



REDUCING CLOSTRIDIUM DIFFICILE

**IMPLEMENTING CHANGE IN
TWO WEEKS**

**DR YASMIN DRABU
MEDICAL DIRECTOR - BHRT**

28th November 2007



BACKGROUND

1981-2006 : North Middlesex

Consultant Microbiologist/Infection Control Officer

2000-2006 : North Middlesex

Medical Director

**March 2006 - present : Barking, Havering and
Redbridge Hospitals NHS Trust**

Medical Director

Director of Infection Prevention and Control



BARKING, HAVERING AND REDBRIDGE HOSPITALS NHS TRUST

- **4 Hospital sites until December 2006**
 - **King George**
 - **Barking**
 - **Harold Wood**
 - **Oldchurch**
- **Inter hospital transfers of patients.**
- **3 Hospital sites December 2006 - present**
 - **King George**
 - **Barking**
 - **Queen's**



BARKING, HAVERING AND REDBRIDGE HOSPITALS NHS TRUST

Population Base:	750,000 – 1 million
Workforce:	5,500
ONEL Cancer:	50%
Radiotherapy and Neurosciences	
Maternity:	10,000 births
2 major A&Es	250,000
Financially Challenged:	
Clinically Challenged	



THE INFECTION PREVENTION TEAM

- **Lindsey Bain, ICD from 1st July 2005**
- **Portia Omo-Bare, GM from June 2006**
- **Sheila O'Mahony, Head of Infection Prevention**
- **Corrine Cameron-Watson, Senior IPN**
- **Mercia Williams, Practice Facilitator**
- **Les Bailes-Barrett, IPN**
- **Juliet Burr, IPN**
- **Sheila Gogah, IPN**
- **Tony Moody, IPN**
- **Robot**
- **Infection Control Passport Holders**



THE TEAM





THE TEAM



THE TALKING KONE

**WASH YOUR
HANDS!**





ACKNOWLEDGEMENT AND THANKS

- **BHR Infection Control Team**
- **BHR Microbiology Staff**
- **BHR Pharmacy Staff**
- **BHR Ward Managers**
- **BHR Clinical Champions**
- **BHR Clinical and Management Teams**
- **Sodexo and Initial (Domestic Services)**
- **HPU and HPA Colleagues**
- **Patients, relatives and the public**



SPRING 2005

- **OLDCHURCH AND HAROLD WOOD**

**Increasing number of severe cases
across all areas.**

Protracted and relapsing cases

14 Isolates: 11 Type 027

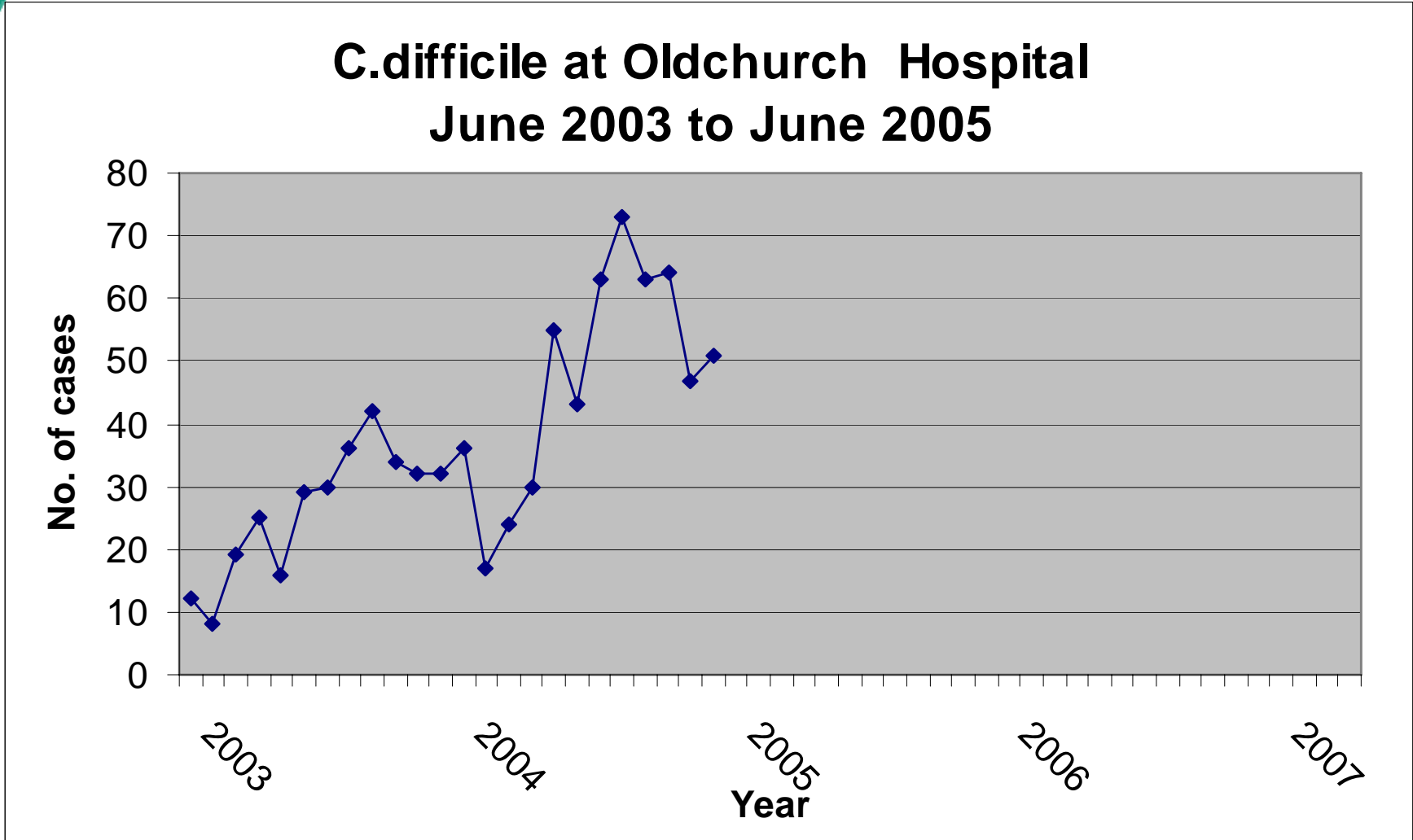
- **KING GEORGE AND BARKING**

No change to usual pattern of infection

4 Isolates: all Type 106



C.difficile at Oldchurch Hospital June 2003 to June 2005





JUNE 2005 – 3RD TRUST 027

Oldchurch Hospital – third in the country to be hit by Clostridium Difficile

SUPERBUG CLAIMS FIRST VICTIM

EXCLUSIVE
NEW superbug Clostridium Difficile has killed one patient and infected nine others in Oldchurch Hospital.

