How leadership can influence antimicrobial stewardship

Professor Alison Holmes
Perspectives on AMS

- Organisational
- Quality Improvement and Implementation
- Behavioural
- Research

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Leadership
Leadership

“ We are all obliged to lead something at sometime”

Max Landsberg
The Tools of Leadership
Leadership

- Vision
- Inspiration
- Momentum

Max Landsberg
‘The Anatomy of Leadership’
Leadership

• Understand management
• Step back from it
• Create other leaders

Max Landsberg
‘The Anatomy of Leadership’
Organisational perspective

Director of Infection Prevention and Control (DIPC)

Winning Ways
Working together to reduce Healthcare Associated Infection in England
Report from the Chief Medical Officer

- Oversee Col policies and implementation
- Responsible for ICT
- Report directly to CE and board
- Challenge inappropriate hygiene practice and antibiotic prescribing
- Assess impact of plans/policies on IC
- Member of Clinical Governance and Patient Safety teams/structures
- Produce an annual report
Organisational perspective

- Optimising individual care and delivering public health within acute healthcare

- Achieving safety requires more than individual carefulness. It is a corporate responsibility
  
  Leape 2002 NEJM 347, 16, GJ Annas 2006 NEJM 354, 19

- It cannot be through an individual or team, or the responsibility solely of a separate service- an organisational approach is required
  
  Murray, Holmes 2012 JAC
Organisational Approach

- In hospitals, even where there is specialist expertise on antibiotic use, excellent policies, and commitment ...

- ...influence across the organisation may be limited, by a lack of strategic input and lack of integration with governance structures.

Dr Eleanor Murray, Saïd Business School, University of Oxford
Organisational Approach
Harnessing Leadership

Role of leadership within Infection prevention
“Hospital epidemiologists and infection preventionists often played more important leadership roles in their hospital's patient safety activities than did senior executives”

Saint S, Kowalski CP et al. ICHE. 2010 Sep;31(9):901-7.
Key Behaviors of Effective Leaders

Cultivated a culture of clinical excellence
- Developed a clear vision
- Successfully conveyed that to staff

Inspired staff
- Motivated and energized followers

Solution-oriented
- Focused on overcoming barriers

Thought strategically while acting locally
- Planned ahead leaving little to chance; politicked before crucial issues came up for a vote in committees
- Worked well across disciplines and kept their eye on the goal: improving patient care
An Organisational Approach

Addresses:
- Much expertise, not used effectively
- Small teams in huge organisations (fire-fighting, without major strategic input)
- Expertise not closely linked to management framework
- Systems based approach for sustainability
- Making AMS a core part of governance and patient safety
- Changing culture and behaviour
- Creating organisational learning
- Ensuring organisational leadership
An Organisational Approach

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"Acute trusts and their boards will need to learn a new language and consider ....using new methods of organisational and behavioural change to reinforce policy implementation."

UK CMO Report 2013
Professor Dame Sally Davies
Organisational Change Requires Four Conditions

1. A belief in a shared purpose
2. Reinforcement systems
3. Skills required for change
4. Consistent role models

1. Belief in a Shared Purpose

- A belief in overall purpose; a **shared vision**, explicit goal
- All must understand their role
- Chief executive backing, providing clear organisational leadership
- Facilitated by:
  - Appropriate language
  - Patient care the driver
  - Addressing local issues (ie **context** specific)
  - Good data (processes **and** outcomes)
  - Existing organisational engagement, commitment, collaborative practice

2. Reinforcement Systems

- Reporting structures -
- Measurement procedures -

Trust wide Point Prevalence Survey of Antimicrobial Prescribing February 2019

- 1321 inpatients reviewed
- 43% of inpatients on an antimicrobial
- 1006 antimicrobials prescribed
- 54% of which were intravenous
- 8915 antimicrobial doses prescribed
- 2% of which were missed

