Ethics & Politics of Infection Prevention & Control (IPC)

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ACIPC conference Hobart,

November 2015

The sad tale of Mr T

- 67 year old man – admitted to hospital
  - Acute retention of urine; acute renal failure
  - IV line - remained *in situ* 8 days (!)
- After 9 days in hospital - MRSA colonised (not previously)
  - fever; R hip pain; breathlessness – Rx Tazocin
- 3 days later – septic shock, admitted to ICU
  - MRSA septicaemia; old IV catheter site – oozing pus
- 4 weeks: persistent bacteraemia despite Rx
  - multiple surgical procedures to drain abscesses
- 4 months later: TUR

Why Ethics & Politics of IPC?

- Ethics:
  - preventing harm (HAI) to patients – without consent
    - clients are whole patient population
  - all IPC programs: benefits vs costs, risks
    - individual restrictions vs communal benefit
- Politics:
  - **complexity**; different power, status, knowledge, skills
  - **resource allocation** - lobbying & influence vs evidence & need
  - **compliance -** some HCWs do better than others
    - Inverse relationship to knowledge status
  - **accountability** - HAIs: who is accountable (i.e. to blame)?

Who was accountable for Mr T's SAB?

- Failure of evidence-based policies
  - Hand hygiene; environmental cleaning; PIVC management
- Whose failure?
  - Nurses, doctors, cleaners, visitors, other patients etc.
  - Organisation/hospital
    - hospital/unit SABSI rates – high
    - staffing levels?; operating theatre availability?
    - team communication

'Healthcare-associated infections do not carry fingerprints or time stamps to identify the offending healers who failed the patient'

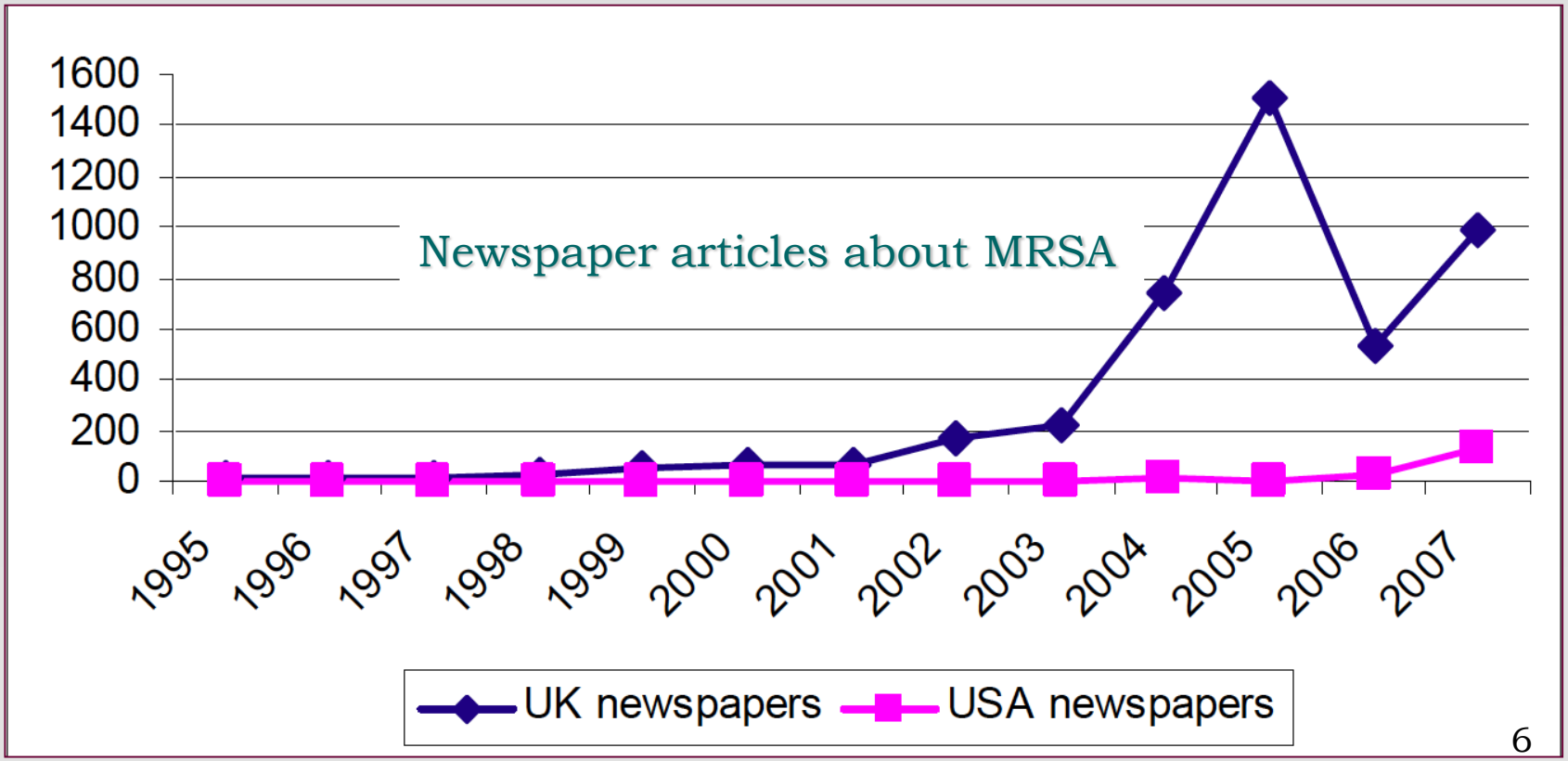
Palmore TN, Henderson DK Clin Infect Diseases 2012;54(1):8–9

