A Personal View of Infection Prevention
Prof. Andreas Voss, Radboud University, Netherlands
Broadcast from the Infection Prevention Society conference (www.ips.uk.net)

'A personal view on infection control'

The Ayliffe Lecture

by Andreas Voss

ips Infection Prevention Society

Infection Prevention 2012
1 - 3 October 2012
ACC, Liverpool
www.infectionpreventionconference.org.uk

'A personal view on infection control'

- We have trouble to communicate
- We have asked for the wrong things
- We did not involve our patients
- We lost the colleagues perspective
- We believe in theory and miss the reality
- We separated MMB-ID-IC
- We ignored behavioural science
- We lack implementation skills
- We re-acted instead of acted
- We did not promote infection control

Trouble to communicate

We have trouble to communicate

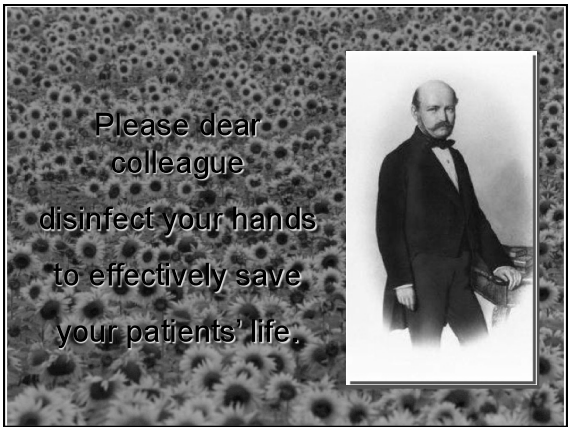
Infection control talks are generally rated as "therapeutic" for HCWs with sleeping disorders.

Semmelweis

Semmelweis was the first to prove that hand-washing alone is not sufficient.

&

… the first to prove that IC can't communicate !



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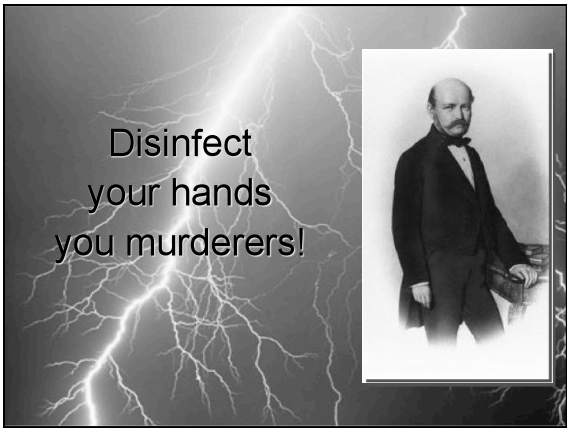
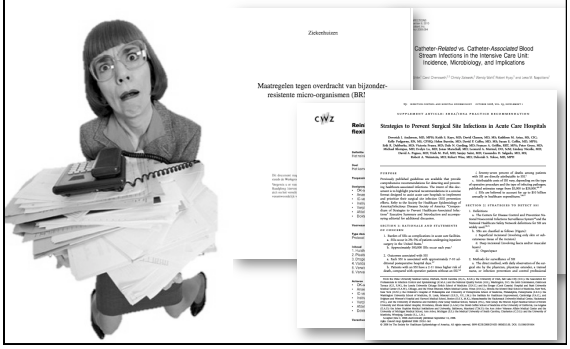


Not speaking the same language ?

While – as in your case – clinicians and members of the ICT both speak English, it seems like we do not get our message across

Guidelines as our way to communicate



What do HCWs think about guidelines

Too many	50%	More needed
Too long	50%	Too short
Too many details	50%	Not enough details
Too many rules	50%	Not enough rules
Too theoretical	50%	Not enough theory

… luckily both groups agree on one thing …

Infection Control don't know what they are doing

Are your guidelines to the point?

Are you really consequent …

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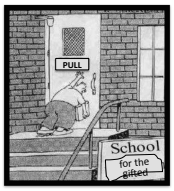
Guidelines do not free you from thinking about what you should do …

Conclusion: Communication

- The training of ICPs and MDs (at least in my country) does not include;
  - ❖ Communication
  - ❖ Behavioural science
  - ❖ Cognitive sociology
  - ❖ Implementation strategies
  - ❖ Change management

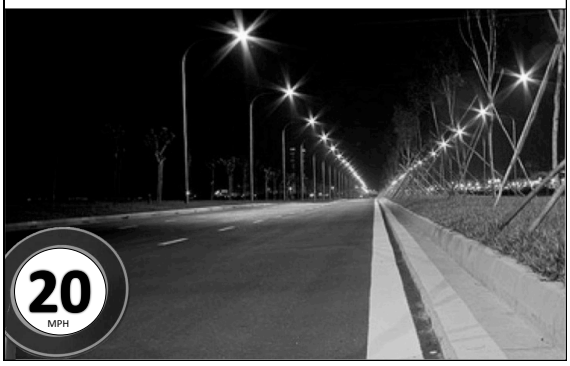


Education needed !

