43	65	291

* coroner, dentist, Hospital Health Professional, Optometrist, Other Health Professional, pharmacist [sector N/K], physician [sector N/K], carer, consumer, parent

Total reports by reporter type for Northumberland, Tyne and Wear

	GP	Hospital Doctor	Hospital Pharmacist	Community Pharmacist	Hospital nurse	Nurse	Patient	Other*	Total
2004-05	144	148	135	12	n/a	36	5	36	516
2005-06	90	162	172	13	1	33	51	48	570
2006-07	104	103	146	9	11	24	50	90	537
2007-08	104	81	82	13	7	36	30	55	408
2008	100	71	67	12	18	77	35	88	468

* coroner, dentist, Hospital Health Professional, Optometrist, Other Health Professional, pharmacist [sector N/K], physician [sector N/K], carer, consumer, parent

Total reports by reporter type for South Yorkshire

	GP	Hospital Doctor	Hospital Pharmacist	Community Pharmacist	Hospital nurse	Nurse	Patient	Other*	Total
2004-05	95	66	28	15	n/a	24	3	38	269
2005-06	66	63	11	6	0	19	45	30	240
2006-07	57	38	11	9	6	16	42	28	207
2007-08	83	49	7	12	7	23	34	24	239
2008	71	46	13	4	8	14	39	52	247

* coroner, dentist, Hospital Health Professional, Optometrist, Other Health Professional, pharmacist [sector N/K], physician [sector N/K], carer, consumer, parent

Total reports by reporter type for West Yorkshire

	GP	Hospital Doctor	Hospital Pharmacist	Community Pharmacist	Hospital nurse	Nurse	Patient	Other*	Total
2004-05	145	91	69	11	n/a	83	6	29	434
2005-06	98	92	42	11	1	58	62	33	397
2006-07	103	71	23	14	12	37	77	74	411
2007-08	128	69	30	16	19	72	60	53	447
2008	95	75	26	21	31	48	72	80	448

* coroner, dentist, Hospital Health Professional, Optometrist, Other Health Professional, pharmacist [sector N/K], physician [sector N/K], carer, consumer, parent

Appendix 3: YCC Northern and Yorkshire objectives for 2007-09

General Objectives	Performance measures and targets	Progress at 31st March 2009
1. Communications Communicate information about the Yellow Card Scheme with a view to improving and increasing ADR reporting.	1.1 To develop and maintain the YCC website and to update the existing yellow-card teaching resource pack and make it available via the Website	Maintenance ongoing. 2 pieces of training material available on YCCNY website.
	1.2 Develop the YCC, with a lay guide to reporting adverse drug reactions	Agreement for YCCs to collaborate on the production of the lay guide. Teleconference May 2008 and meeting Jul 2008 with MHRA, who are now collating slides and ideas from each YCC to create a uniform healthcare profession presentation.
	1.3 Ensure Website has appropriate links to agreed YC partners	Updated according to links provided by MHRA.
	1.4 To make contact with the area managers for the major community pharmacy multiples within YCC area.	Area managers contacted in Feb 2008 to coincide with the promotion of patient YC in community pharmacies. General support and regarding ADR reporting and education offered. Quick electronic questionnaire included, 1 response out of 11 letters sent.
2. Education Act as a point of information to inform stakeholders about Yellow Card reporting initiatives and provide education to reporters on what and how to report	2.1 To contact all providers of undergraduate and postgraduate education for healthcare professionals involved with medicines prescribing in Northern and Yorkshire by April 2008, to establish the current level of teaching regarding ADR and the Yellow card Scheme, and offer support in the form of education materials and sessions	15 universities contacted who provide undergraduate and postgraduate courses for healthcare professionals. 10 responses received of which 75% of courses included information about YC scheme. Half of the respondents requested further information / support with regard to Yellow card training.
	2.2 Deliver 4 training sessions per year to relevant healthcare professional groups to raise awareness of the Yellow card scheme and stimulate reporting.	2008-09 Nine training sessions delivered to healthcare professionals, including a national conference. Three poster presentations at national conferences.
3. Patient Reporting Engage in the Yellow Card Strategy to increase Yellow Card reporting from patients	3.1 To work with community pharmacists as part of a national campaign to engage patients in the Yellow Card Scheme	Liaison with local PCTs and hospital trusts to promote the scheme in Jan 2008. Training materials adapted. No sessions delivered due to lack of user engagement. Press release written in collaboration with MHRA for those PCTs requesting it.
	3.2 To increase patient awareness of adverse drug reaction reporting in secondary care by contacting all hospital pharmacies in Northern and Yorkshire to seek their views on how written information about the scheme can be passed on to patients. To establish a mechanism in at least 1 hospital trust, to provide written information to patients about the Yellow Card scheme.	All Chief Pharmacists contacted prior to patient YC promotional campaign in Feb 2008, including electronic poster and Yellow cards. Written agreement from one trust that used all promotional materials in outpatient pharmacies during the campaign. Views of Senior Pharmacists in Northern area sought regarding ways in which the patient YC scheme can be promoted in hospitals. Patient reporting information displayed in a number of outpatient pharmacy waiting areas for patients to pick up.
	3.3 Engage with local expert patient groups to promote the Yellow Card Scheme	Five local offices of national support groups contacted (Parkinson's Disease Society, arthritis care, Diabetes UK, British Lung foundation, Epilepsy Action). Information about YC scheme included in Northern British Lung Foundation newsletter (circulation 1,100 copies). Epilepsy Action – educational meetings with local branches arranged with regional director.
4. ADR Follow-up Request follow up information from reporters in the region and supply to MHRA	4.1 Request follow up information in accordance with MHRA agreed procedures	Ongoing as per operational procedures