Accounting for HAIs

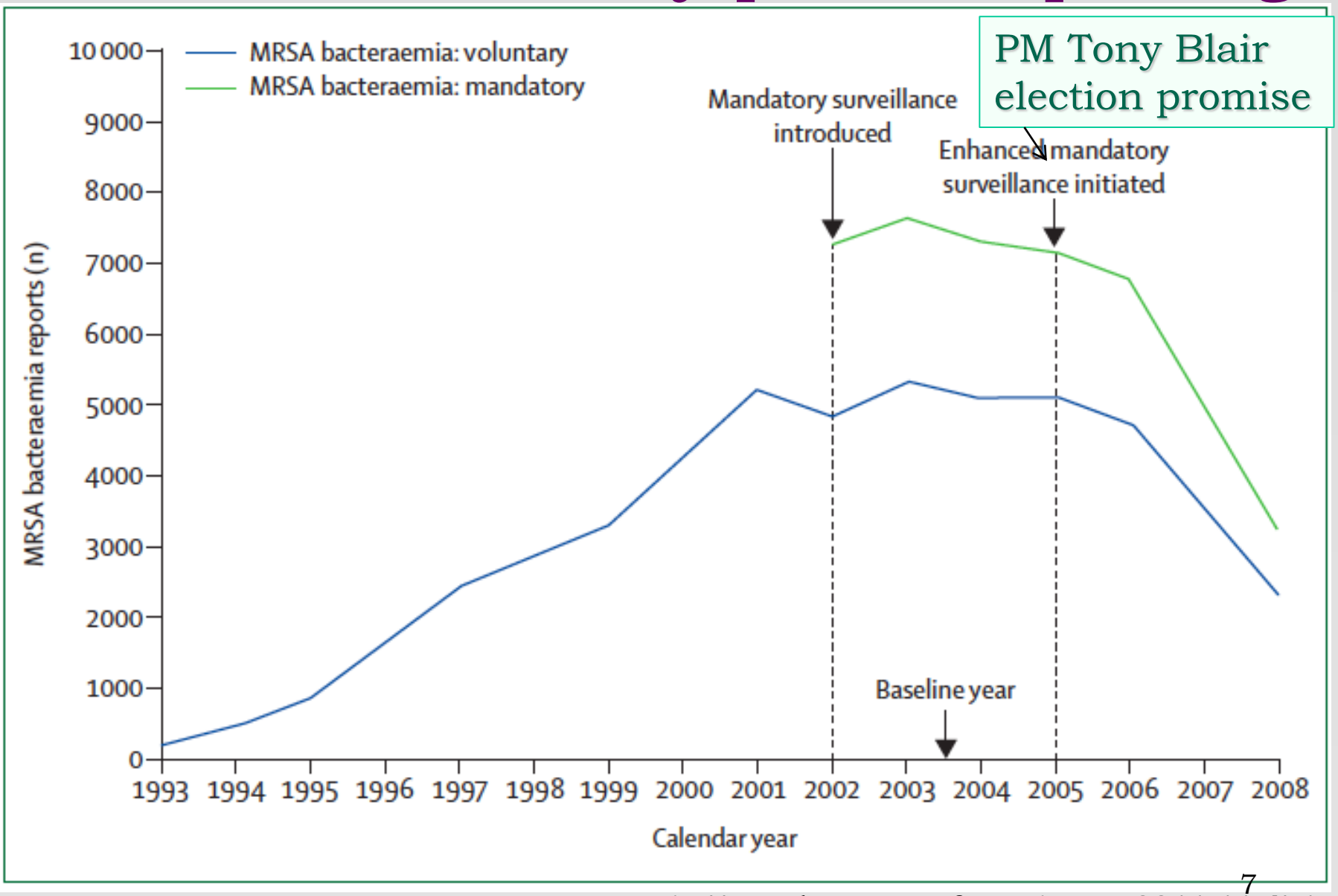
- Hospital/medical culture
  - Resources & outcomes focused on individual patient care
  - Prevention – not a high priority
- Common misconceptions:
  - "Infection control is nurses' responsibility"
  - "MRO colonisation inevitable"
  - "HAIs rare - unavoidable collateral damage"
- Reducing HAIs – more than policies
  - Culture: organisation; unit; professional groups
  - Surveillance & feedback –can be effective but costly
  - Leadership, shared accountability and incentives