The revelation has brought a family claim that their father also died in the hospital from the same infection.
● For James Colasanti's story see pages 6 and 7.



JUNE 2005 VISIT FROM PROFESSOR DUERDEN

CONTROL MEASURES ADVISED:

- **Isolation Ward**
- **Promotion of Hand Washing**
- **Enhanced Cleaning**
- **Review Antibiotic Policy**
- **Review Treatment Pathway of affected patients**
- **Ongoing Surveillance**



MAJOR OUTBREAK PLAN FOR COMMUNICABLE DISEASE CONTROL

**Recognition of an outbreak/defining a
major outbreak = ICD**

- **Responsibility for convening and
Chairing an Outbreak Control Group =
ICD or Consultant in Public Health**



REQUIREMENTS FOR ISOLATION

REQUESTED

- 20 beds
- Single rooms
- Single medical team
- Additional staff
 - 2.5 wte nursing
 - 8.5 wte HCA
 - 2.0 wte domestic
 - 1.0 wte physio & OT

ACTUAL

- 14 beds
- No side rooms
- Admitting team
- Permanent, bank and agency staff



WARD REQUIREMENTS

REQUESTED

ACTUAL

Individual commodes

share

Extra curtains

yes

5 hand wash basins

3

Glove and apron holders

yes

Special signage

usual



COST OF OPENING AN ISOLATION WARD

- **Estimated additional cost of ward** **£440,000 per year**
- **Actual (first six months)** **£360,000 per year**
- **Estimated cost reproviding discharge facility** **£166,000 per year**
- **Actual (loss of facility)** **£13,000 per year**
- **Total actual additional cost** **£373,000 per year**



SPECIFIC PROTOCOLS DEVELOPED

- **Admission**
- **Discharge**
- **Cleaning**
- **Treatment**
- **Patient and relative information**
- **Protective Clothing**
- **Waste Disposal**
- **Laundry**
- **Admission Information**
- **Daily Summary Sheets**



TREATMENT PATHWAY

- **MILD TO MODERATE DISEASE**
 - **Oral Metronidazole 7-10 days**
- **FAILURE TO RESPOND TO METRONIDAZOLE**
 - **Oral Vancomycin**
- **SEVERE DISEASE AT ONSET**
 - **Oral Vancomycin**
- **NIL BY MOUTH**
 - **IV Metronidazole +/- IV Vancomycin**



TREATMENT PATHWAY

- **Fluid and Electrolyte Replacement**
- **Stop Antibiotics**
- **Review Immunosuppressive drugs**
- **Review Proton Pump Inhibitors**
- **Avoid Anti-peristaltic drugs**
- **Encourage normal diet**
- **Stop laxatives!**



SPECIAL CLEANING SCHEDULES

- **Clean bed space when patient transferred to Isolation Ward.**
- **‘BLITZ’ clean whole ward if two or more patients in one week or three in 3 weeks.**
- **Actichlor Plus for ‘Top 10’ wards.**



CONTROL MEASURES

SICP

Hand Hygiene

Cleaning (Actichlor Plus)

ICT review daily and medics

Commodes!!

Single use





PROBLEMS

- **Staffing**
- **Continuity of Medical Care**
- **Discharging Patients**
- **Conflict with 4 hour A&E wait**
- **Infection Control nurse time**
- **Less time for patients on other wards**
- **Insufficient beds**



ASSOCIATED PROBLEMS

- **SUB-OPTIMAL MANAGEMENT WHEN NOT UNDER CARE OF A DEDICATED TEAM.**
 - **Treatment Pathway**
 - **Clinical Lead identified for all Hospitals**
- **RELAPSES/RE-INFECTION, PERSISTENT INFECTION.**
 - **15% of 'New Cases'**
 - **Requirement for 3rd line Therapies**

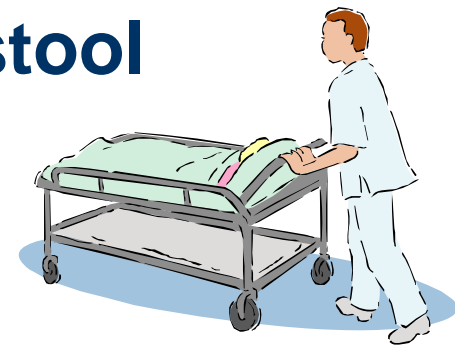


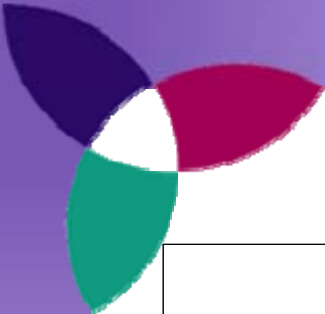
STAFF MORALE ON ISOLATION WARD

- **Infection Control Nurse support**
- **Consultant Gastroenterologist review**
- **Consultant Microbiologist review**
- **Feedback on New Cases**
- **Education Programme**
- **“Infection Control Passport”**

