Infection Control Report 2002-2003

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NEW PATIENTS WELCOME

Squats your lot – page 9

Siege terror at 50ft – page 3

Water row leaves patient high and dry

Driver claims air conditioning caused Legionnaire's

I CAUGHT KILLER BUG FROM BUS

HAVING A SPLASH-TASTIC TIME – P26

A BUS driver with suspected Legionnaire's disease claimed he caught the disease from the air conditioning on his bus.

BUYING OR SELLING A HOME?

Lewis Nedas & Co.

Injured? COMPENSATION

NO WIN NO FEE

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MC Kelsey

The year in review

Our population is elderly and readmission common, they often live in residential accommodation and remain dependent, a situation not unlike hospital. It is not surprising that patients are now admitted with community acquired infection (CAI) that resemble those traditionally associated with hospital such as MRSA, C. difficile and multiple drug resistant coliforms. This has prompted a change in name, no longer do we refer to Hospital Acquired but now Healthcare Associated Infection (HAI) . Reports now suggest that more than 20% of MRSAs isolated in hospital were acquired in the community. New strains of Staphylococcus aureus are now appearing in the community, they resemble some of the hospital staphylococci of the 50's and 60's. Some produce a leucocydin toxin and present with boils and skin necrosis. These strains have arrived from the continent and may become major pathogens. Remember nature is the greatest terrorist.

The Public Health Laboratory Service (PHLS) is no longer, it has been replaced by the Health Protection Agency (HPA). It is intended that the HPA will include all the functions of infection surveillance, radiological protection, chemical hazards and protection against bio terrorism. Most of the PHLS's regional laboratory network have been handed back to the NHS. A new post of Inspector Inspector of Microbiology has been created within the Department of Health, their role will be one of ensuring quality and the provision of effective surveillance material. New relationships require to be built between the HPA and the NHS.

Within the Whittington Hospital Trust there has been a realignment of infection control to bring it within the Trust's clinical governance and risk management strategies. The Clinical Negligence Scheme for Trusts has played a major part in reorienting attitudes and infection control now has a far higher profile throughout the Trust.

EDUCATION.

One of the principal functions of IC is to inform all front-line staff of the standards that are expected of them. All new staff have infection control input during their induction. The number of taught hours has increased considerably and together with the increased number of medical student pathology lectures, has placed considerable strain on the available teachers. Unfortunately we must now all recognise that education alone does not permanently change behaviour. Our aim should be a sustained improvement in staff compliance particularly with regard to hand hygiene. Examples of teaching activity are listed in Appendix 1 and include regular study days for trained staff as well as increased teaching at induction.

SURVEILLANCE.

The aim of surveillance is threefold:

1. To detect trends in infections which may require changes in clinical practice e.g. antimicrobial resistance.
2. To detect outbreaks of infection to allow appropriate intervention to minimise the risk of further spread
3. To inform clinical staff as to their level of performance to allow comparison against other similar healthcare groups. Comparisons can be against other local settings, national data or prior performance.

Clearly surveillance is of limited value without feedback. For more than ten years we have collected data into an infection control database (Alert). This software is no longer supported commercially and is unstable, limiting our ability to produce feedback (or annual) reports.

Involvement in national surveillance schemes has proved to be very revealing. We now report electronically our alert organism isolates to the London regional office of the HPA, this data is then forwarded for collation by the Communicable Disease Surveillance Unit (CDSC). This is entirely dependent on the Alert software (see above). The pathology computer system will be replaced within the next 12 months which should assist in stabilising this problem.

Starting in April 2001 a national league table of MRSA bacteraemias was established (see below). The data from this scheme is not easy to interpret as no case mix comparison can be made. Data is presented by NHS region in England and by hospital type. This surveillance programme is to be changed in 2004 and each Trust will be expected to demonstrate an improvement in the MRSA bacteraemia rate. Pilot schemes for compulsory surveillance of orthopaedic implant surgery are completed and we are awaiting details of the scheme which we assume will be rolled out within the near future. This will replace the existing NINNS scheme (see below).

Compulsory reporting schemes, and league tables, will be introduced next year for glycopeptide resistant en-

terococci and Clostridium difficile.

Nosocomial Infection National Surveillance Scheme (http://www.hpa.org.uk/services/nisu.htm). We have in recent years "dipped " into this surveillance scheme to take part in the modules for hospital acquired bacteraemia, vascular surgery and most recently orthopaedic implant surgery. The results of surveillance in orthopaedic surgery have revealed information which will compel us to alter our practises and is reported in detail further on. Surveillance at this level is not sustainable given our current staffing level.

STAFFING

The staff involved with infection control were as follows:

- Consultant Microbiologist - Dr MC Kelsey (single handed)
- Specialist Registrars in Microbiology (2)
- Senior Infection Control Scientist) – Dr Caroline Mitchell PhD
- Infection Control Nurse - Sister Margaret O'Toole
- Senior Chief Biomedical Scientist- George Hounsome
- Laboratory staff

The "reforms" in Junior Medical Staff training has had the effect of leaving us with the loss of one wte. doctor. Diagnosis and management of infection in individuals takes most of their working day.

The scientific and technical staff, provide the microbiology data and maintain the computer systems, however the increasing workload in both numbers and range of tests performed leaves them little time to add value to infection control. There is a gap between the information we have available for surveillance and the delivery of health care at the ward.

During this year, Dr Mitchell returned from maternity leave at a reduced number of hours. It can be seen that at a time of increased concern and a desire to raise standards, we are expected to do more with less. There is no real hope of raising standards whilst the staffing situation is so poor. Current accepted guidelines of 1 infection control practitioner per 250 beds is unrealistic and no longer accepted as the norm. We urgently need the appointment of an additional full-time member of the infection control team if we are to continue at this current level of activity.

THE INFECTION CONTROL COMMITTEE

The membership of the committee and attendance are listed in the appendices. The committee approved the following priorities for the year 2003 to 2004:

1 Infection Control Policies

a) All policies in the Infection Control Manual due for updating will be reviewed and revisions will be made.

b) Compliance with key infection control policies will be audited, in partnership with CEAD.

2 Hand Hygiene

a) Training in hand hygiene issues will continue to form an integral part of all Infection Control training/ teaching sessions.

b) Hand hygiene will be the key patient care topic in June 2003 across the Trust, in line with the patient care priorities calendar. Spot checks of hand hygiene will be carried out using florescent hand gel and an UV -light box. There will be an information and audit stand in the Turning Point Restaurant on several days in June, to raise general awareness.

c) A poster campaign on hand hygiene will also be launched in June across the hospital.

d) A hand hygiene information stand will be available in June in the Main Foyer of the Hospital near A&E, which will provide general information to the public and staff on the role of hand hygiene in the

home and in the hospital.

e) The provision of alcohol hand rub at every bedside, nursing station, notes trolley, outside side rooms, etc will be audited. Whenever possible the alcohol hand rub should be fixed using clips or wall attachments.

f) A trial of individual pocket sized alcohol hand rub will occur in May on two wards. The acceptability of individual alcohol "tottles" will be assessed using a standard questionnaire. The cost of provision of "tottles" for all clinical practitioners will be calculated.

3 Education

a) Infection Control will remain a key topic on the induction programmes for all staff, including:

1. Non-clinical staff
2. All medical staff
3. Nurses, midwives, AHPs and other clinical staff

b) Infection control will be included in the mandatory update study days for all staff, including nurses, midwives, AHPs, FSAs and porters

c) A programme of key Infection Control Study days will be established for specific staff groups:
1. Specialist nurses
2. Clinical facilitators
3. Matrons
4. Clinical Managers
5. Infection Control Link Workers

4 Clinical Work

a) A network of Infection Control Link Workers for every clinical area will be established across the hospital. They will meet regularly and have clear role expectations
b) Ward based surveillance of patients with 'Alert' organisms will continue, with establishment of trend reporting for wards and departments
c) Monitoring and control of ward based outbreaks
d) Pre-operative screening for MRSA carriage in patients undergoing elective hip or knee replacement surgery, with trend analysis of results.
e) Close liaison with bed managers to co-ordinate bed management issues.
f) Prompt follow up of incident reports relating to infection control issues and needle stick injuries.

5 Surveillance
a) Participation in the National Bacteraemia surveillance scheme run by the Department of Health
b) Participation in Department of Health/ HPA NINSS for surgical site infections in orthopaedics.

6 Training for the Team
a) Infection Control Nurse to continue Diploma in Infection Control at the University of Hertfordshire. Participation in on-site training especially in computing, library skills, report writing and presentation skills.
b) Senior Infection Control Practitioner to continue Diploma in Hospital Infection Control, University of London & London School of Hygiene and Tropical Medicine.

OCCUPATIONAL HEALTH

Occupational health services are purchased externally. The two departments co-operate closely on a number of issues.

Sharps injuries

The OHD monitor and follow up "sharp" injuries (Table 1). Emergency treatment is undertaken by the A&E Dept., Microbiology Juniors often have to support these groups when the OHD is not open. It can be seen that the number of reported sharps injuries has not declined and that anti-retrovirals are dispensed more frequently.

Immunisation

The problems of varicella zoster (chicken pox) susceptibility in staff remains a problem even with more effec-

tive screening of new employees. The live attenuated vaccine is now licenced in the United Kingdom and a policy of staff immunisation will be introduced in 2003. The DOH's "Green Book" has once again failed to be updated. The delay in publication is most likely due to the constant change in immunisation practice. Measles immunisation and change to the Hepatitis B and C arrangements remain issues for staff and patient protection. Influenza immunisation continues to be offered to staff.

HOTEL AND ESTATES

Table 1 Food hygiene

Numbers of "sharp" injuries	*1993-4*	*1994-5*	*1995-6*	*1996-7*	*1997-8*	*1998-9*	*1999-2000*	*2000-01*	*2001-02*	*2002-3*
Whittington staff				97	101	78	95	88	83	79
Medical students				4	6	8	6	6	4	7
Agency				4	5	7	7	3	7	10
Total	23	100	91	105	112	93	106	97	94	96
Viral status of "sharp" donor										
HIV donor	0	2	2	4	0	0	1	1	1	4
HepBdonor	1	3	1	2	2	1	6	3	3	2
HepCdonor	0	1	1	1	4	2	8	3	3	2
Action taken post "sharp" injury										
Fully immune		10	24	35	68	61	69	64	75	68
Hep B booster given		?	38	57	62	49	41	41	47	39
HBIG given		?	0	1	0	0	0	2	3	3
Never immunised		?	4	7	15	5	7	7	6	4
Anti retrovirals given to recipient		2	2	4	4	9	6	5	15	12
Totalsharpsinjuries	23	100	91	105	112	93	106	97	94	96

Historically hospital kitchens were common sources of outbreaks of food borne disease. One famous outbreak in Yorkshire was largely responsible for the removal of Crown Immunity. In 2002-03 we have been unable to perform any inspections due to time constraints. No inspection has been carried out on the premises of the cook chill supplier. It is the intention in the next year to reintroduce kitchen inspections jointly with the Health Protection Agency.

Domestic services

The perceived quality of cleaning in clinical areas has not declined . We are grateful for the co-operation we receive in our efforts to control outbreaks.

Planning

One of the tasks of the infection control doctor is to advise on the suitability of new plans and upgrades of existing buildings to ensure that they meet the standards required for the prevention of infection. This role is made explicit in the controls assurance document as criterion #4, the guidance states:

> *Infection control advice should be provided by the Infection Control Team (ICT), particularly in relation to the following:*
> - *the development of policies relating to engineering and building services for the Trust and to the purchase of medical devices/equipment.*
> - *early stage planning for advice relating to engineering and building works and the purchase of medical devices/equipment.*
> - *all stages of the contracting process for hotel and other services which have implications for infection control, e.g. cleaning, laundry, clinical waste.*
> -

There appear to be no difficulties in this area and the Estates Department co-operates fully although there have been no recent reviews of catering or waste disposal.

Estates

Areas of concern for this reporting year and which remain:

- maintenance and monitoring of negative pressure rooms, particularly in the intensive care units
- ability to decontaminate medical and surgical equipment, particularly with regard to future arrannge-ments for sterile supplies
- a review of theatre ventilation with particular attention to the orthopaedic theatre

Gentamicin resistant Gram negative rods

One of our “alert” organism groups is multiple antibiotic resistant Gram negative rods. Gentamicin has been a mainstay of therapy for Gram negatives and resistance has been slow to develop. These organisms cause particular problems in ITUs and urology settings. Bacteraemic patients will have a mortality of approximately 20%. Some strains such as Acinetobacter baumanii have become resistant to most antimicrobials and represent a therapeutic challenge. We have reported on outbreaks of this organism in previous years.