HAIs are neither rare nor inevitable: public reporting of HAI data

- 2000s UK:
  - massive media coverage; 2005 election issue

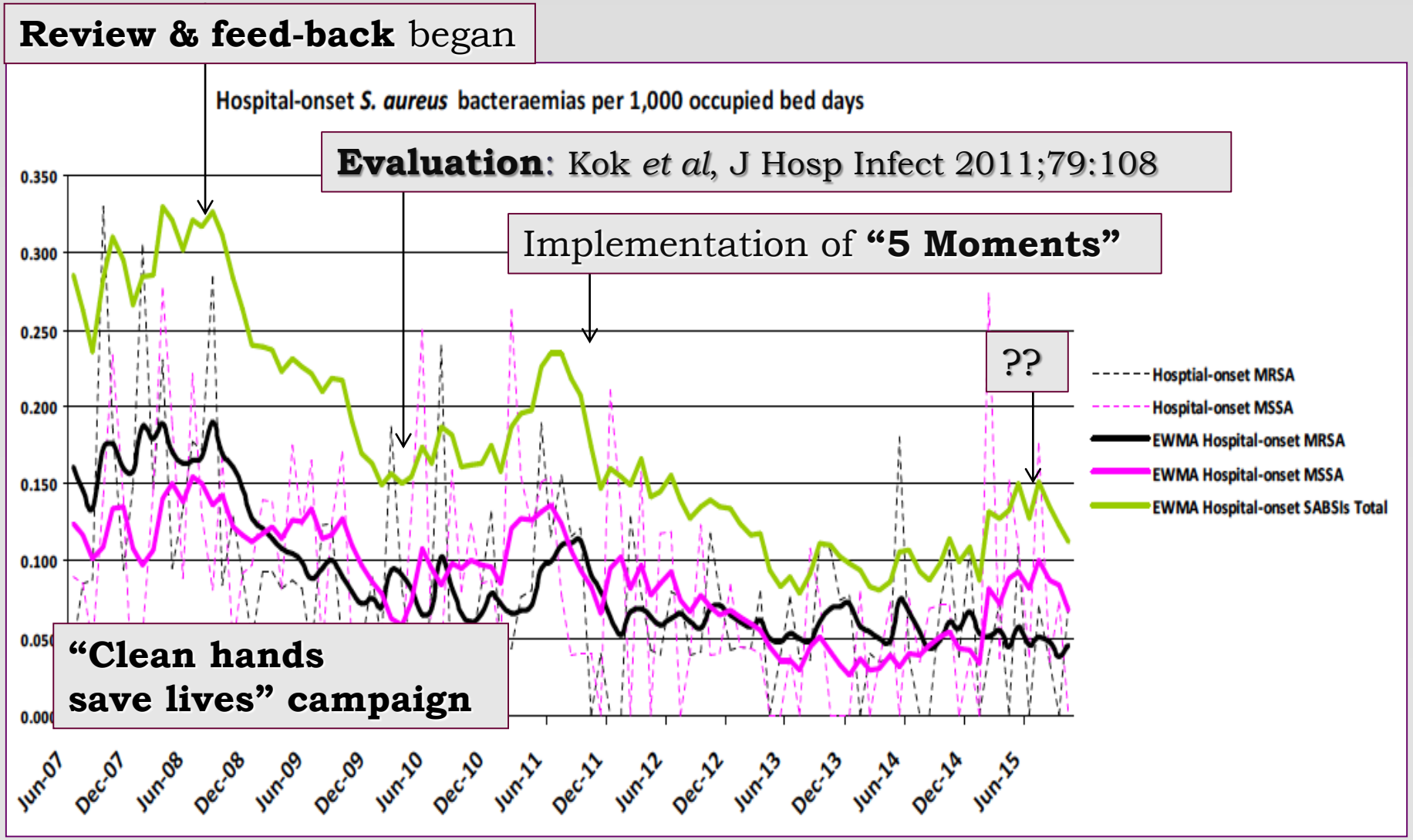


UK mandatory public reporting



Haustein T *et al* Lancet Infect Disease 2011;11:471

HAIs are neither rare nor inevitable: "personalised" reporting of hospital-onset SABSI



- "To Err is Human" (Institute of Medicine, 1999)
  - Focus on safety culture - blame-free environment
  - Bad systems not bad people

The Patient's Right to Safety — Improving the Quality of Care through Litigation against Hospitals

George J. Annas, J.D., M.P.H.