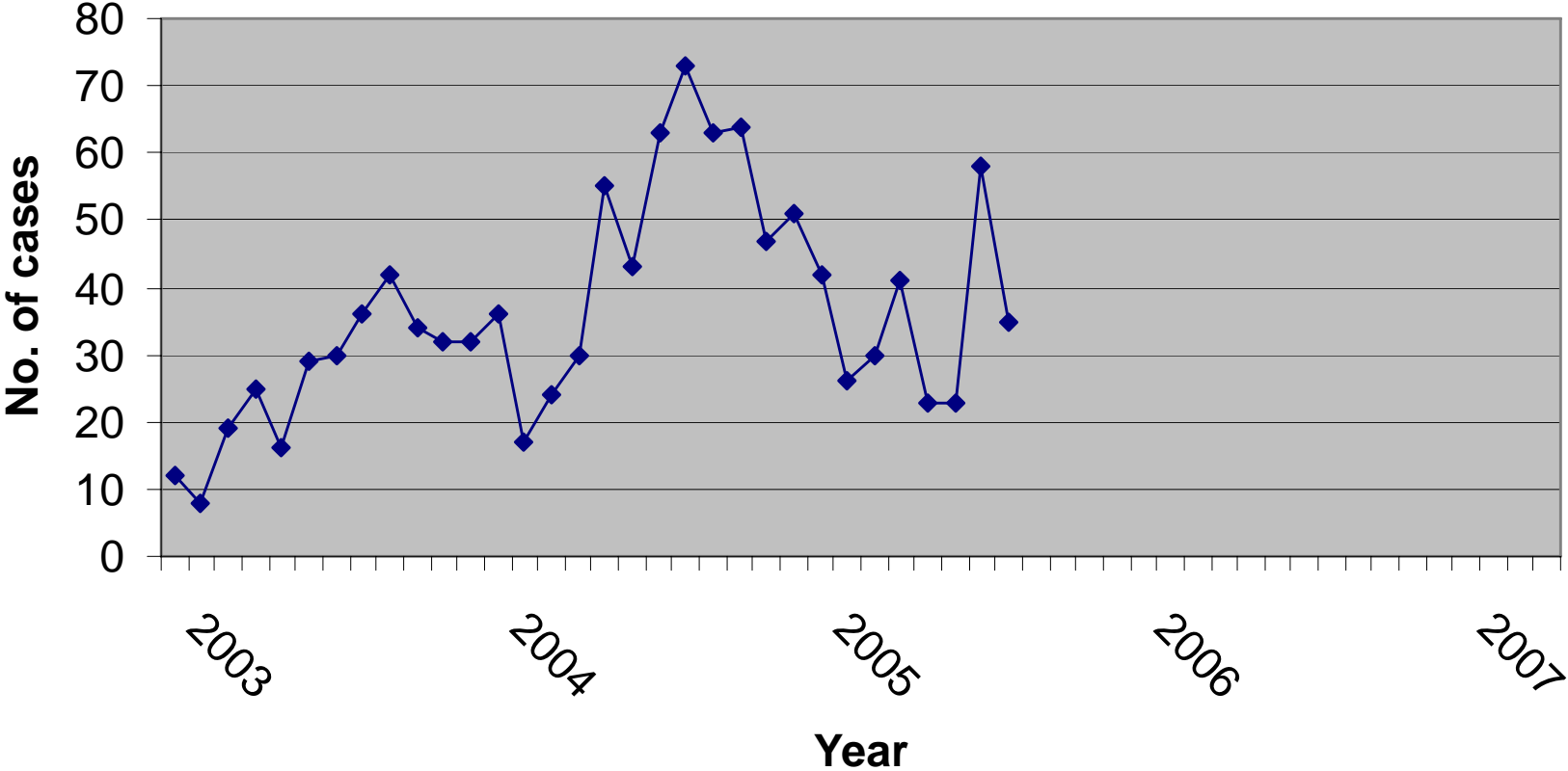
TRANSFER CRITERIA FROM A2

- **Minimum 48 hours asymptomatic (no diarrhoea)**
- **Return to patients previous normal bowel motions**
- **Bristol Stool Chart Type 1-4**
- **Stoma patients - different assessment**
- **No testing for C.diff negative stool**
- **Transfer to other ward/home**





C.difficile at Oldchurch Hospital June 2003 to February 2006





FEBRUARY 2006 REVIEW

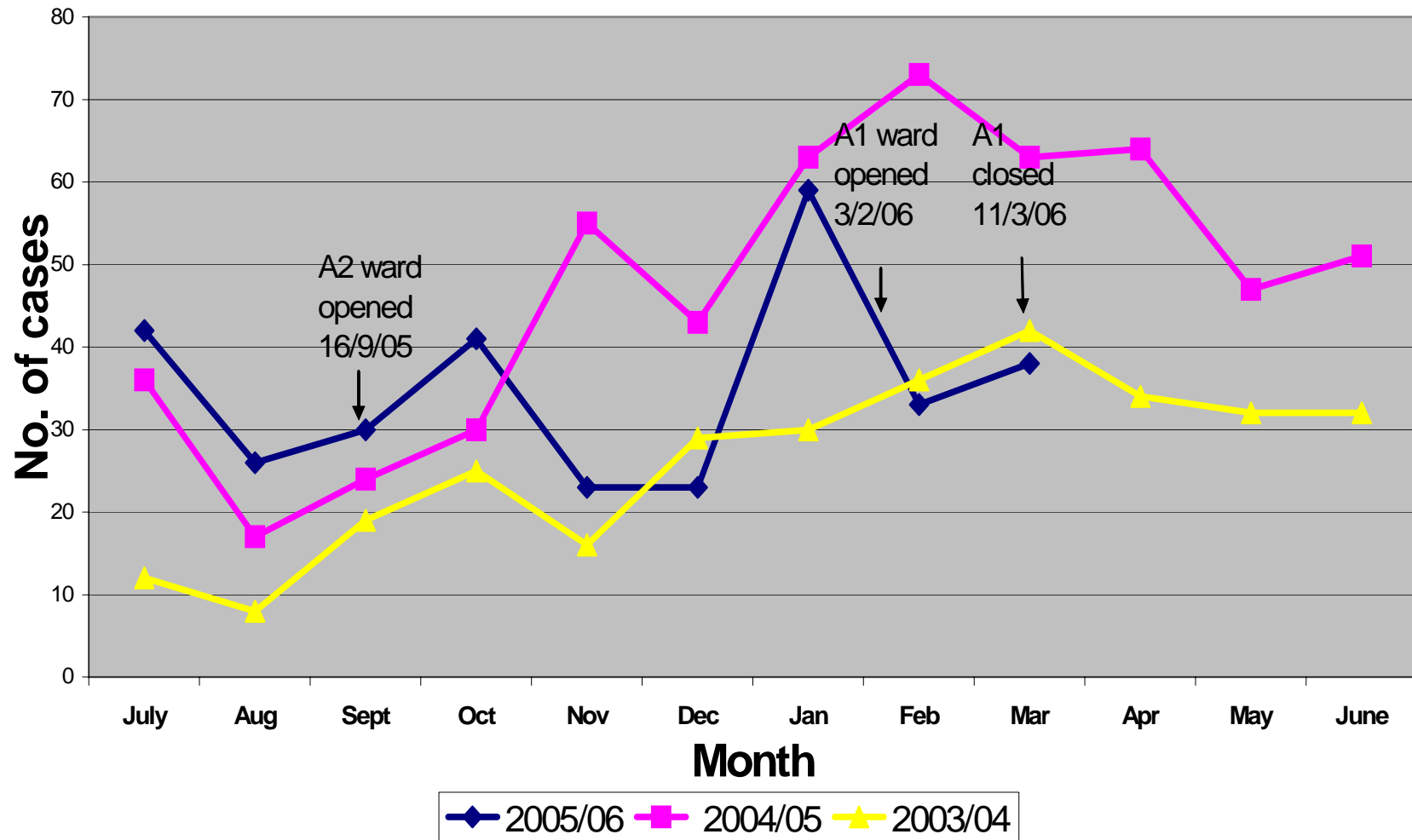
- **NUMBER OF CASES EXCEEDED CAPACITY OF WARD**
 - **Delayed transfer**
 - **Patients in side rooms**
 - **Patients on open wards**
 - **Rapid rise across whole hospital**
 - **Outbreak on Acute Medical Ward - closed**
- **CHANGE OF CLEANING MANAGEMENT**
- **BI-WEEKLY REVIEW**