Figure 1

Gentamicin resistant Gram negative organisms, by month, GP and Hospital, Jan '96- March '03

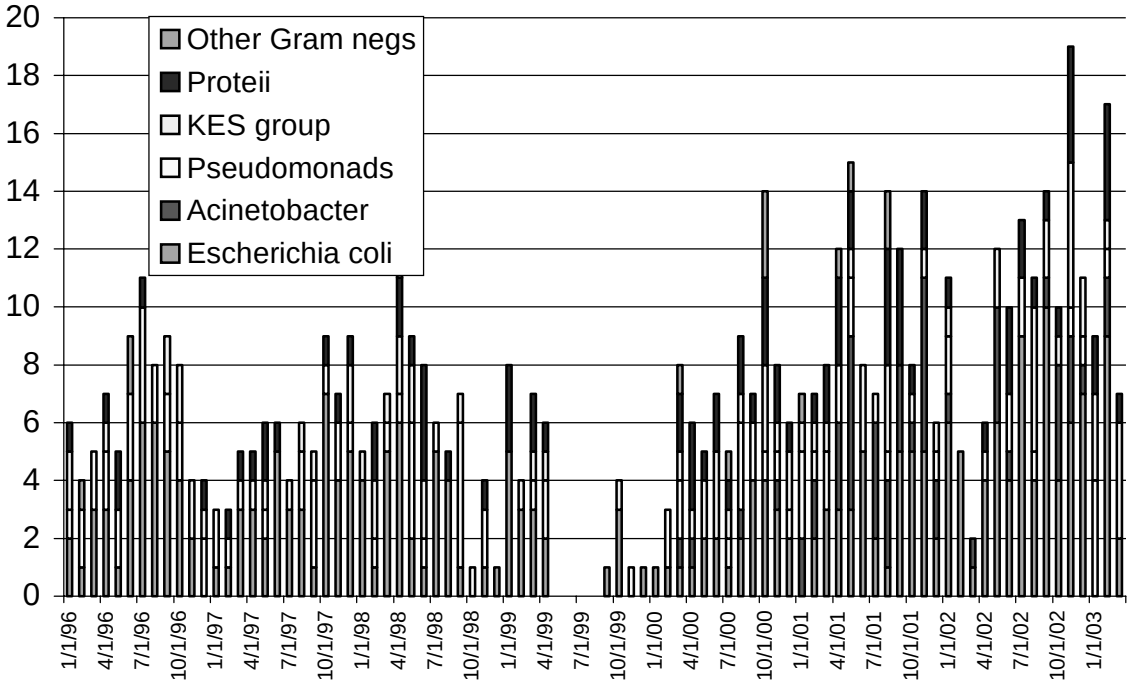


Figure 2

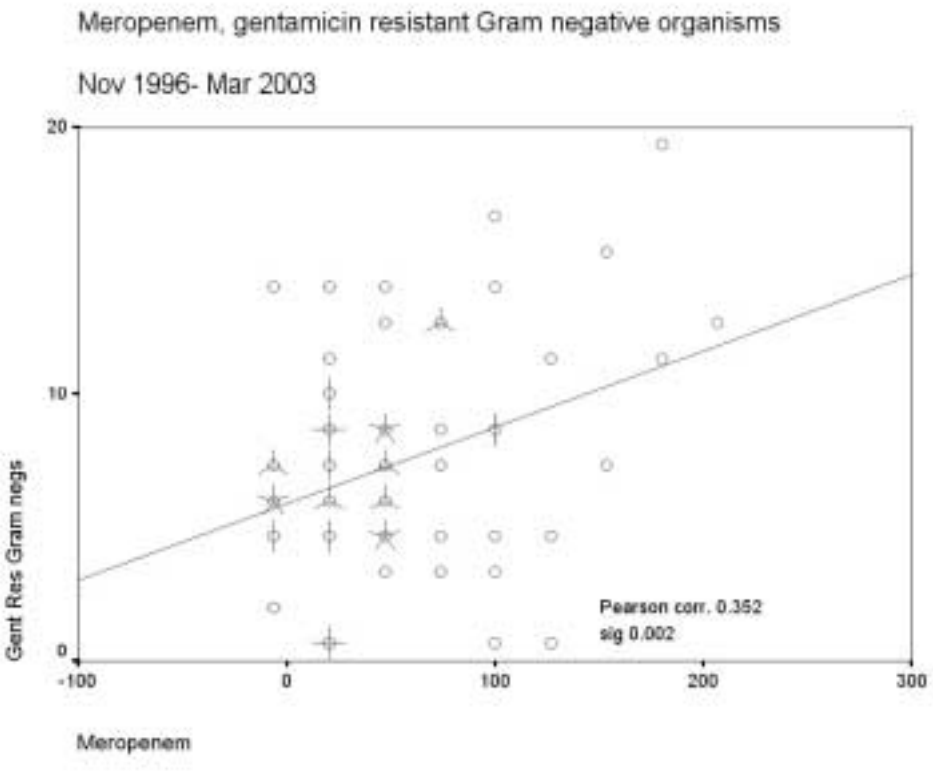


Figure 1 shows the absolute rise in numbers of these bacteria in recent years and Figure 2 the significant correlation between prescribed meropenem, a reserved antibiotic, and the numbers of new isolates of these resistant bacteria.

For most of these organisms the mode of spread is contact via the hands, common source fomites are occasionally to blame. In most cases the source is not detected. Inter-hospital transfer of patients often introduces new strains.

Outbreaks of Norovirus

This virus was previously referred to as Norwalk virus and belongs to a group of agents that were called "small round structured viruses" because of their appearance on electron microscopy. The syndrome usually associated with them was "winter vomiting disease". A glance at national data in Figure 3 reveals that in the summer of 2002 there was a peak of activity. This had never been seen before. Genomic analysis did not reveal any changes in the virus and the change in epidemiology remains unexplained. The winters of 2002 & 2003 saw very high activity levels. Many hospitals had large outbreaks causing ward closures and staff sickness. Figure 4 demonstrates the particular susceptibility of elderly patients

Figure 3

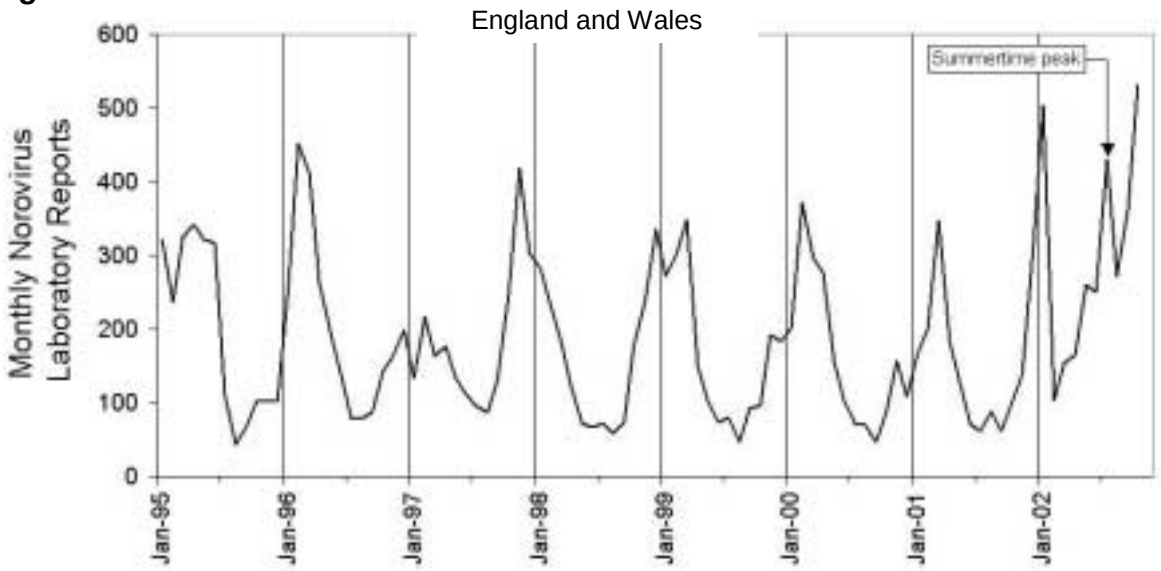
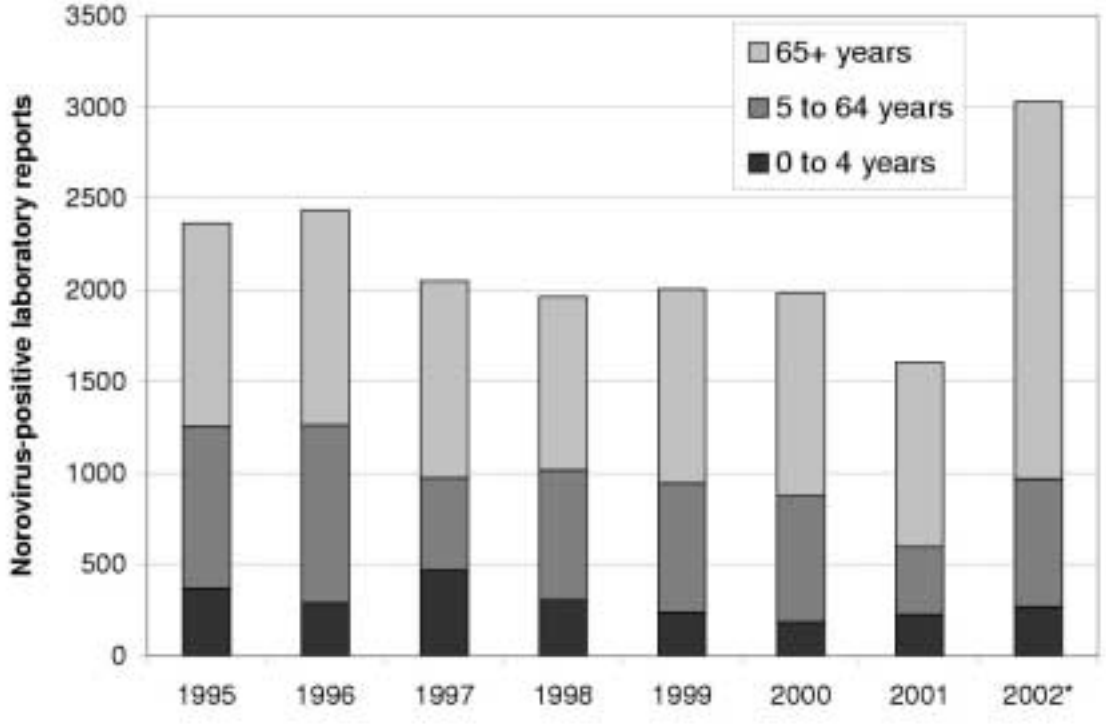


Figure 4



Norovirus outbreaks at the Whittington– Appendix 2 lists the incidents dealt with during the year under consideration. It can be seen that there were several outbreaks of "winter vomiting" involving patients, staff and visitors. Figures 5 a-c show the epidemic curve from the onset of the outbreak in November 2002. By mid December there were more than 200 cases and 15 wards affected. To my knowledge no calculations have been made on the number of lost bed days due to ward or bed closures, staff shortage and delayed discharges. Further outbreaks occurred in January, Febuary and March of 2003 (Appendix 2), following reintroduction of the virus from the community. It is likely that heightened staff awareness led to earlier isolation ie on admission, higher standards of hand hygiene and improved environmental cleanliness. Hopefully there will be sufficient corporate memory to meet this challenge in 2003. It remains to be seen if the epidemiology of the noroviruses has permanently changed. More knowledge and improved surveillance of this virus in the community is required**.**

Clinical Features of **norovirus**-caused gastroenteritis. It has an average incubation period of 12–48 hours and lasts 12–60 hours. Illness is characterized by acute onset of nausea, vomiting, abdominal cramps, and diarrhoea. Vomiting is relatively more prevalent among children, whereas a greater proportion of adults experience diarrhoea. Patients can experience vomiting alone, a condition first identified as *winter vomiting disease*. Constitutional symptoms (e.g.,headache, fever, chills, and myalgia) are frequently reported. Although rare, severe dehydration can be fatal, with this outcome occurring among susceptible persons (e.g., older persons with debilitating health conditions). No long-term sequelae infection have been reported.