New Engl J Med 2006;35:2063-6

- Patient safety is hospital/organisational responsibility
  - *"understaffing is corporate negligence"*
  - *"nosocomial infections resulting from…failure to adopt or enforce hand-washing policies ….breach of duty to keep patients safe"*
- By contrast: (conference abstracts)
  - individual accountability - disciplinary measures
  - physician dismissals, dramatic rise in HH compliance

- *"… moral responsibility for actions and*

behaviours is an irreducible element of professional practice, but …

……..individuals are not .. separate from ' systems' : they create, modify and are subject to the social forces …of the organisational system……."

Aveling E-L et al What is the role of individual accountability for patient safety? Sociology of Health & Illness published online November 2015; doi: 10.1111/1467-9566.12370

4 principles of medical ethics

- Beneficence – do good
- Non maleficence – do no harm
- Autonomy – respecting choice
- Justice – fairness

Beauchamp T, Childress J. Principles of Biomedical Ethics 1st Edition, 1985

- Medical ethics – focuses on individual patient rights
- IPC focuses on hospital population
  - Harm to whom? Whose autonomy? What is fair?

Public health

- Health of populations - surveillance, regulations
  - Limits on individual freedom & privacy for "the public good"

- Ethical framework for PH programs
  1. What are goals of program?
  2. How effective is it in achieving goals?
  3. What are known/potential burdens?
  4. Can burdens be minimised? Are there alternatives?
  5. Is program implemented fairly?
  6. How can benefits and burdens be fairly balanced?

Kass NE. Public health ethics….. Am J Public Health 2001;91:1776–1782

Selective MRO screening & contact isolation

- Aim: protect other patients from MRO acquisition (Kass 1)
  - usually no benefit to patient screened
- Is it effective? (Kass 2)
  - *"Effectiveness of contact precautions…..in acute care: …systematic review…"* **Cohen CC *et al* J Hosp Infect 90 (2015) 275e284**
  - Only 6 studies - contact precautions sole intervention
  - Variable design & quality : compliance, bias, confounders
  - 5 studies: no improvement; the other – poor quality
- Conclusion:
  - *"The quality of this body of literature does not justify changes in practice"* i.e. evidence inconclusive

Selective MRO screening & contact isolation

- Known/potential burdens? (Kass 3)
- *"Adverse effects of isolation in hospitalised patients: a systematic review"* **C. Abad *et al* J Hosp Infect 76 (2010) 97e102**
  - 15 studies: isolated patients:
    - more likely to be depressed, anxious, angry, fearful, lonely
    - visited less frequently by health professionals
    - more likely to suffer from "failure of supportive care"

- *"....Health professionals' lived experience of caring for patients under transmission-based precautions."*

  Godsell M-R *et al* Am J Infect Contr 41 (2013) 971-5

  - PPE: affects rapport & communication; discomfort
  - increased workload; reduced level of care
  - explaining to patients challenging – confused about reasons

- *"Involving patients in understanding hospital infection control using visual methods."*

  Wyer M *et al* Journal of Clinical Nursing. doi:10.1111/jocn.12779

  - Isolated patients
    - varied understanding of IPC; confused by inconsistencies
    - lack of discussion between patients & clinicians
    - devised strategies to protect themselves & others

Are contact precautions ethical?

1. Define goal: prevent MRO transmission & HAI
2. Effective? – uncertain
3. Burdens? - yes for patients & staff
4. Burden minimised by:
   - limiting contact precautions to high risk situations
   - adequate staffing, consistency, communication
5. Is program implemented fairly?
   - involve patients & front-line staff in implementation
6. How can benefits and burdens be fairly balanced?
   - Depends on degree of risk to be prevented

What if healthcare staff were at risk?