RECOMMENDATIONS

- **Open second Isolation Ward**
- **Weekly review of cases**
- **Protocol for ordering cleans**
- **Review and clarification of cleaning**
- **Regular notification to ICT**

C.difficile at Oldchurch from July 2003 to March 2006



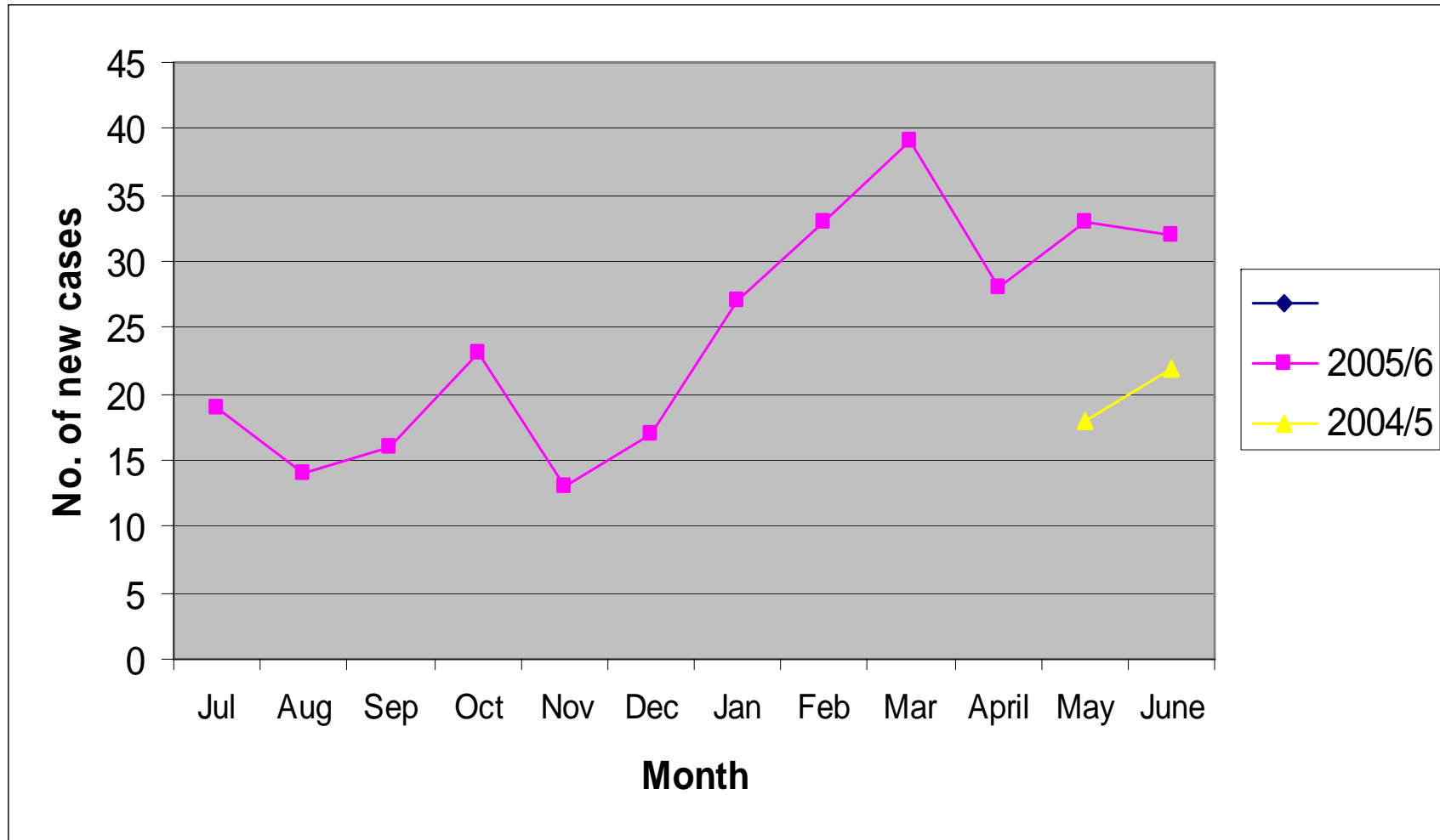


C.DIFFICILE AT KING GEORGE'S FROM MAY 2005 TO JULY 2006

- **Steady increase in cases from January 2006**
- **027 Strain identified in KGH patients**
- **Failed in attempt to control by enforcing use of side rooms and environmental cleaning**



C.DIFFICILE AT KING GEORGE'S FROM MAY 2005 TO JULY 2006





MAJOR INCIDENT : DEFINITION

- **Any event whose impact cannot be handled within routine service arrangements.**
- **It requires implementation of special procedures by one or more emergency services, the NHS or local authority to respond to it.**



MAJOR INCIDENT : DEFINITION

- **BIG BANG** - Serious acute incident, eg accident, explosion.
- **RISING TIDE** - a developing Infectious Disease epidemic or a capacity/staffing crisis.
- **CLOUD ON THE HORIZON** - serious threat eg major chemical/nuclear release needing preparatory action.
- **HEADLINE NEWS** - public or media alarm about a personal threat.