92% In line with guidelines or Micro/ID advice
99% Indication recorded in prescription or medical notes
90% Prescriptions reviewed within 72 hours
94% Duration in line with policy or Micro/ID approved
2. Reinforcement Systems

- Reporting structures
- Measurement procedures
- Setting targets and measuring performance
- Granting rewards

All must be consistent with 'behaviour to be embraced'.
Internal Reinforcement

• Leadership posts
  – High Clinical and Management profile
  – Directors of Infection Prevention and Control (DIPC) – England
    DoH ‘Winning Ways’ Dec 2003

• Consider if separate operational teams undermine rather than reinforce?

• Use existing systems and meetings

• Lines of accountability
  – Aligned with existing decision making and funding structures
  – Clinical leaders identified
AMS Accountability

• If AMS programmes are ‘invisible’ in the organisational structure, it is not clear which resources are then available for these activities

• Clear lines of accountability within organisation are critical

• Accountability pathways may be part of wider quality improvement or dedicated to AMS. Either way these should be identifiable

External reinforcement

- Professional status, peer recognition, reward
- Incentives
- Targets
- Statutory monitoring
- Data in public domain
- Public awareness and civil society
- Research agenda
External reinforcement

- Professional status, peer recognition, reward
- Incentives
- Targets
- Statutory monitoring
- Data in public domain
- Public awareness and civil society
- Research agenda
- Media interest
- Opportunities to inform external influences and harness the external reinforcement...
3. Skills Required for Change

- Provide them, give time to be integrated
- Individual and Team training
- Integrated in leadership/management training
- Role of infection specialists/skill mix?

Routine multidisciplinary antibiotic stewardship meeting reviewing prescribing, Amrita, Kerala
4. Consistent Role Models

- Role models at every level to change behaviour consistently throughout organisation
- Multiple Leaders. Role models confirmed and supported by groups
- Senior Management taking personal responsibility
- Chief executive- demonstrable commitment and leadership
Healthcare Implications

- AMS needs to be **embedded** in how healthcare is run
- Governance structures, quality indicators and communications **must** be aligned and support AMS
- AMS activity as an indicator of quality of care
- AMS, Infection prevention and sepsis interlinked; all optimising antibiotic use

[Healthcare Implications](http://www.bsac.org.uk/antimicrobialstewards/ypebook/BSAC-AntimicrobialStewardship-FromPrinciplesToPractice-eBook.pdf)

Redefine challenge as a social problem that can be solved i.e. involving human action/behaviour, not a technical fix.

Social process, sense of community. Systems with network, teams and sense of ownership.
Quality Improvement: Lessons for Leadership

- Professional organisation involvement or **research collaboration** enhances success

- Clinicians’ behaviours influenced by trusted peers (Dopson et al. 2003).

- **Leaders** with authority to “breathe legitimacy” critical (Hwang and Powell 2005).
Behavourial perspective

- From organisational to individual behavioural focus
- Policies/guidelines insufficient for behavioural change
- Need to understand the factors that influence prescribing behaviour and decisions. Consider culture and context.
Behavioural perspective

- Realising that ‘antibiotic prescribing’ must be recognised as a “behaviour”. It is not linear, it is a complex, dynamic social process, influenced by many determinants.

- The importance of the ‘unwritten rules’ that influence antibiotic prescribing behaviours. Clinical autonomy and hierarchies within clinical peer specialties overrule policies, guidelines and expert input.

Behavioural perspective

- Realised that ‘antibiotic prescribing’ in hospitals must be recognised as a ‘behaviour’. It is not linear, it is a complex, dynamic social process, influenced by many determinants.
- The importance of the ‘unwritten rules’ that influence antibiotic prescribing behaviours. Clinical autonomy and hierarchies within clinical peer specialties overrule policies, guidelines, and expert input.