IPC for (emerging) infectious diseases of high consequence (IDHC)

- IDHC = new/exotic; highly transmissible; high morbidity/mortality; no vaccine or treatment
- Unexpected; risks initially poorly understood
  - 1st presentation likely to be to a hospital
- HCWs at risk; conduit to community
  - e.g. SARS: Toronto, 2003
  - Ebola: Madrid; Dallas, 2014
  - MERS: Seoul, 2015

2003, 21% of SARS infections were in HCWs

Table 1 Numbers of Probable Cases of SARS, Deaths, and Healthcare Workers Infected in Selected Countries and Globally

	Cumulative No. of Cases	Deaths No. (%)	Workers Infected No. (%)
Canada	251	41 (17)	108 (43)
China	5,327	349 (7)	1,002 (19)
Hong Kong	1,755	299 (17)	386 (22)
Taiwan	346	37 (11)	68 (20)
Philippines	14	2	4 (29)
Singapore	238	33	97 (41)
Thailand	9	2	1 (11)
Vietnam	63	5	36 (57)
Global	8,098	774	1,707 (21)

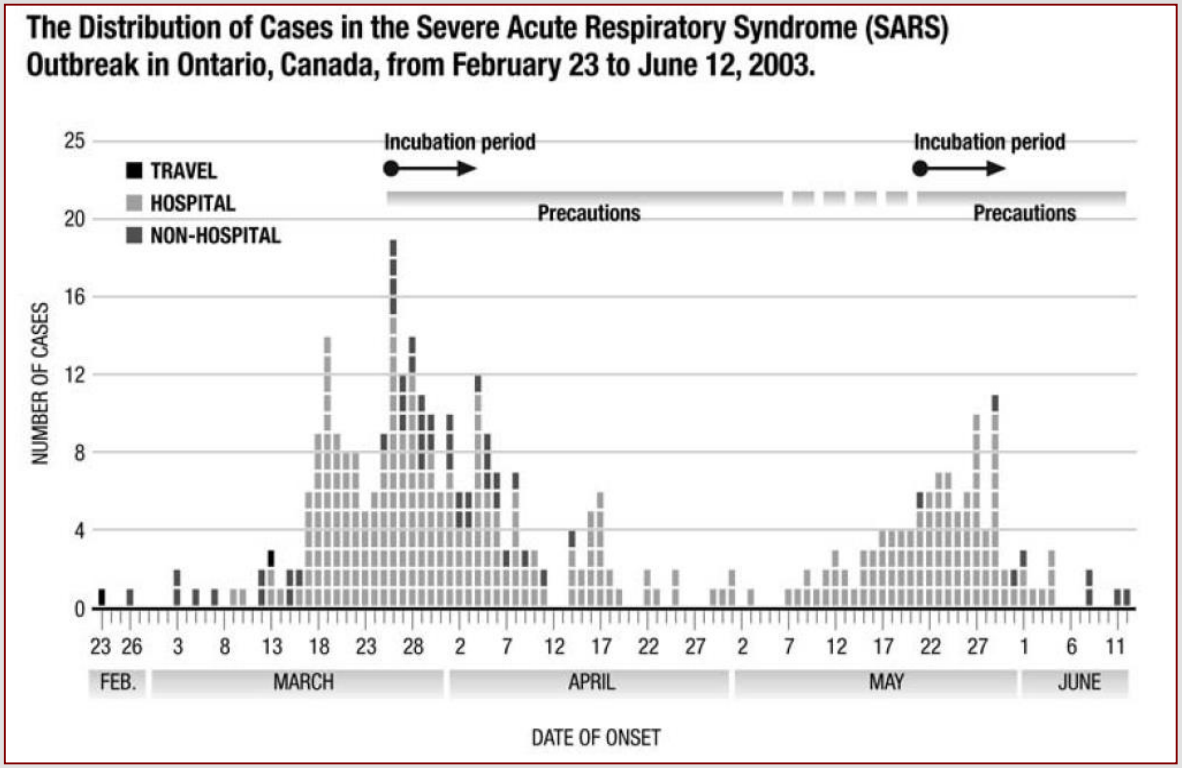
Source: WHO 2007

Vancouver vs. Toronto: A Tale of Two Cities

SARS Commission, 2006

2 Canadians returned from Hong Kong with SARS

- Toronto: 1 died at home; son admitted to hospital
  - he was in ED for 16 hours; not isolated for 21 hours



Hospital: 84 cases

Toronto total:

- 375 cases; 44 deaths
- 72% in healthcare settings, 45% HCWs
- 3 hospitals closed & transfers halted
- City-wide disruption