Figure 5a

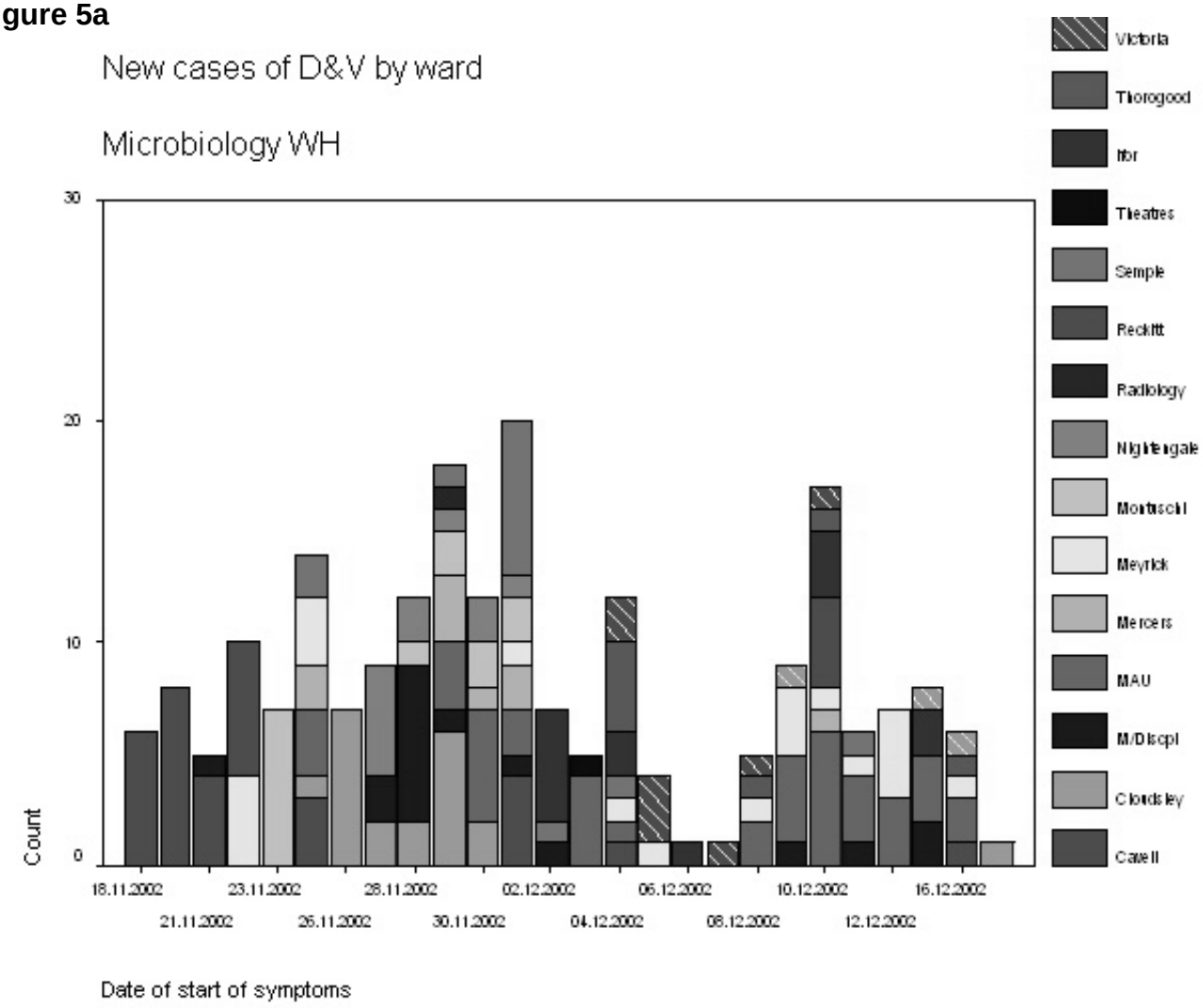


Figure 5b

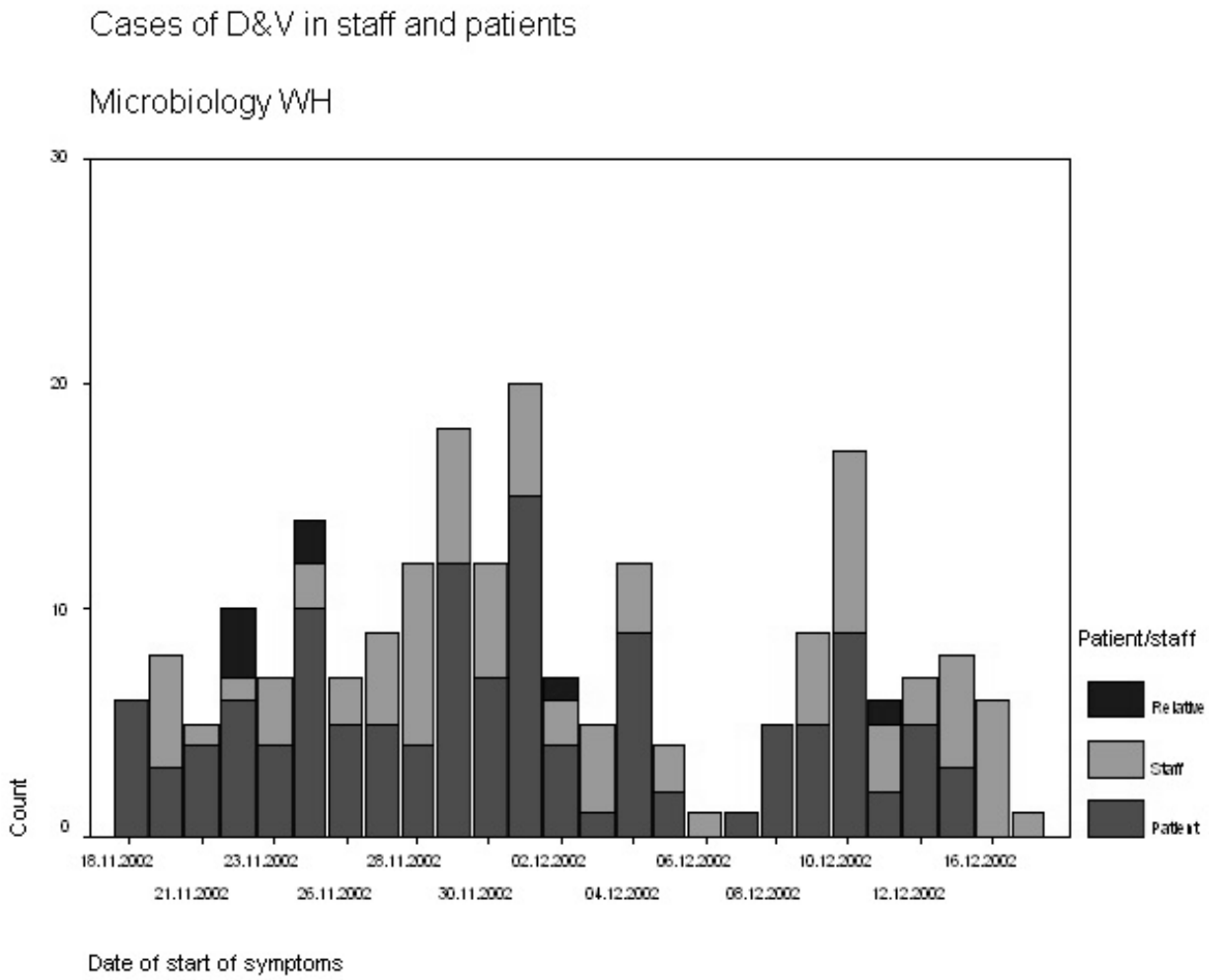
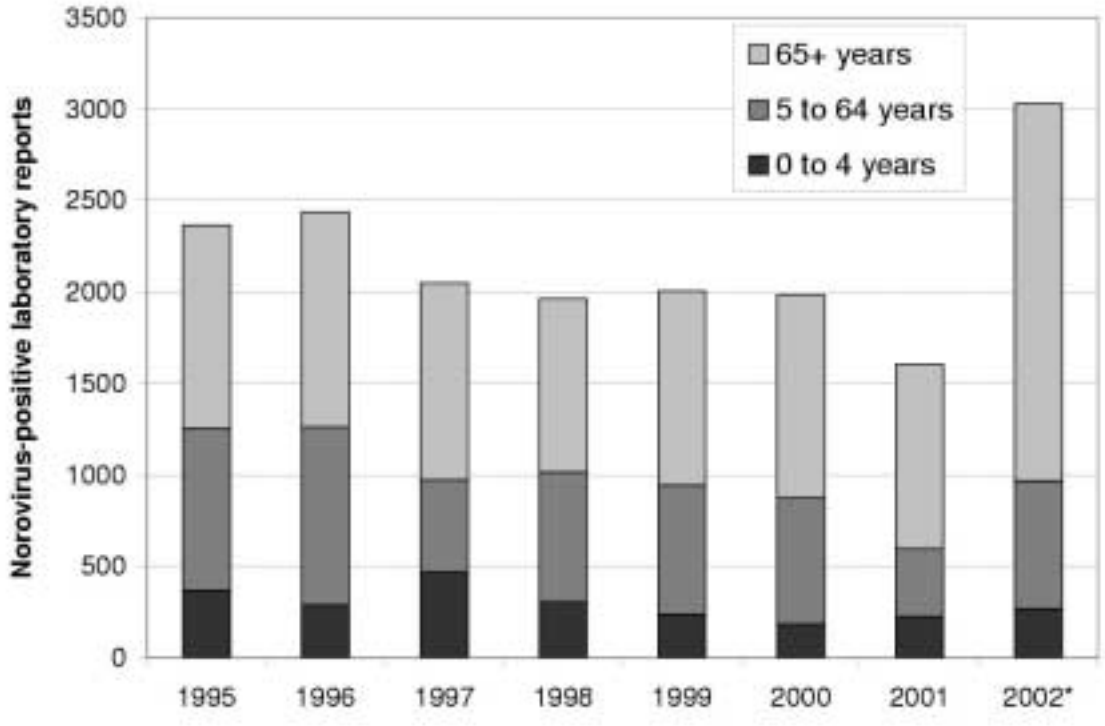


Figure 5c

Figure 4



MRSA

The number of patients infected or colonised with MRSA remains statistically out-of-control{unlikely to be due to chance} (Figure 6a), the criteria for interpretation being given in Table 2. In Figure 6b the rates of colonisation/infection per thousand occupied bed days, per hundred discharges and per 10 deaths are given. Although statistically out-of-control in comparison with earlier historical periods, their does not appear to be an overall increase in rates.

In previous years there has been a significant relationship with purchases of ciprofloxacin (and hence use), the regression line is plotted out in table 6c. The coefficient of correlation (Pearson) of 0.498 is highly