CL DIFFICLE OUTBREAK IS A RISING TIDE MAJOR INCIDENT

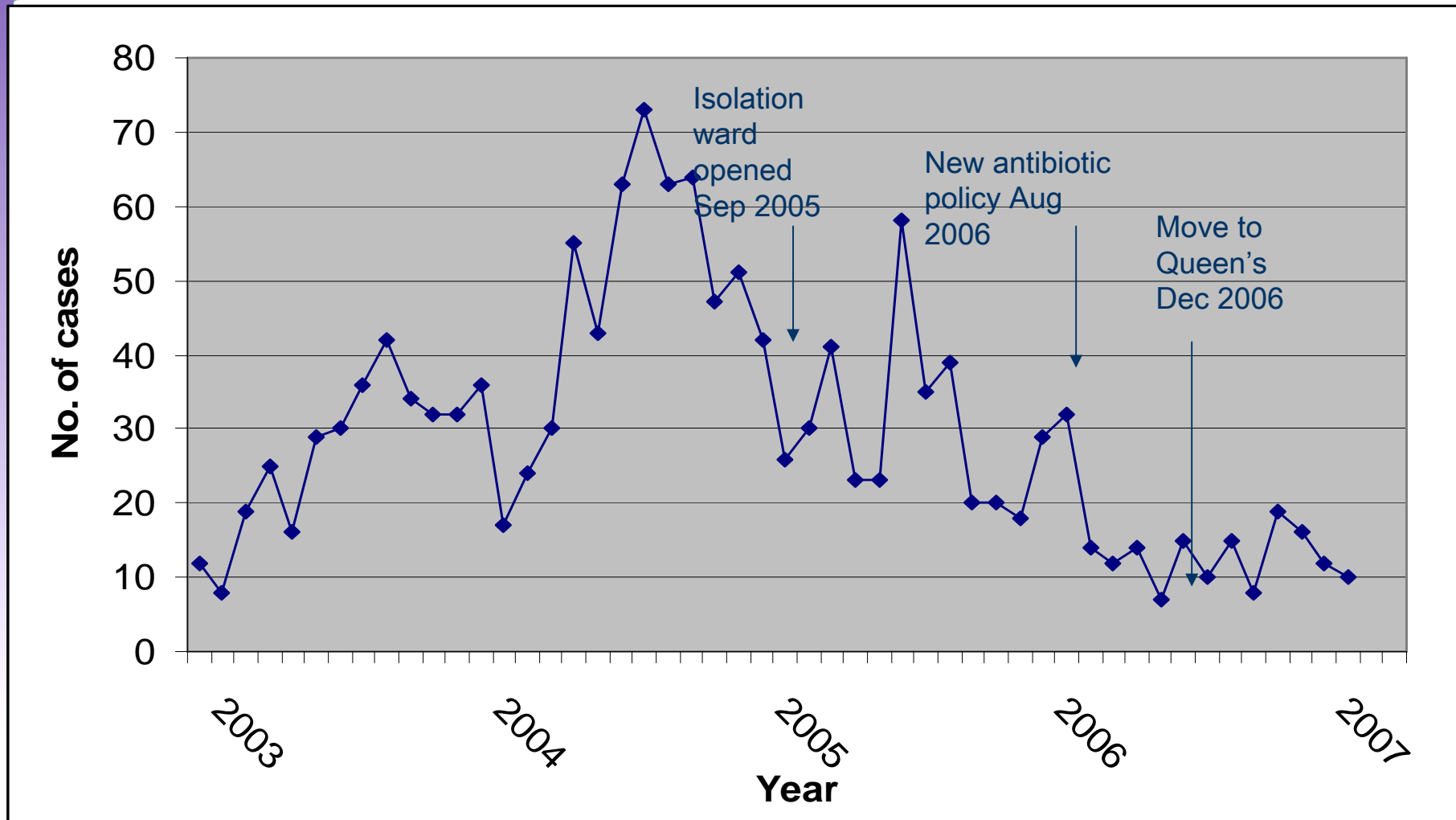
- **CI Difficile outbreak is a Major Incident.**
- **Major Incidents need Command and Control to be put in place.**
- **You cannot manage a major outbreak with business as usual.**
- **Business as usual has to stop to put in measures to control a major outbreak.**



BARKING HAVERING AND REDBRIDGE HOSPITALS NHS TRUST : JUNE 2006

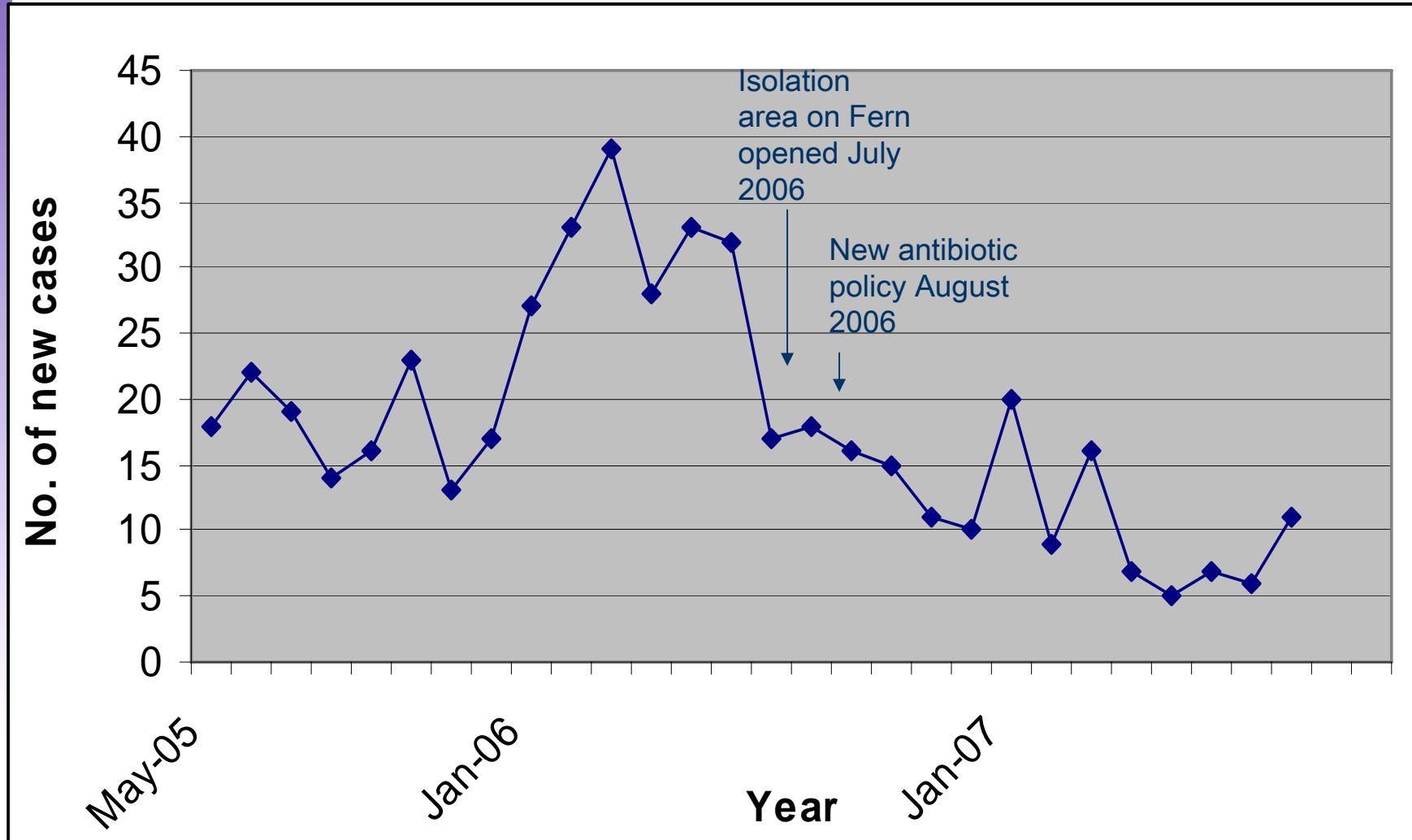
- **Set up a Command and Control structure**
- **Antibiotic Policy reviewed : one week**
- **Implementation of changed policy : two weeks**
- **Designated isolation areas in each hospital with allocated Clinical Leads : two weeks**
- **Agreed target for each main hospital of 10 cases per month by December 2006**
- **Weekly monitoring and reporting of cases to MD/DIPC**