Low D, McGeer A. SARS - one year later. N Eng J Med 2003; 349:25

Vancouver vs. Toronto: A Tale of Two Cities

- Vancouver:1 admitted to hospital
  - Isolated in ED, respiratory precautions in 15 minutes
  - **Vancouver total**: 4 cases (3 imported; 1 HCW)
- SARS Commission:
  - Ontario (Toronto):
    - *"public health system…..broken, neglected, .. dysfunctional…unprepared, fragmented.."*
    - *poor worker safety culture; separate from infection control*
  - British Columbia (Vancouver):
    - *"pandemic" plan in place; public/HCW awareness*
    - *infection control plan for respiratory infections*

SARS Commission, 2006

Toronto: "Duty of Care"

- Some doctors and nurses refused to work
  - ? unique "duty of care" - irrespective of personal danger
  - Is it unlimited?
- "Duty of care" must be defined & negotiated
  - What are the limits? who decides? criteria?
    - level of risk (may be unknown)
    - degree of benefit to patient
    - HCW expectations of "normal" risk – specialty
    - competing duties of care – to self, family, other patients….
    - level of training, available PPE, equipment
    - institutional support; compensation

Sokol DK. Virulent epidemics and scope of healthcare workers duty to care. Emerg Infect Dis 2006;12:1238-41

Are we ready to manage IDHCs?

1. Goals? - care for patient & prevent 2º cases
2. Effectiveness? Yes - with consistent compliance
3. Burdens? Yes - on patients & staff
4. Burdens (&fear) can be minimised by
   - policies; training; facilities; equipment –**in place BEFORE the next threat**
5. Is program implemented fairly?
   - involve frontline clinicians in planning & implementation
   - organisational support
6. How can benefits and burdens be fairly balanced?
   - Define "duty of care" & responsibilities of organisation & frontline staff

What would you want if you (your parent/spouse/child) were a patient?

- Information about risks
  - what is being done to minimise them; what I can do
  - truthful explanation if things go wrong
- Clean, tidy ward; consistent practice by HCWs
- Supportive, responsible hospital administration
  - Adequate staff with time to think, communicate, comply with policies and work as a team
  - Systems that make it easy to do do the right thing
- Then: accountability with consequences
  - organisation, unit/ward (director/manager); individuals

Mr T – issues

Hosp	Ward	Date coll	Note		*nuc*	*mecA*	*pvl*	Typing Result	(Predicted)* MLST	spa
WMD	A6B Dia	25/10/2011		2				280841	*239*	*t037*
WMD	W.A6A	2/11/2011		1				280841	*239*	*t037*
WMD	A6B Dia	10/11/2011		3				280841	*239*	*t037*
WMD	W.A6A	15/11/2011		4				280841	*239*	*t037*
WMD	W.A6A	20/11/2011		Mr T				280841	*239*	*t037*

Probe Results

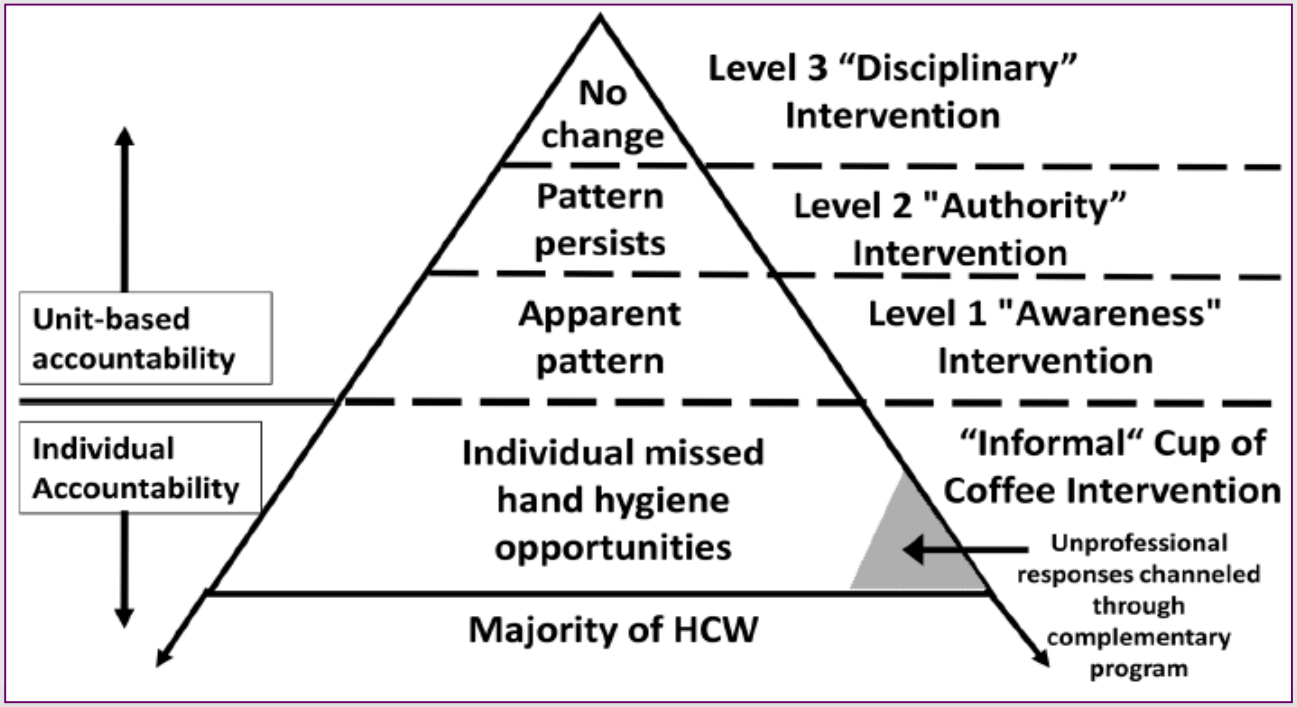
seaSp, seaAp, secSp, secAp, sedSp, sedAp, pvlSp, pvlAp, N046Sp, N046Ap, SAV0881Sp, SAV0881Ap, PV83ORF2Sp, PV83ORF2Ap, SAV0858Sp, SAV0858Ap, phi11-4568Sp, phi11-4568Ap, sltORD257Sp, sltORF257Ap, SA1801Sp, SA1801Ap, SAV1974Sp, SAV1974Ap, sltORF182Sp, sltORF182Ap, ccrAB1Sp, ccrAB1Ap, ccrCSp, ccrCAp, mecR1Sp, mecR1Ap, E007Sp, E007Ap, CQ002Sp, CQ002Ap, cadBSp, cadBAp