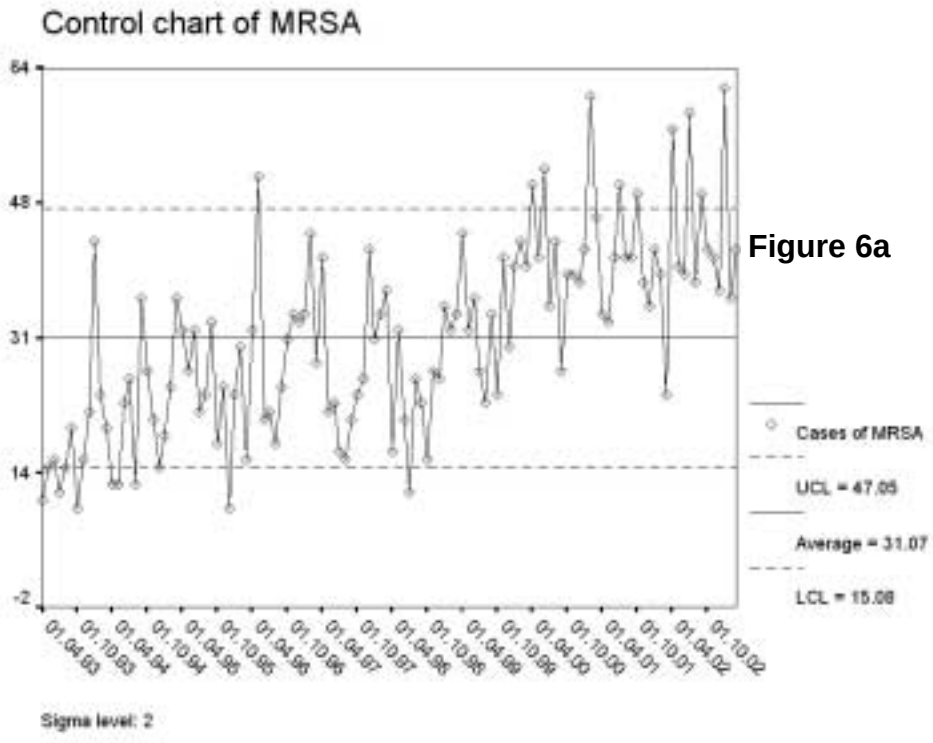
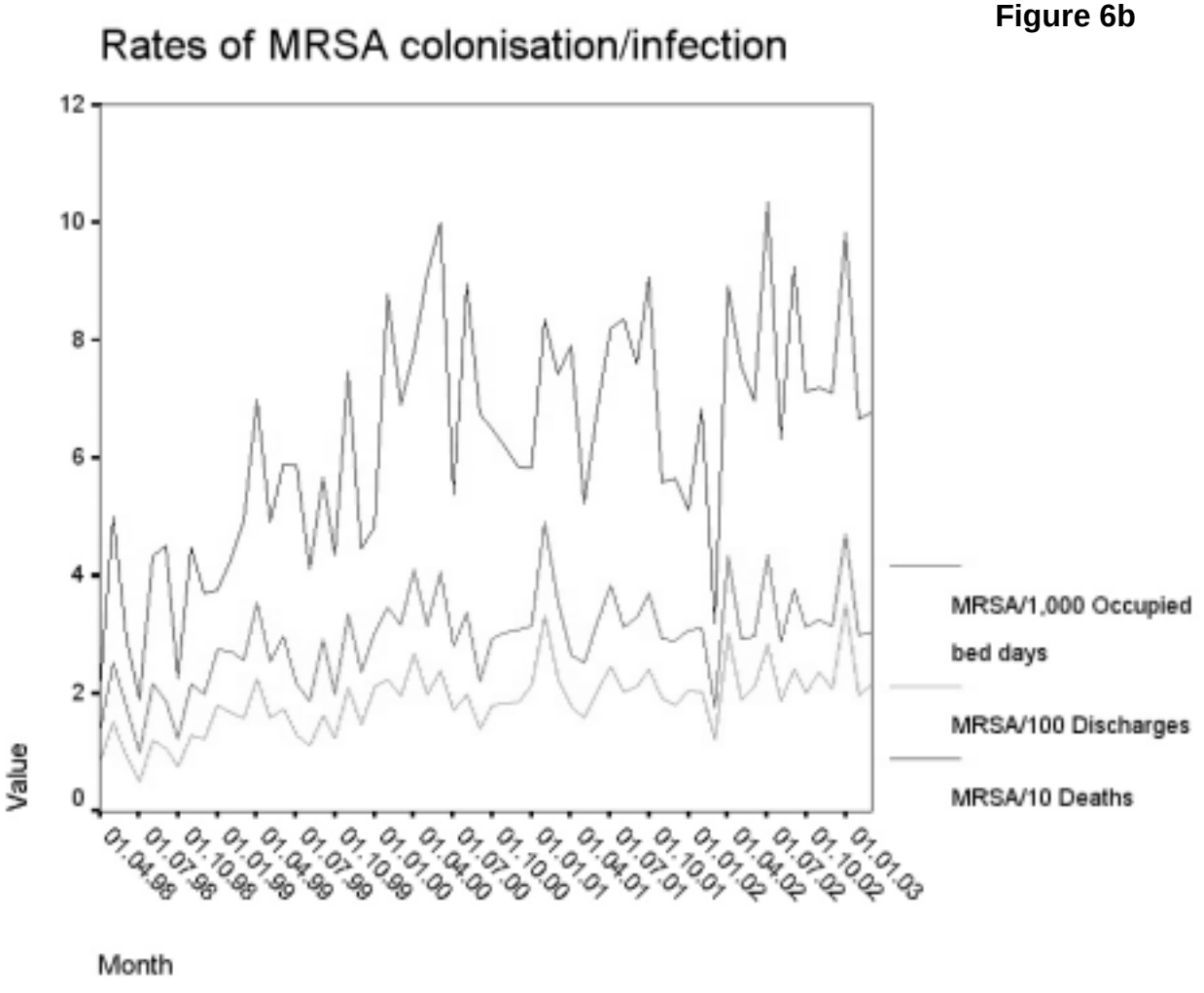


Figure 6a

Figure 6b



significant (Table 3). Figure 6d is a sequence chart with the data transformed by the natural logarithm and separated. It can be seen that the chart peaks and troughs do not overlap. This is possibly explained by the following facts:

1.The antibiotic quantities listed are those that are purchased and not related to individual patient prescriptions, therefore antibiotics will be purchased when the shelf life expires or usage has reduced the stock level.
2. The effects of antimicrobial prescribing although having an immediate effect on the patient will have a slower effect on the environment. Accumulation of bacteria and cases will progress over time.

Figure 6c

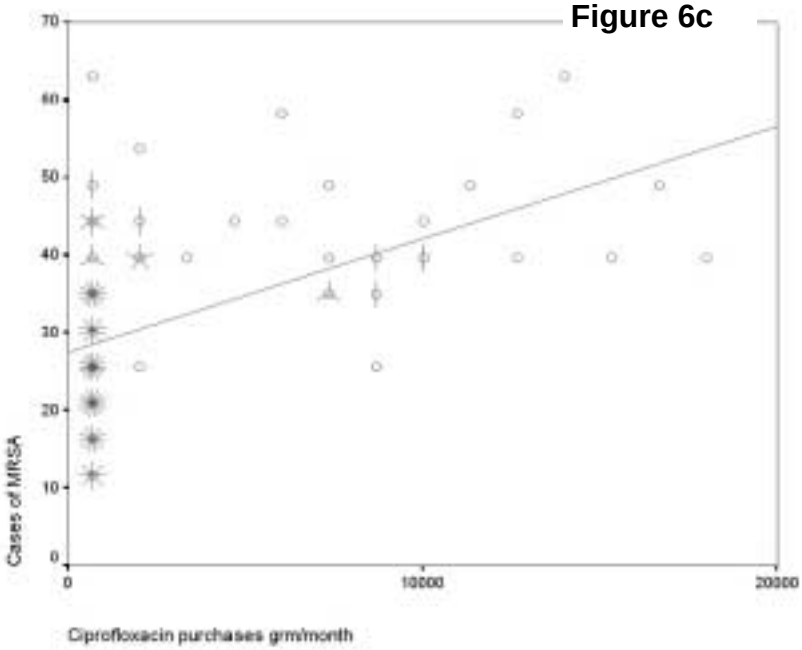


Figure 6e is the results of a time series correlation introducing a period of lags, the maximum correlation coefficient occurs two months after the purchase of ciprofloxacin. It would be fascinating and possibly essential if we are to control MRSA to severely limit the prescription of ciprofloxacin. In 2004 one of the Department of Health targets will be to demonstrate a reduction in MRSA bacteraemia rates.

Figures 7 a-c are data from the Health Protection Agency showing some of the rates from the compulsory MRSA bacteraemia surveillance programme. The Whittington Hospital Trust is hospital number 83. Figure 7a demonstrates that MRSA bacteraemia rates are highest in the London region. Figure 7b compares our rates with other acute Trusts within the London region and 7c shows our position against other trusts in England and Wales. This data does not include the figures from specialist and teaching hospitals. As in previous years this data cannot be interpreted.

Figure 6d

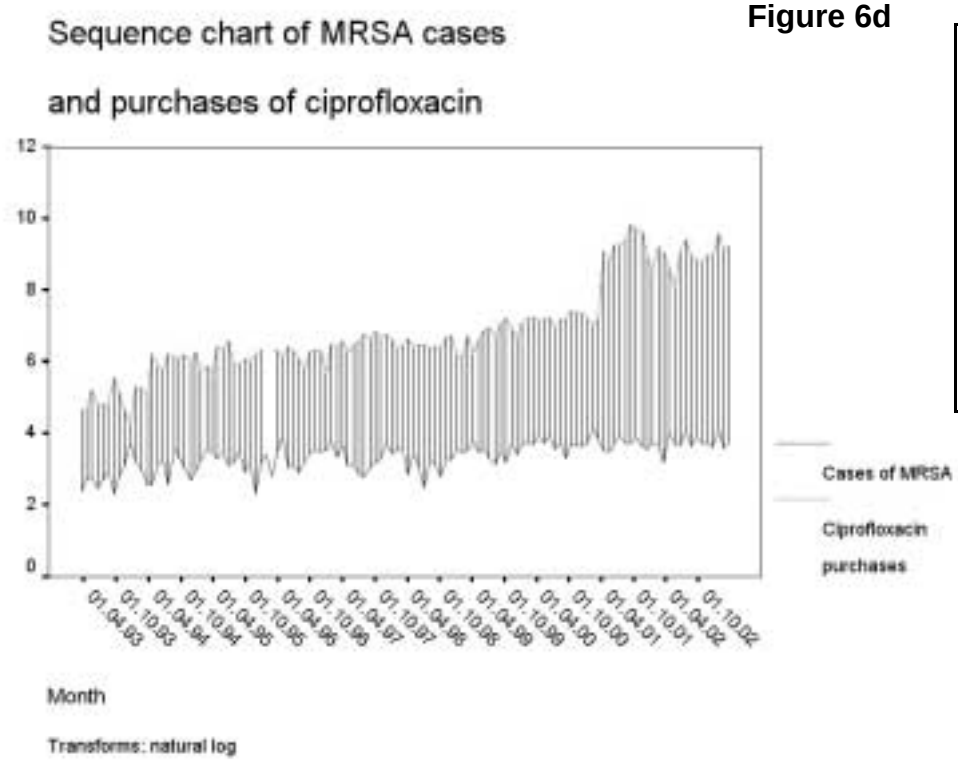


Table 2

- any point outside the control limits (i.e. a single point above or below 3 sigma)
- a run of 6 or more points up or down
- a run of 6 or more points above the center line
- a run of 6 or more points below the center line
- 8 points in row above the center line
- 8 points in row below the