Asking for too much and for the wrong things

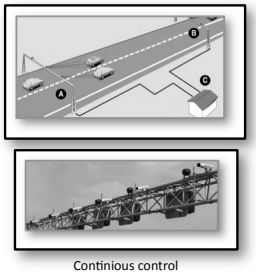
IC = asking HCWs to keep the speed limit

Less easy at midnight with no one around



Monitoring

Single control



Continious control

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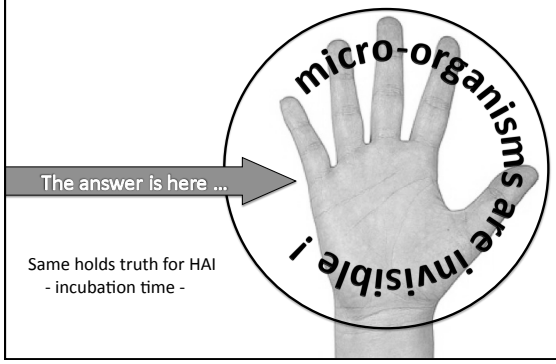
New ways of monitoring in healthcare

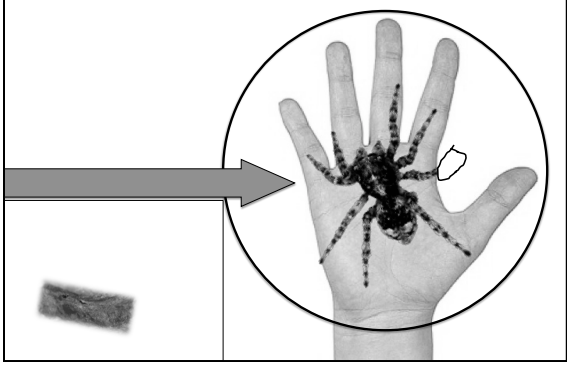
Armelino et al. CID 2012;54:1-7

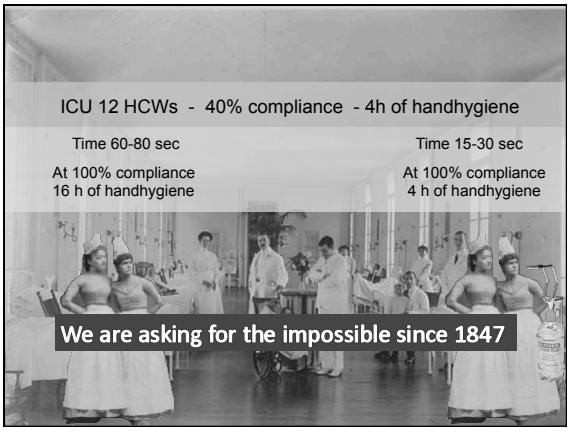
What is the problem?



Same holds truth for HAI
- incubation time -

If hospital bugs would look like this – compliance with hand hygiene would be 100%





Only implement needed rules …

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… and ensure that they are correct

Infection Control Teams

- "Size matters"

ICT a la SENIC

The SENIC standard is completely out-dated!

Patient Safety – friend or foe

- Patient safety departments quickly arise in many hospitals –
  - ❖ with bigger budgets
  - ❖ larger amount of people
  - ❖ partly overlapping tasks

Our bike looks more like this …

If you can't beat them, join them/cooperate

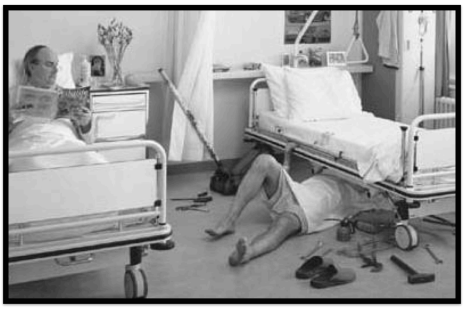
Infection Control Team

- Cooperate where possible
- Ensure secretarial and data-management support
- Focus the ICP's work to what you need an ICP for
- Use techs and/or ICT for data collection
- Shed non-IC tasks
- Pick the moment to ask for changes in structure
  - ❖ straight after the outbreak
- Watch out, don't over-ask

Do you need what you want?