- Mr T admitted bed 27 - 11th November
- Patient 1 – bed 26 (same 4-bed room)
  - moved on 10th November– “vertical” transmission
- Patients 2-4; in same or adjacent unit

Sustained Improvement in Hand Hygiene Adherence: Utilizing Shared Accountability and Financial Incentives

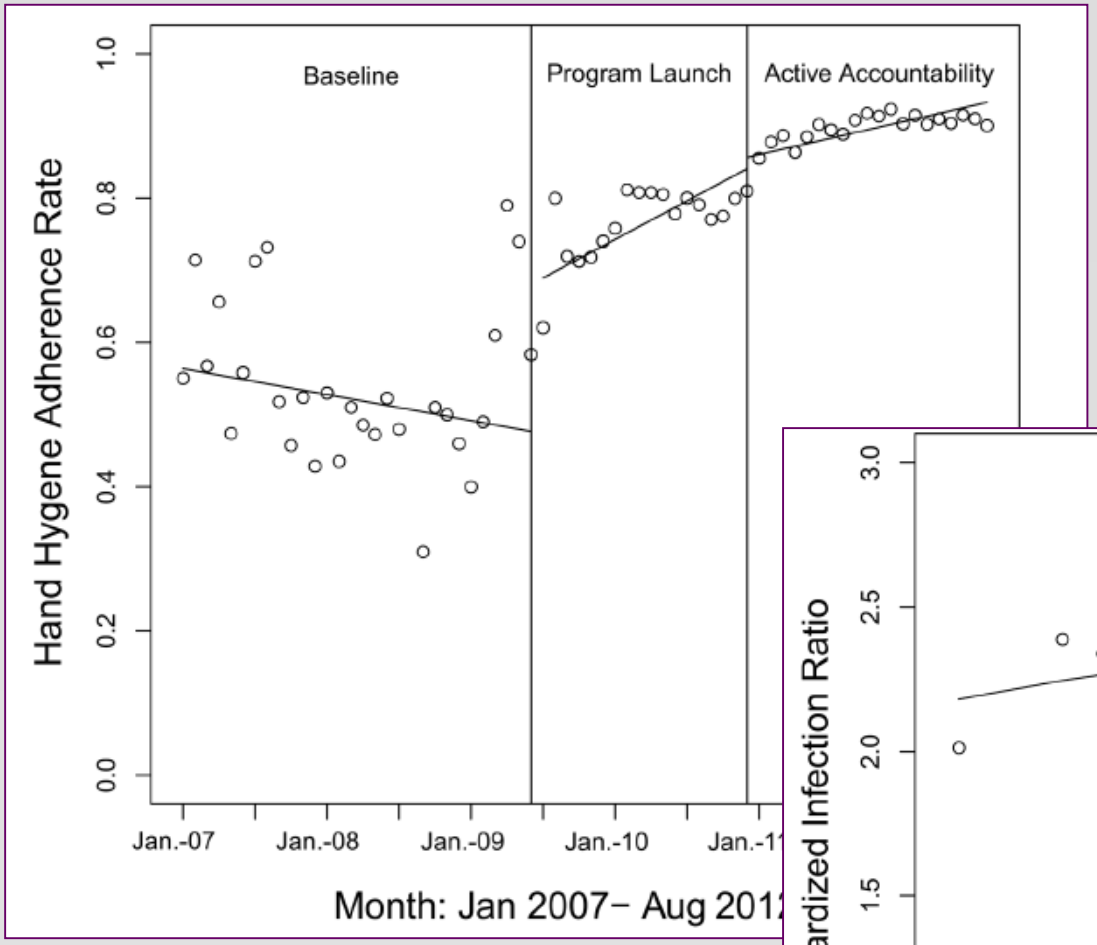
Thomas R Talbot *et al.* Infect Control Hosp Epidemiol 2013;34(11):1129-1136