Figure 6e

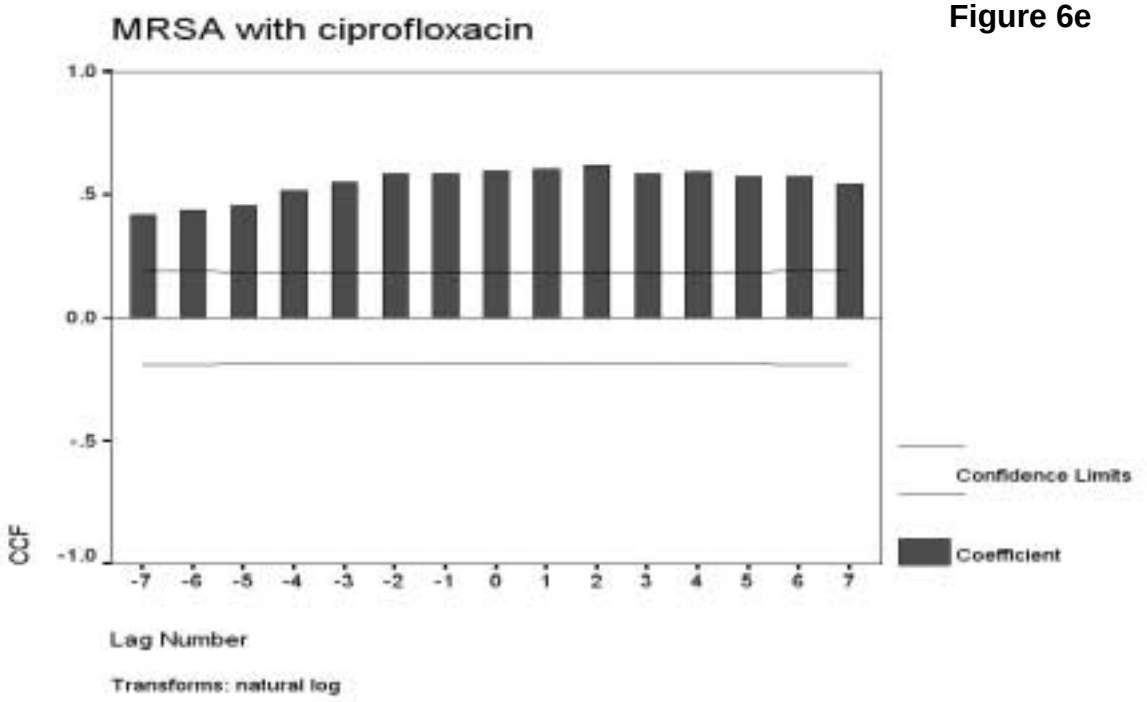


Figure 7a

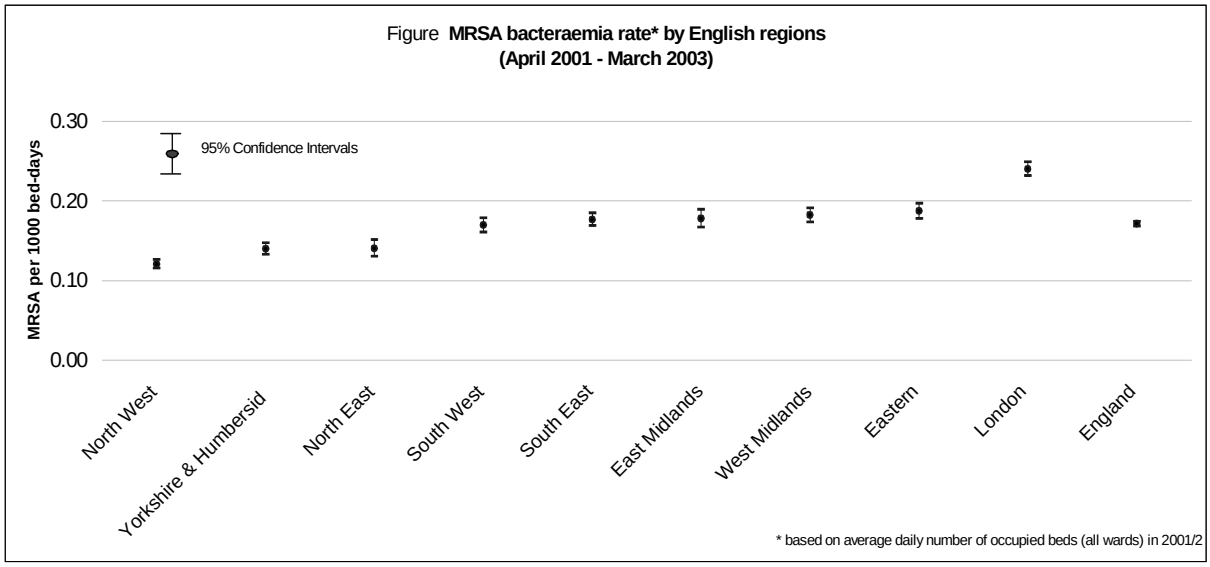


Figure 7b

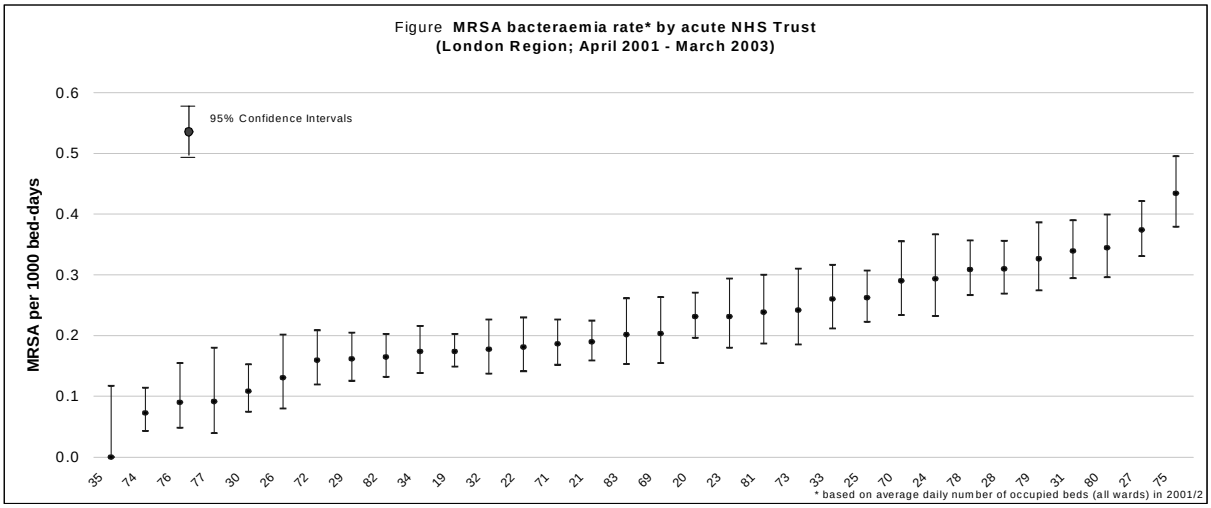


Figure 7c

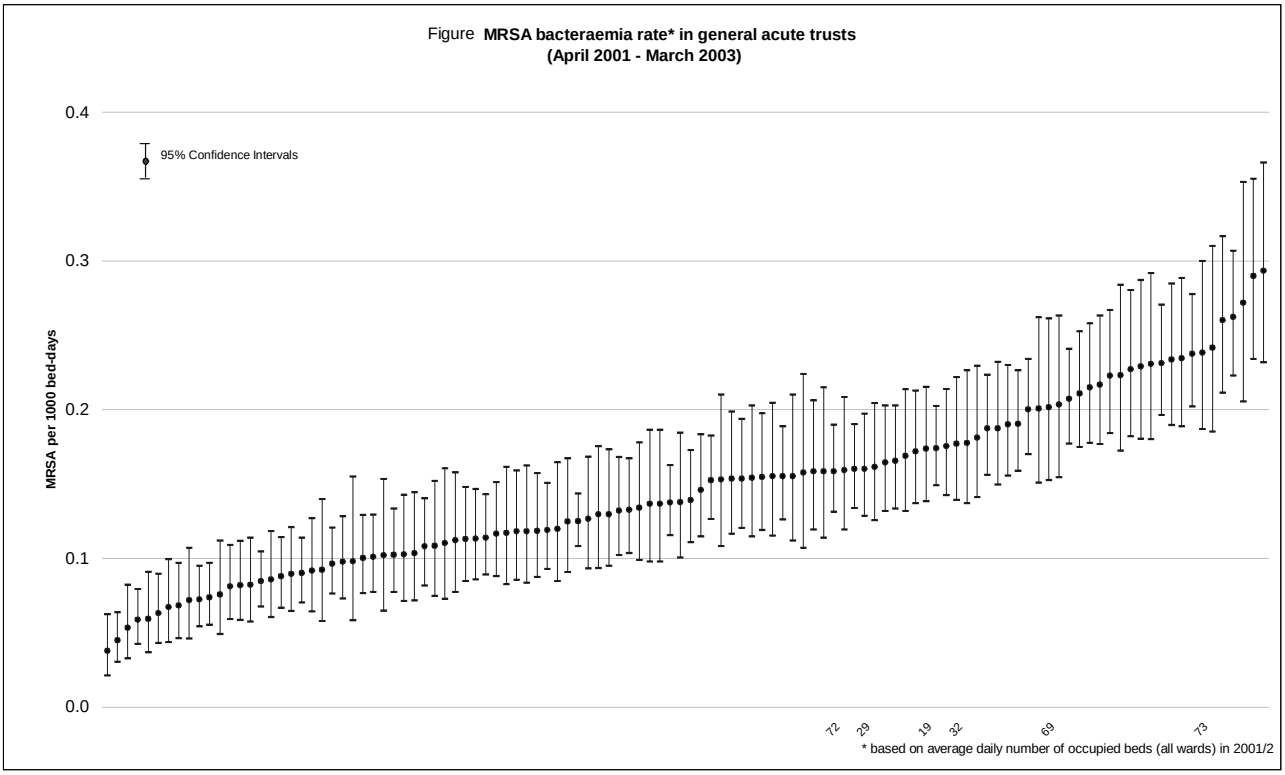


Table 3

		Cases of MRSA	Total Ciprofloxacin	Grams of injectable cephalosporins	Cases of Cl.difficile
Cases of MRSA	Pearson Correlation	1	.498	-.342	.391
	Sig. (2-tailed)	.	.000	.000	.000
	N	120	118	108	120
Total Ciprofloxacin	Pearson Correlation	.498	1	-.352	.426
	Sig. (2-tailed)	.000	.	.000	.000
	N	118	118	106	118
Grams of injectable cephalosporins	Pearson Correlation	-.342	-.352	1	.153
	Sig. (2-tailed)	.000	.000	.	.114
	N	108	106	108	108
Cases of Cl. difficile	Pearson Correlation	.391	.426	.153	1
	Sig. (2-tailed)	.000	.000	.114	.
	N	120	118	108	120

Clostridium difficile

Clostridium difficile is a spore forming organism, patients acquire it either directly from a case with active diarrhoea or from the environment. It is becoming clear that the initial acquisition and then the development of illness may be two separate stages both of which are promoted by the concurrent use of antimicrobials. It is a relapsing disease and the patients ability to mount an immune response to the toxin may affect the outcome. Control involves the appropriate use of antimicrobials, isolation of symptomatic cases and environmental cleaning.

With reference to the process control chart (Figure 8a) for Clostridium difficile and its interpretation (Table 2), control is lost in May of 2001. In the last year control has been achieved and Figure 8b shows the decline in the rates. In 2004 a compulsory reporting scheme for Clostridium difficile will start. No details of this scheme have been released.

In previous years there has been a significant correlation with the amount of injectable cephalosporin purchased and the numbers of cases, this has now been lost (Table 3). It is unclear why this relationship appears to have diminished. It is highly likely that the policy of restricting cephalosporins has now achieved its effect and that other antibiotics have become significant as promoters of antibiotic associated diarrhoea. Ciprofloxacin, not usually associated is now significantly correlated (Table 3).

Figure 8c indicates the cases by ward, Figure 8d is a sequential chart of new cases of Clostridium difficile and purchases of injectable cephalosporins.

Figure 8e is a time series correlation of injectable cephalosporins and new cases of Clostridium difficile, it would appear that a lag period of several months correlates most closely with cephalosporins being associated. This would fit in well with an organism that resists disinfectants and survives in the environment.