C.DIFFICILE AT OLDCHURCH AND QUEEN'S HOSPITALS - JULY 2003 TO AUGUST 2007



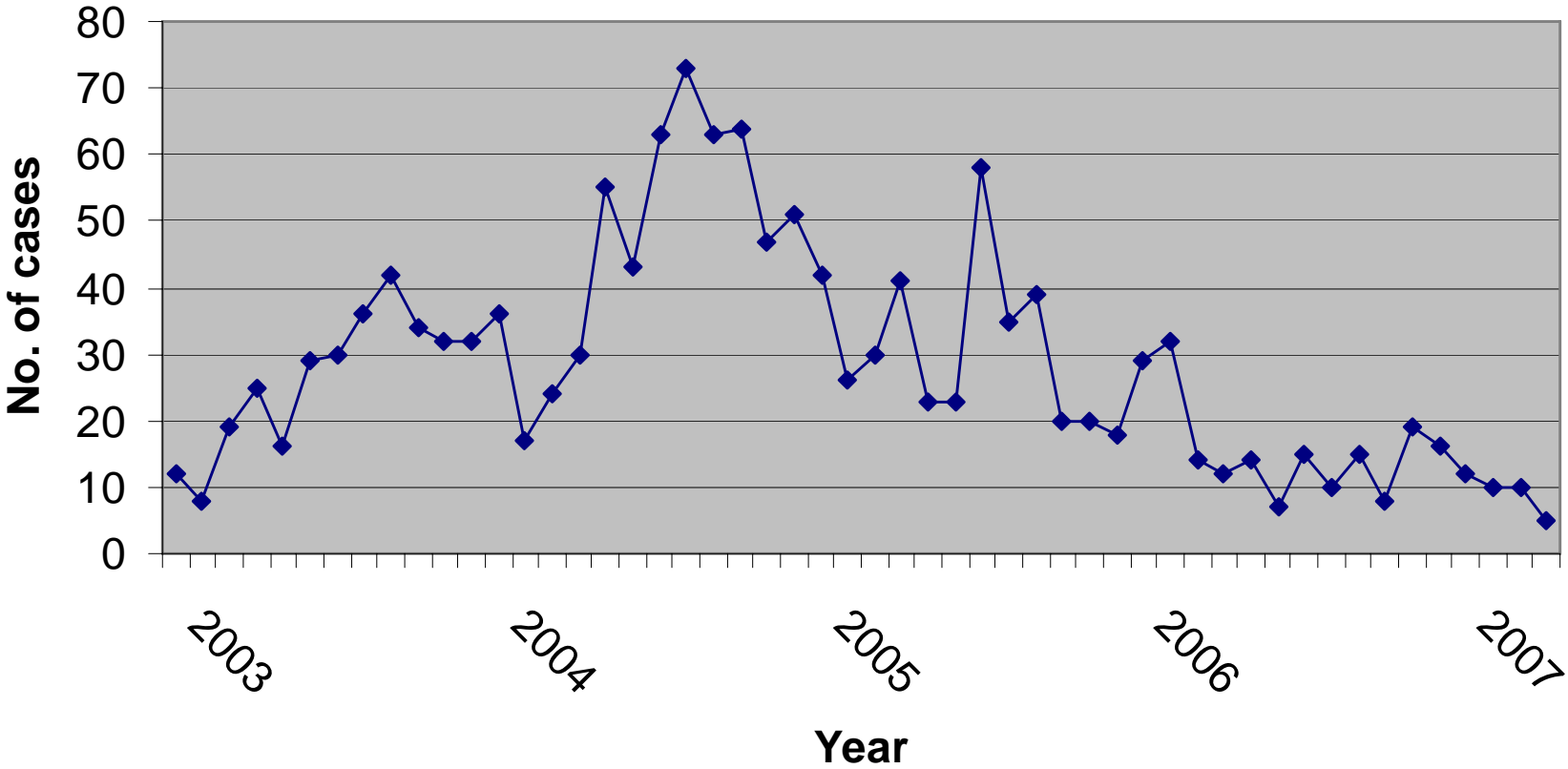


C.DIFFICILE AT KING GEORGE AND BARKING HOSPITALS - MAY 2005 TO AUGUST 2007



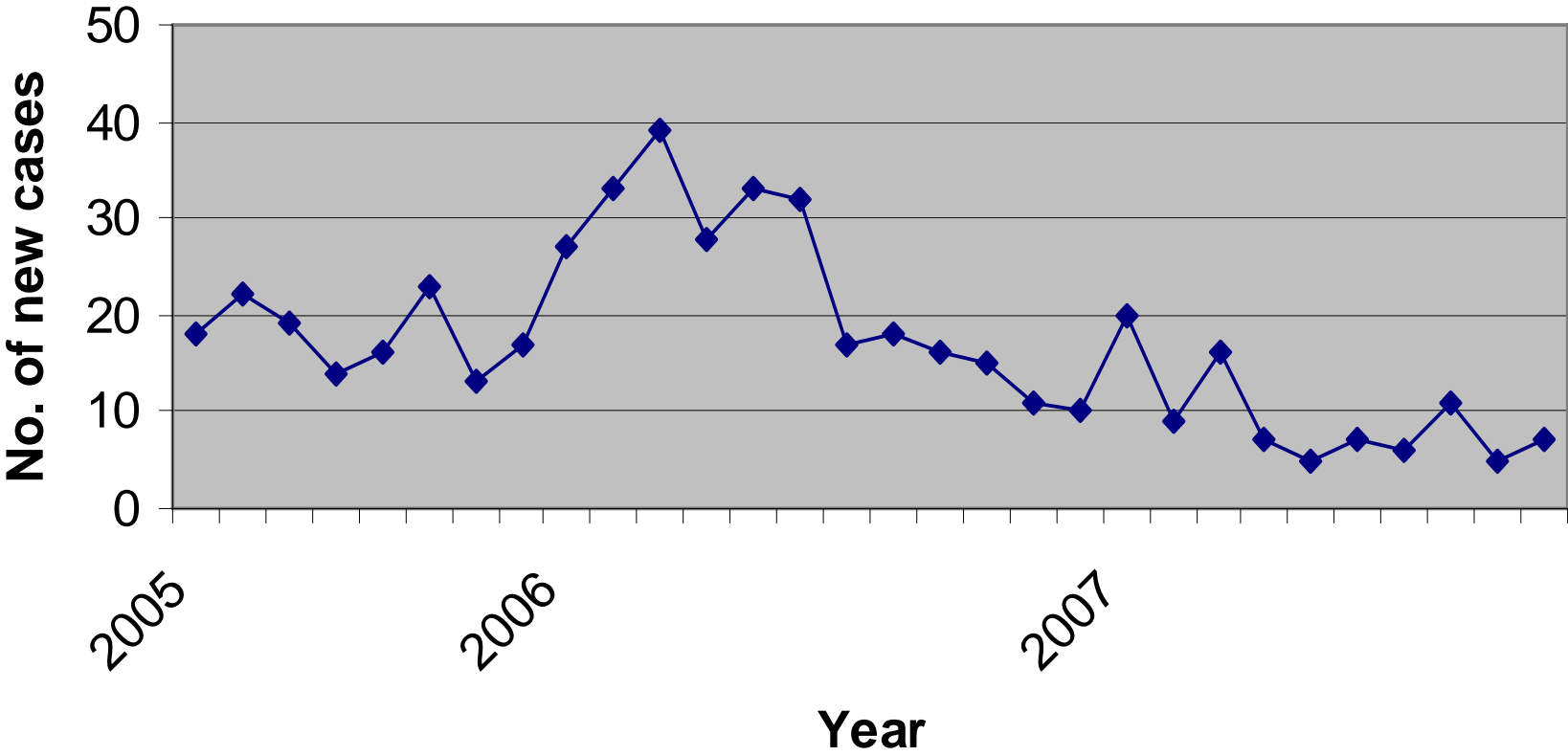