Conclusion:

To influence the antimicrobial prescribing of individual healthcare professionals, interventions need to address these behaviours and use clinical leadership and existing clinical groups to influence practice.
Behavioural perspective

- Realised that ‘antibiotic prescribing’ in hospitals must be recognised as a “behaviour”. It is not linear, it is a complex, dynamic social process, influenced by many determinants.

- The importance of the ‘unwritten rules’ that influence antibiotic prescribing behaviours. Clinical autonomy and hierarchies within clinical peer specialties overrule policies, guidelines.

- Much focus on leadership……

- But less on using clinical leaders

- Actively involve clinical leaders in antibiotic stewardship
### Cross-Specialty Engagement?

**Figure 3.** AMS- and/or AMR-related abstracts from UK and international state-of-the-art clinical scientific conferences in 2014. *UK significantly greater than international conferences (P<0.05). #International significantly greater than UK conferences (P<0.05). Risk score: H=high, M=medium and L=low (calculated from the ECDC pilot point-prevalence survey of HCAI and AU data). n/a, not available.

Cross-Specialty Engagement?

Figure 3. AMS- and/or AMR-related abstracts from UK and international state-of-the-art clinical scientific conferences in 2014. *UK significantly greater than international conferences (P<0.05). #International significantly greater than UK conferences (P<0.05). Risk score: H=high, M=medium and L=low (calculated from the ECDC pilot point-prevalence survey of HCAI and AU data). n/a, not available.
Clinical leadership in surgery

- Burden of AMR in surgery globally
- Surgical leaders needed for AMS
- And Anaesthetics and Peri-operative Medicine leaders
Clinical leadership In surgery

https://doi.org/10.1093/cid/ciy844

- Burden of AMR in surgery globally
- Surgical leaders needed for AMS
- Anaesthetics and Peri-operative Medicine leaders

Prof Puneet Dhar
GI Surgery, Amrita, Kerala

Prof Ramani Moonesinghe
Perioperative Medicine, UCL, London

Dr Jules Ndoli,
Medical Director, Consultant Anaesthetist,
Butare University Teaching Hospital, Rwanda.
The ASPIRES Study: Antibiotic use across Surgical Pathways - Investigating, Redesigning and Evaluating Systems

Developing context-relevant preventative measures to reduce the risk of infection and AMR, and optimise the use of antibiotics, coupled with tailored implementation strategies, along the entire surgical pathway.

ASPIRES: Antibiotic use across Surgical Pathways - Investigating, Redesigning and Evaluating Systems  http://www.imperial.ac.uk/arc/aspires/
Success depends on:

- Teams, networks and sense of community
- Recognition of **multi-professional** roles, teams, effective networks, and leaders across the healthcare


Charani E, Castro-Sanchez E et al. Understanding the determinants of antimicrobial prescribing within hospitals: The role of prescribing etiquette. CID. 2013 Jul;57(2):188-96

Developing a ‘sense of community’, with leaders across healthcare?

Accra April 2019

#CwPAMS
@THETlinks
@FlemingFund

• The role of the clinical pharmacist and the great untapped potential in pharmacy workforce is increasingly recognised
• Much that be learnt from established HIV and TB networks
• The role of nurses, the largest workforce in healthcare, beginning to be developed –some excellent examples emerging
International Nursing Summit on Antimicrobial Stewardship

European Commission Guidelines for the prudent use of antimicrobials in human health: A missed opportunity to embrace nursing participation in stewardship Castro-Sánchez, E et al.
CMI March 2016
Nurses and midwives are already leaders in delivering care; the next step is to put them at the heart of health policy-making.

ELIZABETH IRO
Chief Nursing Officer,
World Health Organization
AMS networks

Antimicrobial stewardship programmes: the need for wider engagement

Esrita Charani, Alison H Holmes

Antimicrobial resistance has been recognised as a major global health threat and is now on the political agenda with world leaders recognising the necessity to act to preserve the potency of antimicrobial agents and invest funds to discover new ones. Despite the majority of antimicrobial prescribing and consumption occurring in primary care settings, hospitalised populations experience the full force of antimicrobial resistance and difficult-to-treat multidrug resistant organisms.