Figure 8a

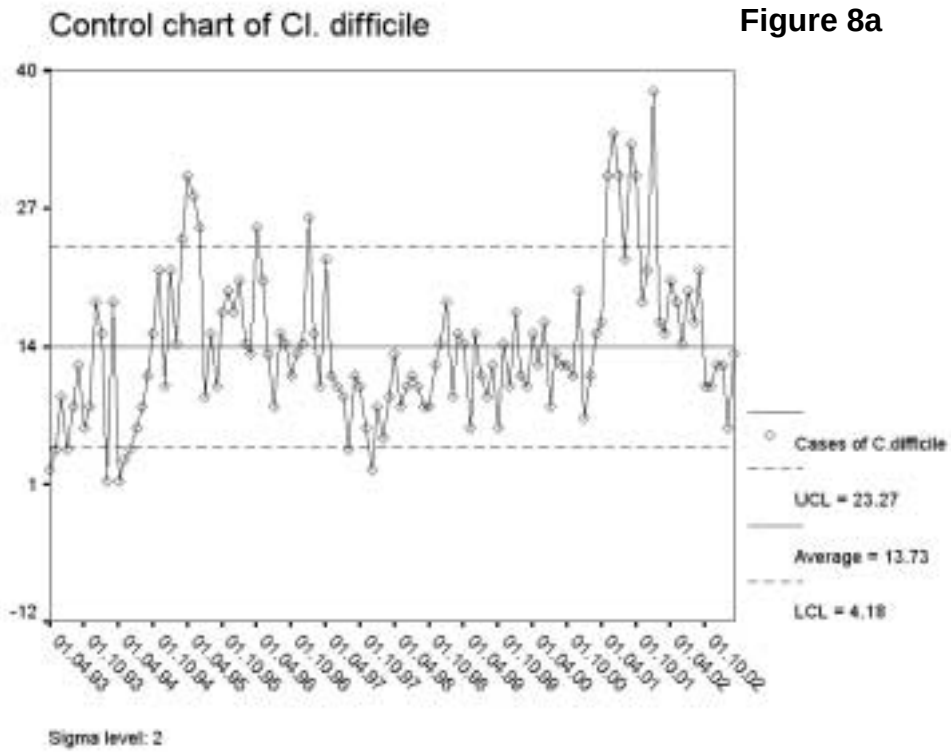


Figure 8b

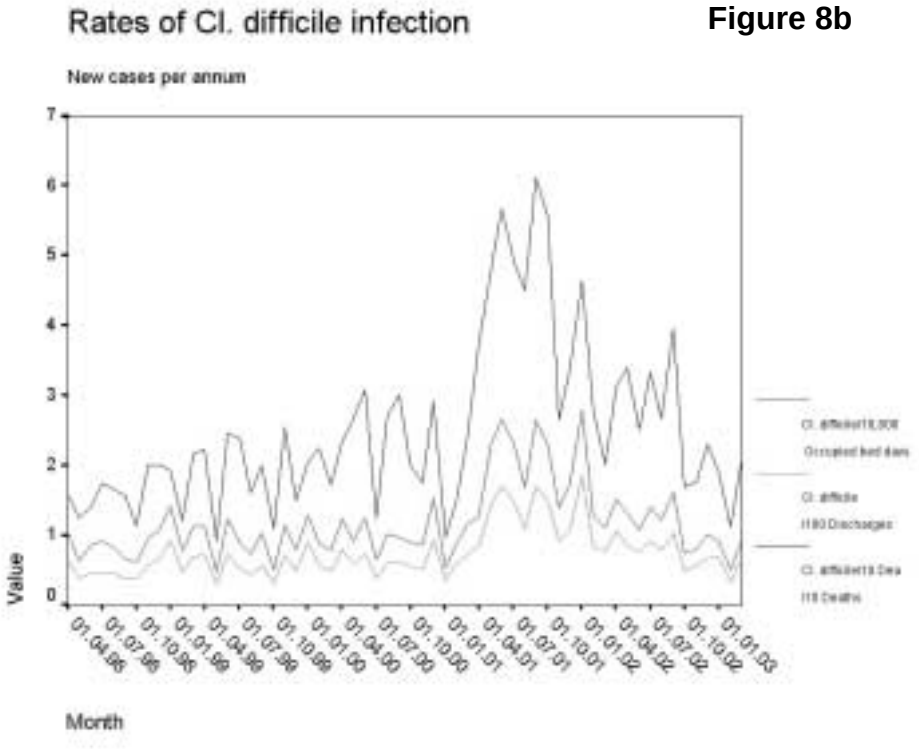


Figure 8c

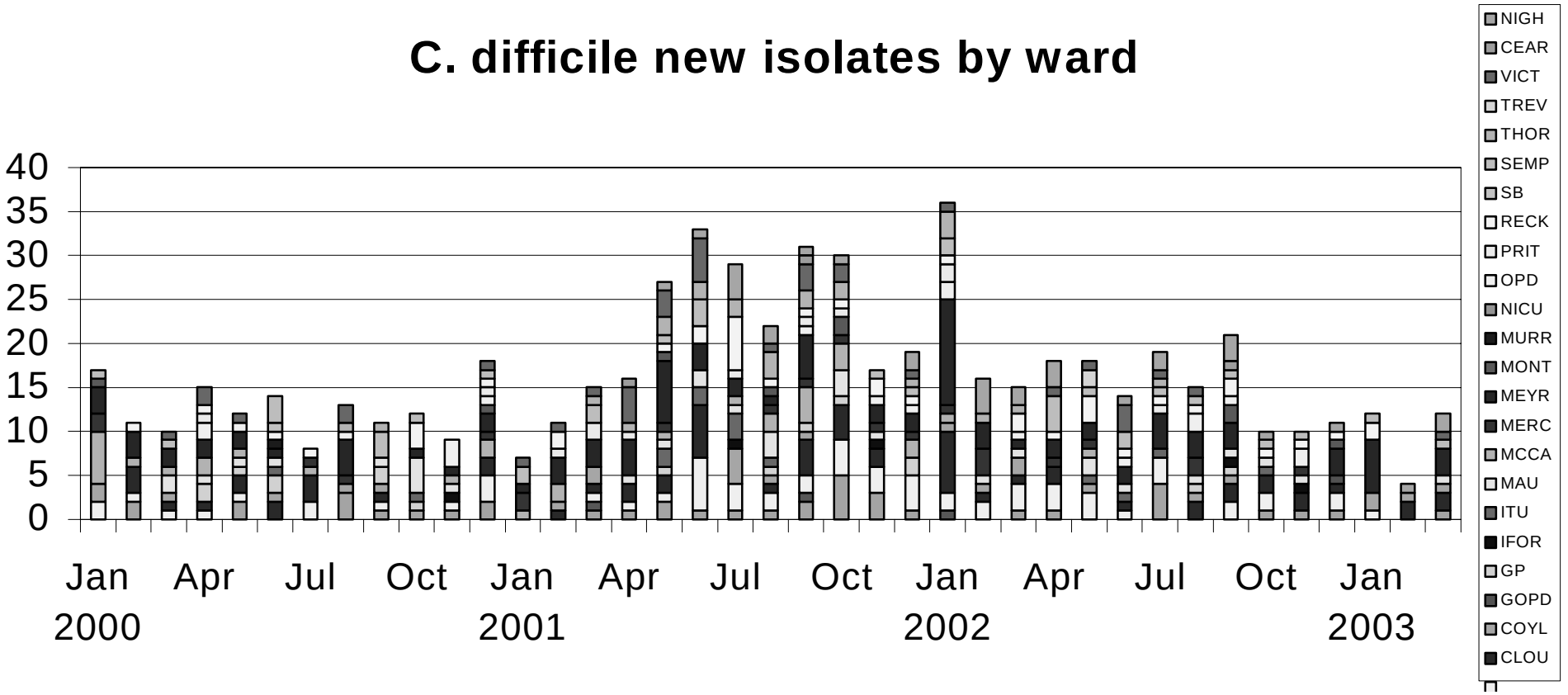

C. difficile new isolates by ward
40
35
30
25
20
15
10
5
0
Jan
2000
Apr
Jul
Oct
Jan
2001
Apr
Jul
Oct
Jan
2002
Apr
Jul
Oct
Jan
2003
NIGH
CEAR
VICT
TREV
THOR
SEMP
SB
RECK
PRIT
OPD
NICU
MURR
MONT
MEYR
MERC
MCCA
MAU
ITU
IFOR
GP
GOPD
COYL
CLOU

Figure 8d

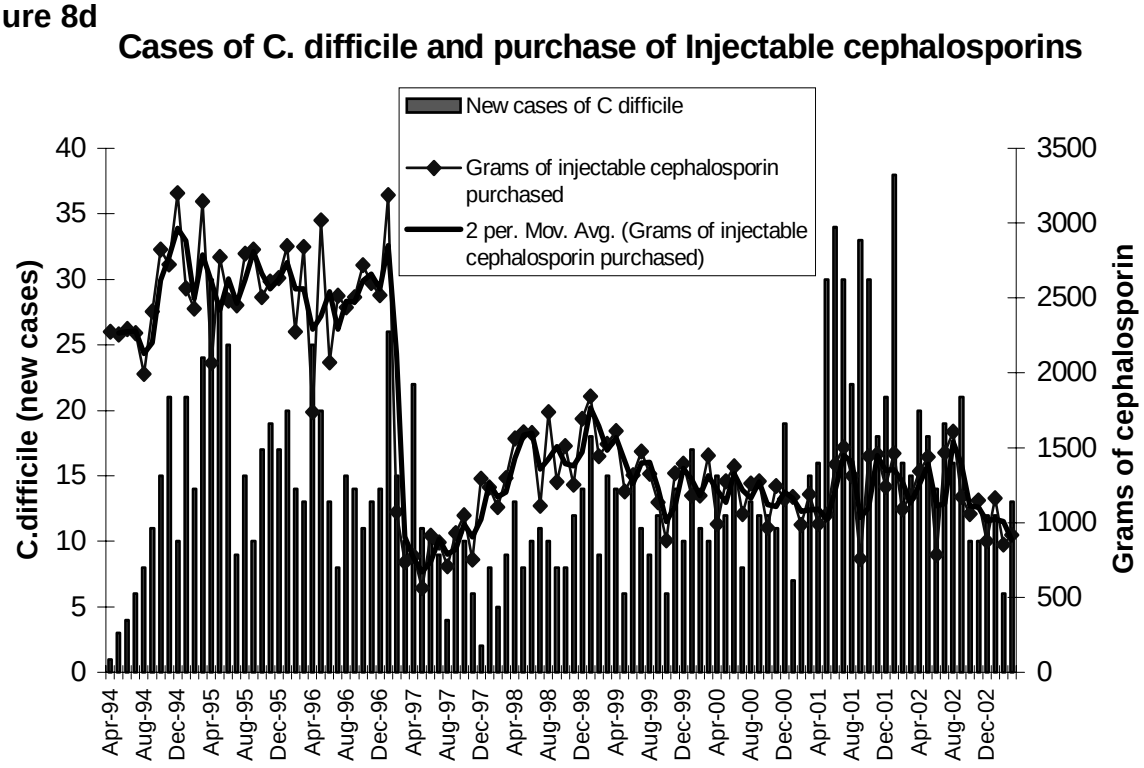
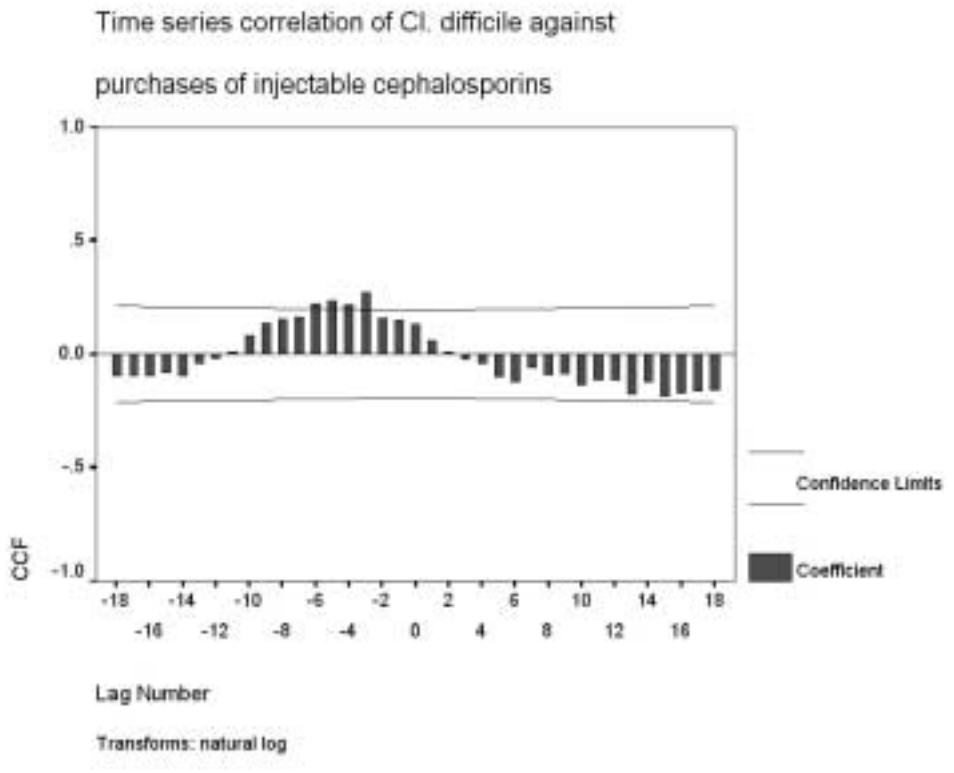


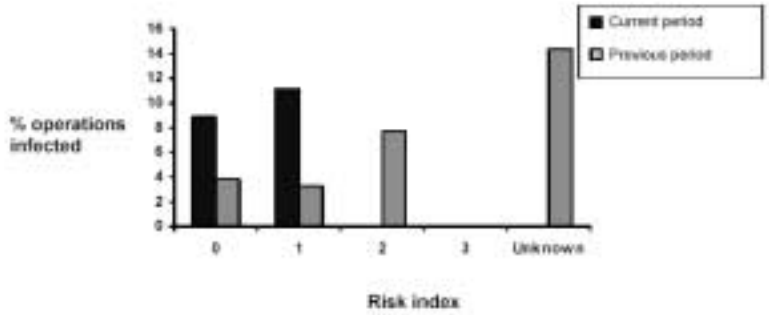
Figure 8e



National Infection Nosocomial Surveillance Scheme (NINSS)

We have participated in a number of modules of this scheme, vascular surgery, bacteraemia and orthopaedic implant surgery. These schemes are well-designed and reproducible studies but suffer significantly from being labour-intensive and not including standardised post discharge surveillance. The scheme will be replaced by a number of compulsory surveillance programmes, the first of these will be for orthopaedic implant surgery. Although pilot studies have been completed, the exact nature of the scheme has not been revealed. The current scheme relies upon the infection control team to act as surveyors, replacement schemes would expect greater ownership from the surgical team.