C.difficile at Oldchurch and Queen's Hospitals June 2003 to October 2007





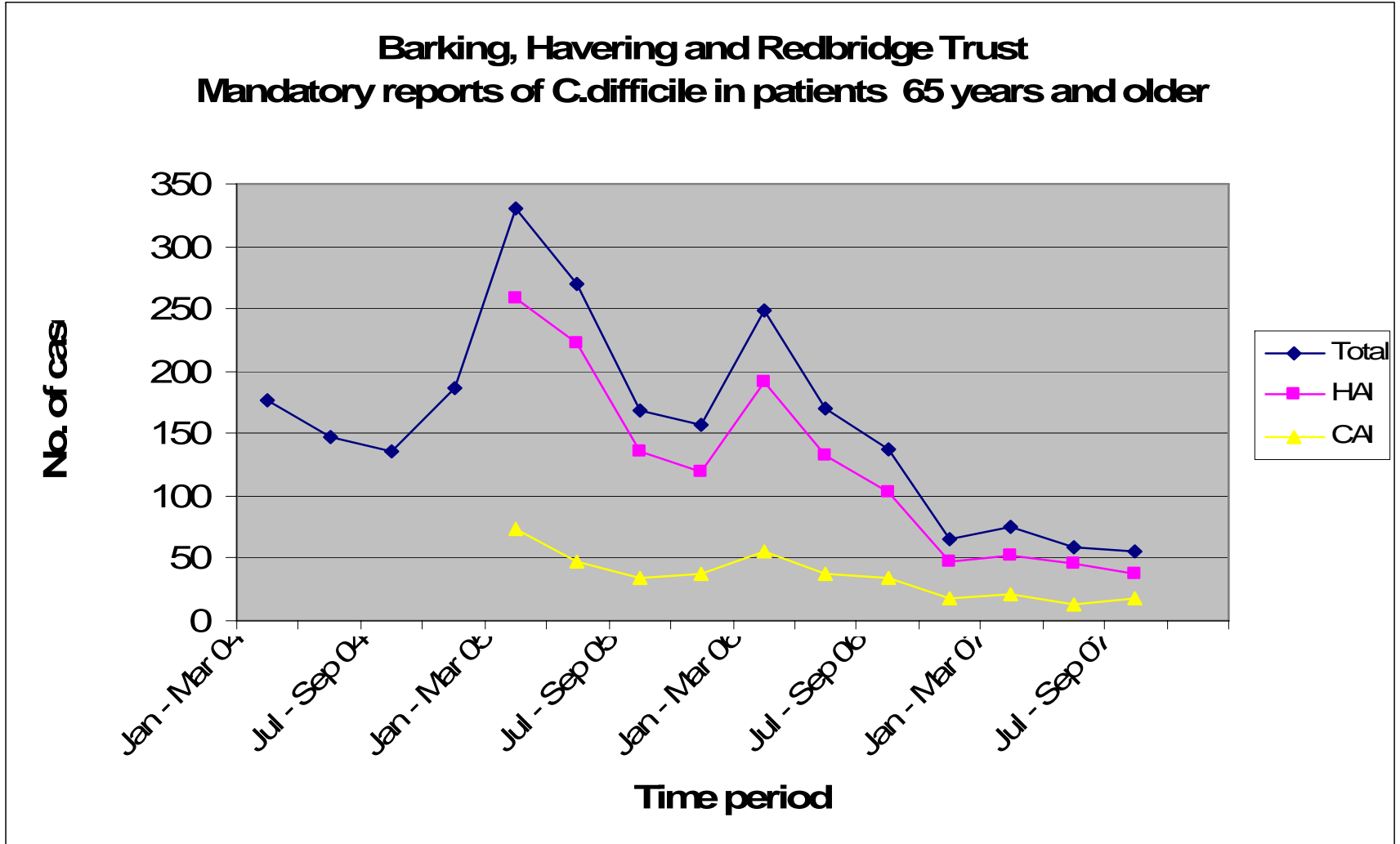
C.difficile at King George's and Barking Hospitals May 2005 to October 2007