To optimise antimicrobial prescribing, reduce healthcare associated infections, and minimise microbial development, systems and initiatives such as stewardship programmes are needed to tackle these challenges. The umbrella term ‘stewardship’ is perhaps the term of choice for capturing the multifaceted initiatives that together provide an organism.

A managed multidisciplinary programme on multi-resistant Klebsiella pneumoniae in a Danish university hospital

Stig Ejstrup Andersen,1 Jenny Dahl Knudsen,2,3 for the Bispebjerg Intervention Group

A managed multidisciplinary programme on multi-resistant Klebsiella pneumoniae in a Danish university hospital

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Providing Impetus, Tools, and Guidance to Strengthen National Capacity for Antimicrobial Stewardship in Vietnam

Haifan F. L. Worholm1,2,4, Arjun Chandra5, Phu Dinh Vu, Ca Van Pham, Phong Dai Tho Nguyen, Van Minh Lam, Chau Van Nguyen, Mattias Larsson, Uh Rydell, Lennart E. Nilsson, Jeremy Raman6,7, Kim Van Nguyen8, Hakon Hamberg8

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Whole Healthcare Economy Approach

A whole-health-economy approach to antimicrobial stewardship: Analysis of current models and future direction

Monsey McLeod, Raheelah Ahmad, Nada Atef Shebl, Christianne Micallef, Fiona Sim, Alison Holmes

1 Centre for Medication Safety and Service Quality, Pharmacy Department, Imperial College Healthcare National Health Service (NHS) Trust, London, United Kingdom, 2 National Institute for Health Research Health Protection Research Unit, Healthcare Associated Infections and Antimicrobial Resistance, Imperial College, London in partnership with Public Health England, Hammersmith Hospital, London, United Kingdom, 3 Department of Clinical and Pharmaceutical Sciences, University of Hertfordshire, Hatfield, United Kingdom, 4 Pharmacy Department, Cambridge University Hospitals NHS Foundation Trust, Addenbrooke’s Hospital, Cambridge, United Kingdom, 5 Institute for Health Research, University of Bedfordshire, Luton, United Kingdom, 6 NHS England (Midlands & East), United Kingdom

* These authors share first authorship on this work.

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Majority AMS strategies implemented in single healthcare sectors and organizations. Assessing degree of integration of AMS across the whole health economy and its impact is essential if we are to achieve a ‘one health’ approach.
Developing New leaders

- A key aspect of leadership...

Developing Emerging Leaders
ISID’s First cohort

For selected early career investigators and physicians in global infectious diseases to:
- Become involved in a major international organization
- Work closely with influential experts in their field
- Gain invaluable experience at a senior level with program development and management

First cohort from 12 countries

Cambodia, Chile, Hong Kong, India, Israel, Oman, Peru, Saudi Arabia, South Africa, USA, UK, Vietnam
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Leadership and the AMS Research Agenda

Crossing research boundaries

Interdisciplinarity: The power and the necessity for AMR

doi:10.1038/525305a

Rebekah R. Brown, Ana Deletic and Tony H. F. Wong. Monash University
Some final top tips

LEADERSHIP & PROFESSIONAL DEVELOPMENT

The socio-adaptive (or “nontechnical”) aspects of healthcare including leadership, followership, mentorship, culture, teamwork, and communication are not formally taught in medical training. Yet, they are critical to our daily lives as Hospitalists. The LPD series features brief “pearls of wisdom” that highlight these important lessons.

Hire Hard, Manage Easy

Vineet Chopra, MD, MSc1,2,*; Sanjay Saint, MD, MPH1,2

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Picard Tips (@PicardTips)

04/02/2019, 19:13

Picard management tip: Leave the bridge sometimes. Other people can handle things fine without you.
Thank you

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