Figure 9a Your results stratified by risk index for the current period compared with previous periods



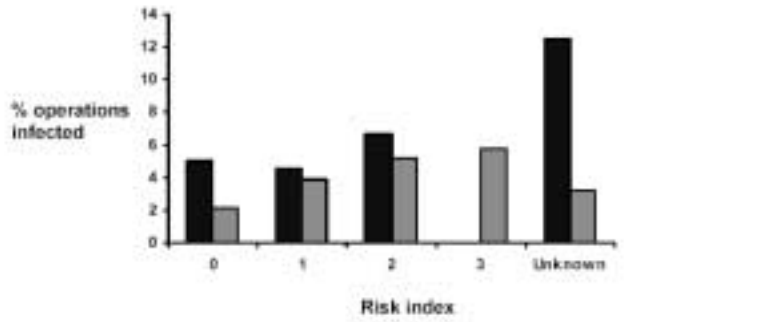
Risk index	Current period: No. operations	Current period: No. SSIs	Current period: % infected	Previous periods*: No. operations	Previous periods*: No. SSIs	Previous periods*: % infected
0	34	3	8.8	106	4	3.8
1	18	2	11.1	91	3	3.3
2	2	0	0.0	13	1	7.7
3	0	0	-	0	0	-
Unknown	1	0	0.0	7	1	14.3
Total	**55**	**5**	**9.1**	**217**	**9**	**4.1**

*This includes any previous surveillance periods carried out at your hospital between 01/10/1997 and 30/09/2002

The following tables are extracted from the most recent report received from the Health Protection Agency. The last quarter which is presented as the "current period", is from October to December 2002. These tables only show data for hip replacements. The periods surveyed previously are the fourth quarter 2000; first, second and fourth quarter 2001 & 2002.

Figure 9a shows the results of current and the previous periods listed above for surveillance of hip implants. Figure 9b gives the combined results of the periods with the national comparator data. It can be seen that our rate of infection exceeds the national norm. Unfortunately the national comparator data only looks at infections developing before discharge. In implant surgery a more significant observation period would be one to five years. We have looked at our data for 30 days post surgery but do not have national comparisons to draw upon. The figure for infections in all periods surveyed, up to 30 days postoperatively was, 23 out of 272 cases (8.5%) (Table 4b). It was also apparent that we were outliers with regard to pre-operative stay. Ideally patients should be admitted on the day of, or the day before surgery. Our patients were being admitted too soon and had greater chance of acquiring hospital pathogens such as MRSA. It can be seen that 8\15 of the postoperative surgical site

Figure 9b Your combined results for current and previous surveillance periods compared with all participating hospitals, stratified by risk index



Risk index	Your hospital - current and previous periods*: No. operations	Your hospital - current and previous periods*: No. SSIs	Your hospital - current and previous periods*: % infected	All hospitals from October 1997: No. operations	All hospitals from October 1997: No. SSIs	All hospitals from October 1997: % infected
0	140	7	5.0	19903	431	2.2
1	109	5	4.6	13475	522	3.9
2	15	1	6.7	1702	88	5.2
3	0	0	-	52	3	5.8
Unknown	8	1	12.5	8279	262	3.2
Total	**272**	**14**	**5.1**	**43411**	**1306**	**3.0**

*This includes any previous surveillance periods carried out at your hospital between 01/10/1997 and 30/09/2002

Table 4a

Surgical site infection (SSI) by type of infection at your hospital

	Number of SSIs	
Type of infection	Current period	Previous periods
Superficial incisional	2	6
Deep incisional	2	2
Organ/space	1	1
Unknown	0	0
Total	**5**	**9**

Table 4b

Time of detection of surgical site infection (SSI) at your hospital

	Number of SSIs	
Detection of SSI	Current period	Previous periods
During admission	5	9
At re-admission	2	5
Other post-discharge follow-up	2	0
Total	**9**	**14**

NB. Only the infections identified during admission are included in Section 1 of this report.

Table 4c

Micro-organisms causing surgical site infection (SSI) at your hospital

	Number of isolates	
Micro-organisms	Current period	Previous periods
Coagulase-negative staphylococci	0	2
Coliforms (unspecified)	0	1
Methicillin-resistant S.aureus	3	5
Methicillin-sensitive S.aureus	1	1
Nocardia spp.	1	0
Pseudomonas aeruginosa	1	0

infections, where the organism was known, were due to MRSA (Table 4c).

Preoperative screening for MRSA with attempted eradication of patient found positive was introduced for the fourth quarter of December 2002. Table 4d shows the results of the screening programme. The protocol called for microbiological sampling of elective cases seen in the pre-assessment clinic. Only 23 of the 42 elective hips were screened preoperatively and one patient was found to be MRSA positive. In this cohort of patients, five were found to be infected pre-discharge and 9 within the first 30 days. Further work requires to be done with the surgical teams involved to improve the situation.

Table 4d

OCT- DEC 2002	HIPS	KNEES
Total	56	29
No Elective	42	29
No Emergency	14	0
Cases screened	23	25
MRSA + at screening	1	0
Infected cases	5 (9)	0 (1)

Screening of vertically transmitted diseases in pregnancy

The Whittington Hospital has undertaken screening of all pregnant women for certain microbial disease that may be transmitted during parturition and in utero. These policies were often in place before they were accepted as national standards.

Figure 10 gives the percentage of pregnant women tested at booking for HIV. There are inherent problems with testing at this time (usually about 12 weeks) in that infections may occur after this time. It is unlikely that a figure of 100% should be achieved as some women will be known to be positive before booking and there would be no sound reason to retest.

The London Regional Office of the HPA has compiled comparative data for other infections screened for as a routine in pregnancy. They are shown in Figures 11 a-d. At present there are no plans to screen for HTLV 1 (transmitted via breast milk) or Hepatitis C (vertical transmission not common).