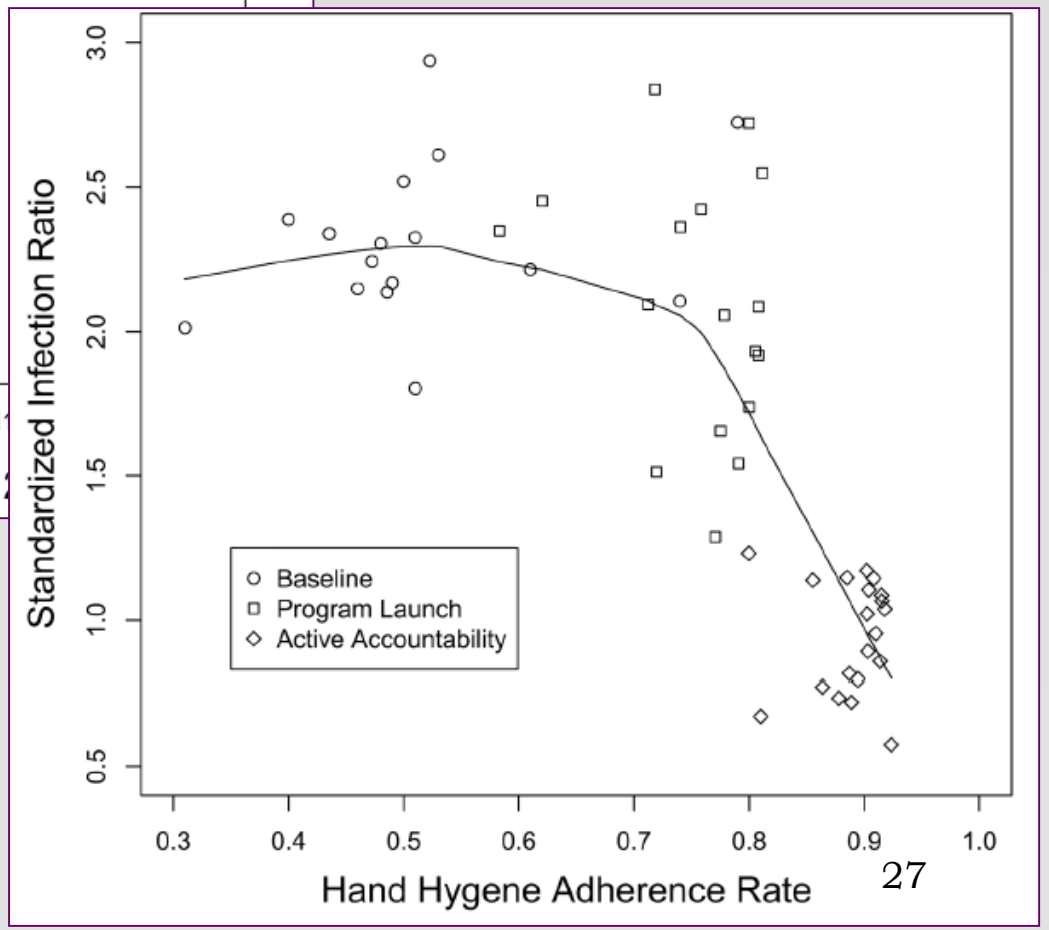
- Hand hygiene program
  - project planning, leadership buy-in, goal setting
  - financial incentives linked to performance



Tiered system-wide shared accountability

Results





Talbot *et al* ICHE, 2013;34:1129-36