BARKING, HAVERING AND REDBRIDGE HOSPITALS NHS TRUST : JANUARY 2004 – SEPTEMBER 2007

Barking, Havering and Redbridge Trust
Mandatory reports of C.difficile in patients 65 years and older





LESSONS FROM HISTORY

“DEATH PROBES MAY REVEAL NHS FLAWS” 1985 STANLEY ROYD

- **19 old people died from an acute salmonella outbreak in hospital.**
- **Role of Health Authority.**
- **Role of Hospital Managers.**
- **Role of Specialist Support.**
- **Role of Environmental Health Inspectorate.**



THE SUNDAY TIMES: BRIAN DEER 24TH FEBRUARY 1985

- **STANLEY ROYD INQUIRY WOULD BE TO PREVENT A SIMILAR OCCURRENCE ELSEWHERE.**

“There have been few more powerful examples of why the Government is right to introduce a new tier of General Managers into the Health Service who can take command and be brought to account.”



STANLEY ROYD : BRIAN DEER THE TIMES 1985

NORMAN FOWLER - Social Services Secretary has nothing to lose and everything to gain from a hard hitting attack on the Hospital and preventing a repetition at little cost to the Government.”

CONFEDERATION OF HEALTH SERVICES EMPLOYEES - Nursing shortages were an important factor in the difficulties of the staff in containing the outbreak.”



STANLEY ROYD RECOMMENDATIONS 1986

- **All Health Authorities to learn from the incident**
- **Prepare adequate plans for dealing with future outbreaks**
- **Proper Outbreak Control procedures supported by professional experts**



20 YEARS LATER



STOKE MANDEVILLE HCC JULY 2006

- **30 people died**
- **Outbreak recognised 2003-2004**
- **“Infection Control Team asked for a dedicated area in which to care for patients with CI difficle but none was available”**
- **Second outbreak in October 2004 - June 2005**
- **“Same unusual strain as first outbreak”**



STOKE MANDEVILLE HCC JULY 2006

- **“The Director of Infection Prevention and Control had not persuaded the Board to give sufficient priority to control of infection in general and to the control of CI difficile in particular”.**



A YEAR LATER



HCC REPORT OF MAIDSTONE AND TUNBRIDGE WELLS 2007

- **90 patients died**
- **Two outbreaks : one undetected and one uncontrolled**
- **“The Director of Infection Control and Prevention had insufficient understanding of the role”**



BUT EVERYONE IS AN INFECTION CONTROL EXPERT!

- **THE SUN**
- **ALAN JOHNSON**
- **PROFESSOR DARZI**
- **EVEN MELANIE FROM WATFORD!**

MELANIE'S VIEWS – The Sun, March 2004



“ People need to feel safe in hospital. There’s a growing feeling hygiene standards on the wards are not as high as they were a generation ago. With all the money thrown at the NHS recently it’s startling to see a killer bug spread so rapidly.”



HCC : ANNA WALKER MAIDSTONE REPORT 2007

- **“Infection Control is complex. Cleanliness is an important part but there are other relevant factors such as appropriate use of antibiotics, availability of isolation facilities, regular training of staff, adequate levels of staff and high standards of care”.**
- **“One thing this report highlights again is the importance of leadership”**



COMMON THEMES

- **RECOGNITION OF AN OUTBREAK**
- **HOW TO CONTROL AN OUTBREAK**
- **AUTHORITY TO IMPLEMENT ACTIONS TO CONTROL AN OUTBREAK**



COMMON THEMES

- **RECOGNITION OF, AND HOW TO CONTROL AN OUTBREAK**
 - Lies in the hands of the Professionals
- **AUTHORITY TO IMPLEMENT ACTIONS TO CONTROL AN OUTBREAK**
 - Lies in the hands of Management NOT the Professionals



PERSON SPECIFICATION

- **Strategic thinking and decision making**
- **Leadership**
- **Planning and Delivery**
- **Resource Management**
- **Change Management**
- **Drive for Results**
- **Team Working and Communications**
- **Managing Relationships**
- **Corporate Commitment**
- **Holding to account**



CL DIFFICLE RATE/1000 BED DAYS

Trust	2004	2005	2006	Beds
BHRT	2.10	3.01	2.02	307,000
Maidstone	3.27	3.14	3.69	147,000
Bucks	2.09	2.35	1.42	146,000
Barnsley	1.73	2.35	4.81	82,000
Bedford	2.36	1.97	4.01	91,000
Burton	1.55	3.12	3.62	90,000
George Elliott	4.17	4.94	4.47	81,000

CL DIFFICLE RATES/1000 BED DAYS

Trust	2004	2005	2006	Beds
Good Hope	1.18	1.09	3.52	125,000
Hereford	1.29	4.20	5.22	43,000
Homerton	0.78	2.39	3.05	64,000
Kettering	3.94	5.25	6.78	94,000
Mid Staff	5.07	4.61	5.18	157,000
U of Leic	1.91	3.46	5.06	380,000
Weston	1.96	2.93	4.15	82,000



TAKE HOME MESSAGES

- **DIPC : Do you have the authority or ability to close wards or open wards for isolation?**
- **If you don't – you cannot do the job. Resign immediately.**
- **CE : How many times have you closed a ward to admission in your hospital?**
- **If you have not closed at least one ward a year – then you don't have the ability to recognise or deal with an outbreak.**
- **Urgent review of our procedures to control major outbreaks to make them in line with major incident procedures.**



TAKE HOME MESSAGES

**URGENT REVIEW OF OUR PROCEDURES
TO CONTROL MAJOR OUTBREAKS TO
MAKE THEM IN LINE WITH OUR MAJOR
INCIDENT PROCEDURES**



FINALLY

As a Clinical Microbiologist and Infection Control Officer and as a Medical Manager:

- **My sincere condolences and apologies to all those who have lost loved ones with this infection**
- **My support to all those staff in the NHS who tried their best to manage under impossible conditions**