The antimicrobial management team or stewardship team

Nick Brown
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Cambridge Biomedical Campus

Addenbrooke’s Hospital, Cambridge University Hospitals NHS Trust
1,100 beds tertiary referral and teaching hospital
Whipsnade zoo keeper is seriously injured in Addenbrooke's, Cambridge, after being trampled by a rhino

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A rhino at Whipsnade zoo
‘It is not difficult to make microbes resistant to penicillin in the Laboratory...and the same thing has occasionally happened in the body.

The time may come when penicillin can be bought by anyone in the shops. Then there is the danger that the ignorant man may easily underdose himself and by exposing his microbes to non-lethal quantities of the drug make them resistant.’

Alexander Fleming
Nobel Lecture, 11 December 1945
‘This enquiry has been an alarming experience, which leaves us convinced that resistance to antibiotics and other anti-infective agents constitutes a major threat to public health, and ought to be recognised as such more widely than it is at present.’

Lord Soulsby of Swaffham Prior
Chairman
17 March 1998
'There now, it’s not as bad as all that, is it'
Hospital superbug must be halved

Bloodstream infections with the hospital superbug MRSA must be halved in three years, the government has said.

Health Secretary John Reid tasked NHS hospitals with achieving a year on year reduction up to and beyond March 2008.

But official rates show year on year increases in England since measurement began in 2001.

Critics said more resources would be needed to meet the ambitious target.

The National Audit Office estimates infections such as MRSA (methicillin resistant Staphylococcus aureus) kill 5,000 people each year.

“To meet these expectations there will be a need to increase resources.”

Jean Lawrence of the Infection Control Nurses Association
Health chief is Dr Do Little

By GEORGE PASCOE-WATSON
Deputy Political Editor

HEALTH chief Dr John Reid was slammed last night after admitting MRSA will still be killing 3,500 patients a year in 2008.

Dr Reid said he could only HALVE the number of victims of the superbug within four years.

He claimed just 7,000 die annually from MRSA — but the true figure is thought to be as high as 20,000.

Critics were up in arms at the confession that it will take another five years for the death rate to halve.
Reports of MRSA bacteraemia by quarter in England April 2001- June 2008

Source: Mandatory Surveillance HCAI Data Capture System
Staphylococcus aureus bacteraemia laboratory reports (voluntary reporting scheme): England, Wales and Northern Ireland 1993-2010

Source: Health Protection Agency
Winning Ways

Working together to reduce Healthcare Associated Infection in England

Report from the Chief Medical Officer

December 2003
‘Winning Ways’ - Management and organisation

**Key issue:** Tackling healthcare associated infection (HCAI) cannot be left to clinical staff alone; senior management commitment, local infrastructure and systems are also vital.

- Chief Executives will designate HCAI as a core part of their organisation’s clinical governance and patient safety programmes.
- Chief Executives will be aware of factors which promote low levels of HCAI and ensure that the appropriate action is taken.
- Chief Executives will be aware of their legal duties to identify, assess and control risks of infection in the workplace.
- A Director of Infection Prevention and Control will be designated within each organisation and will:
  - oversee local control of infection policies and their implementation;
  - be responsible for the Infection Control Team within the healthcare organisation;
  - report directly to the Chief Executive and the Board and not through any other officer;
  - have the authority to challenge inappropriate clinical hygiene practice as well as antibiotic prescribing decisions;
  - assess the impact of all existing and new policies and plans on infection and make recommendations for change;
  - be an integral member of the organisation’s clinical governance and patient safety teams and structures;

The World Health Assembly resolution on antimicrobial resistance

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Antimicrobial resistance is a global problem that can only be tackled successfully through strengthened international partnerships. A concerted political, scientific and media campaign has garnered support for the recent World Health Assembly resolution on antimicrobial resistance, mandating the WHO to develop a global action plan. This resolution has the ‘One Health’ approach at its core, emphasizing collaboration across human and animal health sectors at the international, national and regional levels, coupled with strong leadership and the political will to act. Key themes are communication, prevention of infection, using knowledge to guide action, sustainability and optimizing the use of antimicrobial medicines and diagnostic devices. Implementation of the global action plan will require member states to make a commitment to developing national action plans and strengthening capacity, building on collaborations between the WHO, the World Organisation for Animal Health, the World Bank, Codex Alimentarius and the Transatlantic Task Force on Antimicrobial Resistance.

Keywords: World Health Organization, WHO, public health, policy, global health
The antimicrobial stewardship programme

Summary of Core Elements of Hospital Antibiotic Stewardship Programs

- **Leadership Commitment**: Dedicating necessary human, financial and information technology resources
- **Accountability**: Appointing a single leader responsible for program outcomes. Experience with successful programs show that a physician leader is effective
- **Drug Expertise**: Appointing a single pharmacist leader responsible for working to improve antibiotic use.
- **Action**: Implementing at least one recommended action, such as systemic evaluation of ongoing treatment need after a set period of initial treatment (i.e. “antibiotic time out” after 48 hours)
- **Tracking**: Monitoring antibiotic prescribing and resistance patterns
- **Reporting**: Regular reporting information on antibiotic use and resistance to doctors, nurses and relevant staff
- **Education**: Educating clinicians about resistance and optimal prescribing

CDC ‘Get Smart for Healthcare’ www.cdc.gov
Leadership Commitment

Leadership support is critical to the success of antibiotic stewardship programs and can take a number of forms, including:

- Formal statements that the facility supports efforts to improve and monitor antibiotic use.
- Including stewardship-related duties in job descriptions and annual performance reviews,
- Ensuring staff from relevant departments are given sufficient time to contribute to stewardship activities
- Supporting training and education
- Ensuring participation from the many groups that can support stewardship activities.

CDC ‘Get Smart for Healthcare’ www.cdc.gov
Reporting framework for antimicrobial prescribing

APP&P = antimicrobial prescribing policy and practice

The Antimicrobial Stewardship Team

• Multi-disciplinary
• Involving prescribers, pharmacists, administrators, infection control experts, information systems experts, microbiologists and ID physicians
• Core: clinician (a microbiologist or ID physician) and a clinical pharmacist (with ID training)
• Dedicated time (? >10h per 100 beds)
• Others with relevant leadership or other skills
Why do interns make prescribing errors?

The normalization of deviance in healthcare delivery

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Abstract

Many serious medical errors result from violations of recognized standards of practice. Over time, even egregious violations of standards of practice may become “normalized” in healthcare delivery systems. This article describes what leads to this normalization and explains why flagrant practice deviations can persist for years, despite the importance of the standards at issue. This article also provides recommendations to aid healthcare organizations in identifying and managing unsafe practice deviations before they become normalized and pose genuine risks to patient safety, quality care, and employee morale.

Keywords

Medical errors; Patient safety; Preventable harms; Deviations from standards of care; Normalization
'Changing physician behaviour is considered by many to be an exercise in futility—an unattainable goal intended only to produce premature aging in those seeking the change. The more optimistic might describe the process as uniquely challenging.'