Figure 10

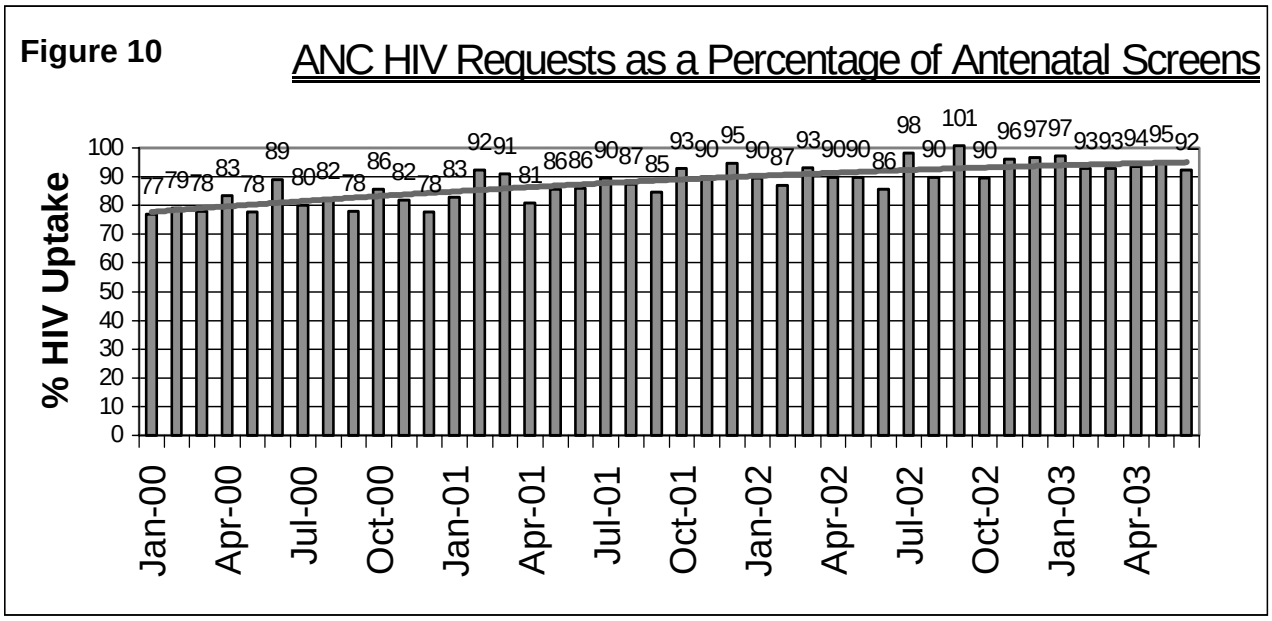


Figure 11a a: HIV prevalence (rates per 100,000 tested); Jan-Jun 2002

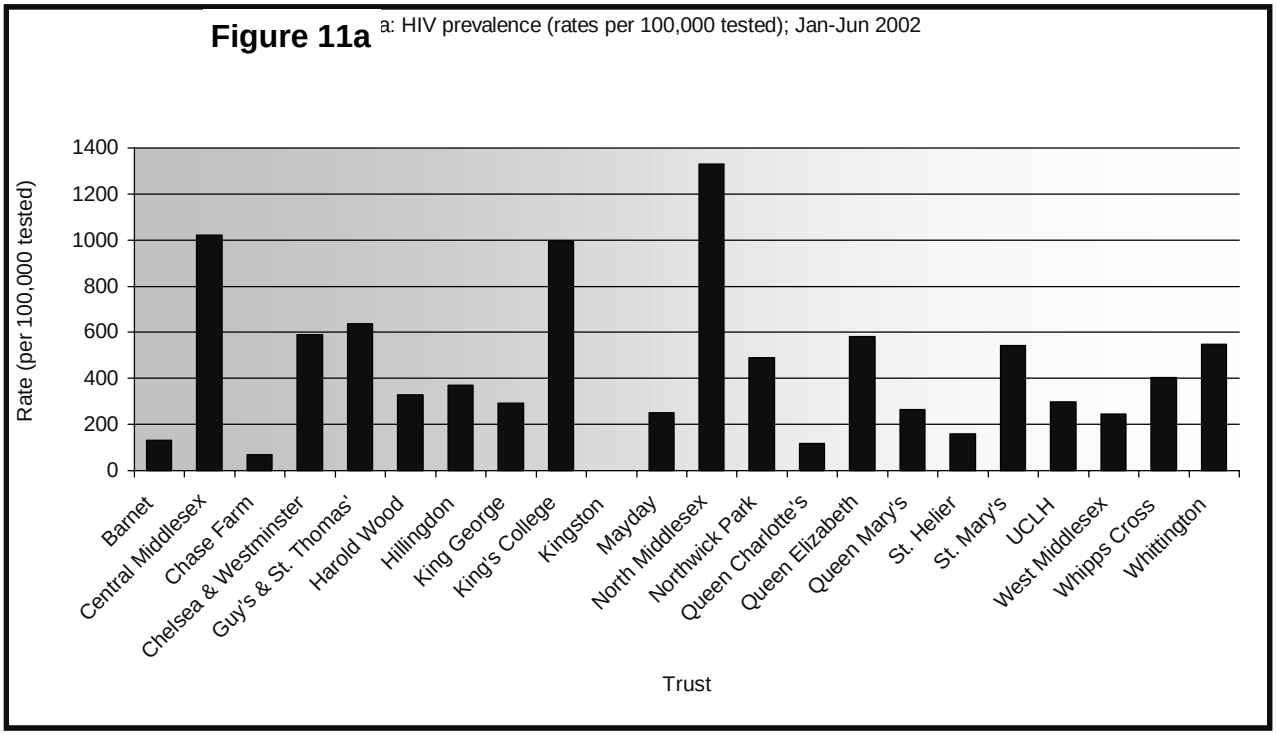


Figure 11b Hepatitis B prevalence (rates per 100,000 tested); Jan-Jun 2002

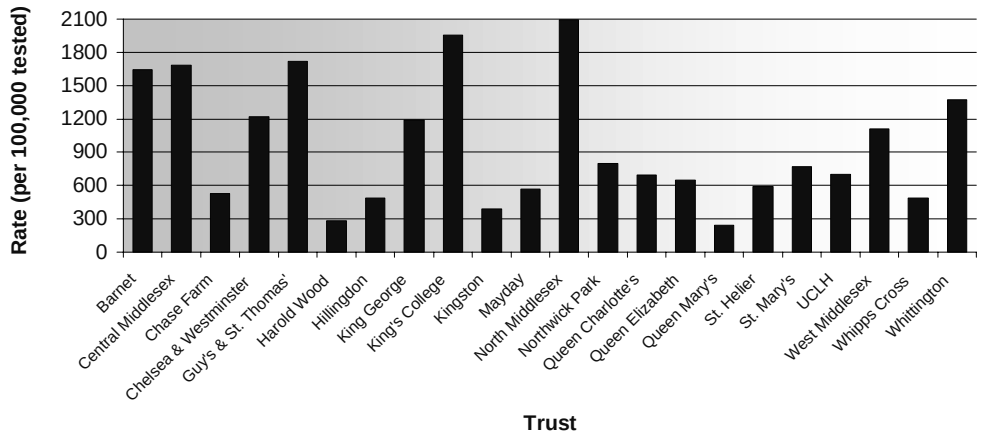


Figure 11c Syphilis prevalence (rates per 100,000 tested); Jan-Jun 2002

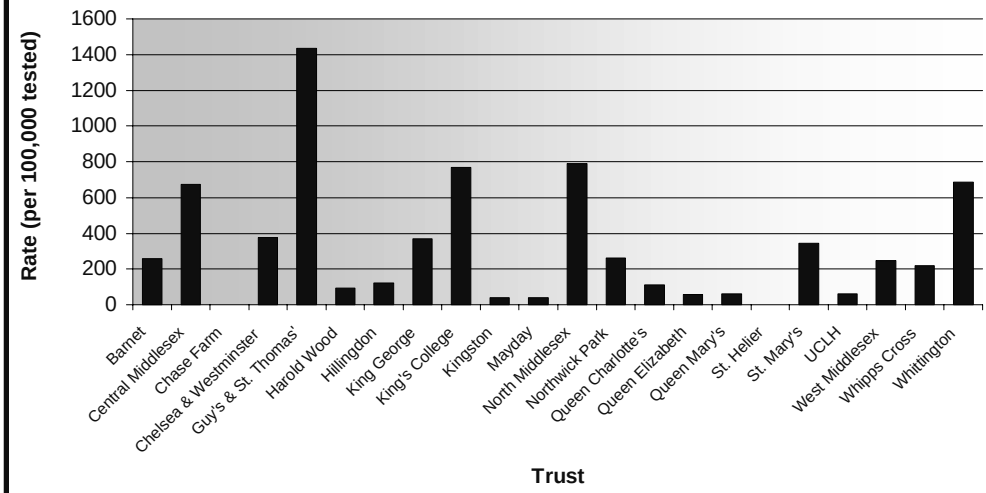
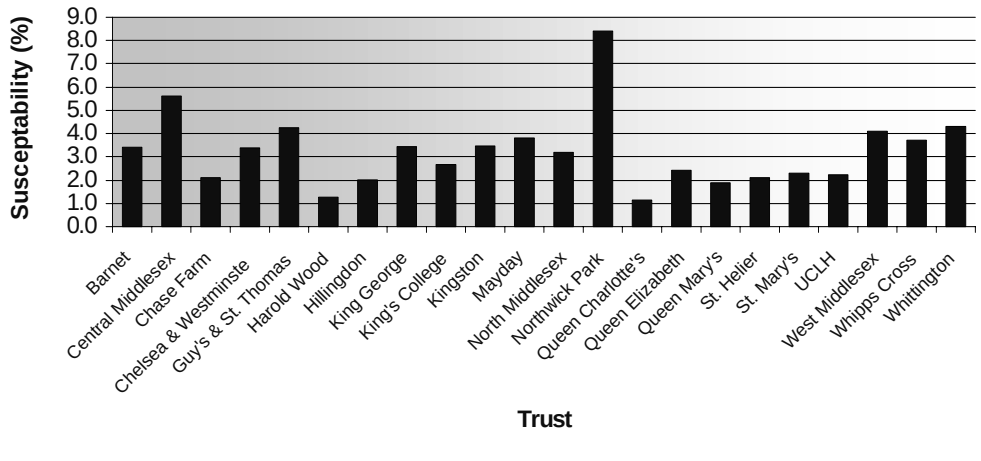


Figure 11d Rubella susceptibility (%); Jan-Jun 2002



Handwashing Audit

The following observational audit was carried out by one of the surgical house officers watching the activities of staff in one ward, in a three day period. No comment is necessary

Handwashing Audit
Victoria Ward
25th, 26th, 27th March 2003

Sarah Eisen

Grade Total n = 40		Wash before and after	No washing	Wash before, not after	Wash after, not before
Medical					
	Consultant n = 5	4	1		
	SpR n = 6	4	1		1
	SHO n = 1			1	
	PRHO n = 7	5	2		
	Student n = 7	2	2		3
Nursing	Permanent n = 5	4		1	
	Bank n = 3	2			1
	Student n = 1		1		
Physio n = 2		1			1
Other n = 3		2	1		

Summary

Group (total: n = 40)	**Washed before and after**	**Failed to wash at all**
Medical (n = 26)	**58%**	**23%**
Nursing (n = 9)	**67%**	**11%**
Other (n= 5)	**60%**	**20%**

Appendix 1

ICC Committee Member Names 2000 - 2002	3/2/00	9/28/00	12/7/00	6/29/01	9/21/01	12/7/01	3/1/02	9/13/02	12/6/02	4/17/03	7/18/03
Dr M C Kelsey	*	*	*	*	*	*	*	*	*	*	*
Caroline Mitchell (maternity leave May - Nov 02)	*	*	*	*	*	*	*		*		*
Microbiology Registrar/s	*	*	*	*	*	*	*	*		*	*
Michael Coltman (started Jun 2000 left June 2001)		*									
Gretta O'Toole (started Oct 01)							*	*	*		*
Stephanie Gardner (seconded from lab May-Nov 02)							*	*			
Marie Grant											
Deborah Wheeler					*	*			*		
Dr M Bahl - CCDC C & I		*	*		*	*				*	*
Representative for Dr Bahl				*				*	*		
Dr S Sen - CCDC - E H & B									*		
Representative for Dr Sen		*		*	*						
Sheena Fenn - Community IC Manager (left 02)				*							
R Mohammed Klein - Community ICN (left 02)				*							
Malcolm Bubb	*	*	*	*	*	*	*	*	*	*	
Dr S Smith - OHP			*	*		*		*	*	*	*
Representative for Dr S Smith - Julia McMillian		*									*
Dorothy Weeden (left)	*	*				*	*				
Representative for Dorothy Weeden				*	*						
Dr N Parker					*	*			*	*	*
Russell Emeny (left)											
Veronica Shaw (left)	*										
Steve Lennox (left)	*		*		*	*					
Mike Giblin	*		*			*	*	*	*	*	*
Alan Ryan (left)				*	*	*					
Sue Jenkins											
Nigel Schofield (left)											
Philip Ient				*	*	*				*	*
Representative for Philip Ient											
Chris Lawson (left)											
Femi Obembe	*	*									
Edward George			*								
Colan Ash	*	*					*		*		
Steve Hodgson (left)					*						
John Nuss					*			*	*	*	*
Tina Cooper											
Representative for Tina Cooper				*	*						
Fiona Elliot									*		
Mr C Spence Jones											
Prof Malone Lee											
Mrs Ingham Clarke											
Teresa McHugh also Liason for Mrs Ingham Clarke									*	*	*
Deborah Rogers											
Trevor Campbell Davies (mins only)											
Keith Ellis									*		
Ros Basri									*	*	
Steven Packer									*		
Doris Thomson - Community Lead Inf Ctrl Nurse C & I										*	*
Kath Evans (Rep for D Wheeler)										*	*

Appendix 2

Date	Area	Alert organism	Action taken	Comments
1.4.02	Ifor	Varicella	Contact screen and trace	VZIG to high risk non-immune contacts
9.4..02	Reckitt/ A&E	TB	Contact screen and trace	
12.4.02	Ifor/A&E	Bordetella pertusis	Contact screen and trace	
30.4.02	Main Thea- tres	TB	Contact screen and trace	
15.5.02	Montuschi	MDR A. baumannii	Contact screen and trace	Deep clean area
17.5.02	ITU	MDR A. baumannii	Contact screen and trace	Deep clean area
21.5.02	Antenatal Clinic	?rubella/measles	Contact screen and trace	
24.5.02	Cloudsley	VRE	Contact screen and trace	
28.4.02	Meyrick	MDR A. baumannii	Contact screen and trace	Deep clean area
13.6.02	NICU	Varicella	Contact screen and trace	pt also on labour ward & Cearns ward, VZIG to high risk non-immune contacts
21.6.02	A&E	Varicella	Contact screen and trace	
21.6.02	Meyrick	Zoster	Contact screen and trace	
21.6.02	Labour ward	Varicella	Contact screen and trace	VZIG to high risk non-immune contacts
1.7.02	Montuschi	MDR A. baumannii	Contact screen and trace	Deep clean area
1.7.02	ITU	MDR A. baumannii	Contact screen and trace	Deep clean area
22.7.02	Reckitt	Zoster	Contact screen and trace	
25.7.02	Nighten- gale	TB	Contact screen and trace	Pt also in A&E
29.7.02	NICU	Varicella	Contact screen and trace	VZIG to high risk non-immune contacts
31.7.02	NICU	MRSA	Contact screen and trace	VZIG to high risk non-immune contacts
22.7.02	Antenatal Clinic	Varicella	Contact screen and trace	VZIG to high risk non-immune contacts
23.8.02	Meyrick	MDR A. baumannii	Contact screen and trace	Deep clean area
27.8.02	Antenatal Clinic	Varicella	Contact screen and trace	pt also on Murray ward, VZIG given to high risk non-immune contacts
28.8.02	NICU	Varicella	Contact screen and trace	VZIG to high risk non-immune contacts
28.8.02	Nighten- gale	MDR A. baumannii	Contact screen and trace	
28.8.02	A&E	MDR-TB	Contact screen and trace	

Appendix 2: continued

Date	Area	Alert organism	Action taken	Comments
14.10.02	ITU	MDR A. baumannii	Contact screen and trace	
14.10.02	ITU	Varicella	Contact screen and trace	VZIG to high risk non-immune contacts
21.10.02	MAU/A&E	TB	Contact screen and trace	
23.10.02	A&E	TB	Contact screen and trace	
23.10.02	Cavell	MDR A. baumannii	Contact screen and trace	Deep clean area
29.10.02	Nightingale	Zoster	Contact screen and trace	
30.10.02	Thorogood	MRSA		in epidural tip- investigate source
1.11.02	Cavell	TB	Contact screen and trace	
4.11.02	Cearns	TB	Contact screen and trace	
4.11.02	Nightingale	MDR-TB	Contact screen and trace	
18.11.02	Reckitt	Norovirus		Outbreak precautions, ward closed
22.11.02	Meyrick	Norovirus		Outbreak precautions, ward closed
23.11.02	Montuschi	Norovirus		Outbreak precautions, ward closed
25.11.02	Coyle	TB	Contact screen and trace	
26.11.02	Cloudsley	Norovirus		Outbreak precautions, ward closed
27.11.02	Thorogood	TB	Contact screen and trace	
28.11.02	Nightingale	Norovirus		Outbreak precautions, ward closed
28.11.02	Thorogood	MDR A. baumannii	Contact screen and trace	
4.12.02	Thorogood	Norovirus		Outbreak precautions, ward closed
4.12.02	Victoria	Norovirus		Outbreak precautions, ward closed
4.12.02	Ifor	Norovirus		Outbreak precautions, ward closed
4.12.02	MAU	Norovirus		Outbreak precautions, ward closed
4.12.02	Ifor	Varicella	Contact screen and trace	VZIG to high risk non-immune contacts
20.12.02	Semple	MDR A. baumannii	Contact screen and trace	
4.01.03	Montuschi	Zoster	Contact screen and trace	
6.01.03	Reckitt	Norovirus		Outbreak precautions, ward closed
10.01.03	Thorogood	Varicella	Contact screen and trace	
17.01.03	Cavell	TB	Contact screen and trace	pt also in A&E and MAU
21.01.03	Semple	Norovirus		Outbreak precautions, ward closed
27.01.03	Montuschi	TB	Contact screen and trace	
28.01.02	Thorogood	Varicella	Contact screen and trace	
28.01.03	A&E	Zoster	Contact screen and trace	

Appendix 2: continued

Date	Area	Alert organism	Action taken	Comments
3.02.03	Cearns	TB	Contact screen and trace	
3.02.03	Reckitt	Norovirus		Outbreak precautions, ward closed
4.02.03	MAU	Norovirus		Outbreak precautions, ward closed
6.02.03	ITU	MDR A. bauman-nii	Contact screen and trace	
9.02.03	Murray	Varicella	Contact screen and trace	VZIG to high risk non-immune contacts
10.02.03	Cavell	MDR A. bauman-nii	Contact screen and trace	
19.02.03	Nightingale	MDR A. bauman-nii	Contact screen and trace	
19.02.03	ITU	MDR A. bauman-nii	Contact screen and trace	
21.02.03	Thorogood	TB	Contact screen and trace	
21.02.03	Nightingale	TB	Contact screen and trace	
25.02.03	FSA	Varicella	Contact screen and trace	
25.02.03	Nightingale	Norovirus		Outbreak precautions, ward closed
25.02.03	Ifor	Rota virus	Screen	Outbreak precautions, ward closed
03.03.03	A&E	Varicella	Contact screen and trace	
03.03.03	Antenatal Clinic	Varicella	Contact screen and trace	
06.03.03	NICU	Norovirus	Contact screen and trace	
14.03.03	IFOR	Measles	Contact screen and trace	IGm & mmr given to contacts if appropriate
18.03.03	Thorogood	Norovirus		Outbreak precautions, ward closed
23.03.03	Victoria	Norovirus		Outbreak precautions, ward closed
23.03.03	Coyle	Norovirus		Outbreak precautions, ward closed
26.03.03	JKU	Norovirus		Outbreak precautions, ward closed