Not involving our patients

Should we involve our patients?



While I used to be against it …

- and agree with those who say that patients should not be responsible for their own safety
- … we should look for new ways of involving patients
- Now would be the time to present such an idea but I never had it – hope you do!
  - ❖ Change their expectations – through the media

Lost our customer's persepective

Keep your customer in mind

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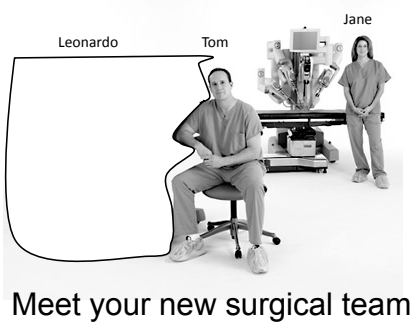
Change your expectations !

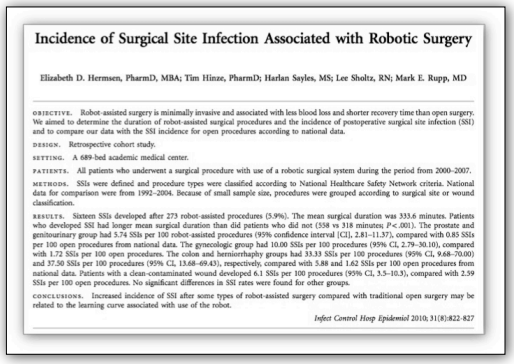
- Do you expect your clinical colleagues to know all your guidelines?
- Assuming that most of you silently answered the question with "yes"..
- **Do you find yourself looking-up your own guidelines to know what to advice?**

Prioritize your guidelines

Try to see "their" need



Meet your new surgical team



Incidence of Surgical Site Infection Associated with Robotic Surgery

Elizabeth D. Hermsen, PharmD, MBA; Tim Hinze, PharmD; Harlan Sayles, MS; Lee Sholtz, RN; Mark E. Rupp, MD

OBJECTIVE. Robot-assisted surgery is minimally invasive and associated with less blood loss and shorter recovery time than open surgery. We aimed to determine the duration of robot-assisted surgical procedures and the incidence of postoperative surgical site infection (SSI) and to compare our data with the SSI incidence for open procedures according to national data.

DESIGN. Retrospective cohort study.

SETTING. A 689-bed academic medical center.

PATIENTS. All patients who underwent a surgical procedure with use of a robotic surgical system during the period from 2000–2007.

METHODS. SSIs were defined and procedure types were classified according to National Healthcare Safety Network criteria. National data for comparison were from 1992–2004. Because of small sample size, procedures were grouped according to surgical site or wound classification.

RESULTS. Sixteen SSIs developed after 273 robot-assisted procedures (5.9%). The mean surgical duration was 333.6 minutes. Patients who developed SSI had longer mean surgical duration than did patients who did not (358 vs 318 minutes; $P < .001$). The prostate and genitourinary group had 3.74 SSIs per 100 robot-assisted procedures (95% confidence interval [CI], 2.81–11.37), compared with 0.83 SSIs per 100 open procedures from national data. The gynecologic group had 10.00 SSIs per 100 procedures (95% CI, 2.79–30.10), compared with 1.72 SSIs per 100 open procedures. The colon and herniorrhaphy groups had 33.33 SSIs per 100 procedures (95% CI, 9.68–70.00) and 37.50 SSIs per 100 procedures (95% CI, 13.68–69.43), respectively, compared with 5.88 and 1.62 SSIs per 100 open procedures from national data. Patients with a clean-contaminated wound developed 6.1 SSIs per 100 procedures (95% CI, 3.5–10.3), compared with 2.59 SSIs per 100 open procedures. No significant differences in SSI rates were found for other groups.

CONCLUSIONS. Increased incidence of SSI after some types of robot-assisted surgery compared with traditional open surgery may be related to the learning curve associated with use of the robot.

Infect Control Hosp Epidemiol 2010; 31(8):822-827

Hermsen et al (Nebraska) ICHE 2010;31:822-27

Incidence of SSI associated with robotic surgery

Three possible reasons (2 according to authors, 1 according to me)

- Learning curve associated with the use of the robot
  - ❖ increased time of the operations with new technique
- Possible problems with cleaning & sterilization
  - ❖ presence of accumulated organic debris on robot arm cables

Hermsen et al (Nebraska) ICHE 2010;31:822-27

Use new techniques or not?

- Central sterilization considers cleaning and sterilization "unsafe"
- Surgeons/urologists consider it an advance in their possibilities (and a great toy)
- Hospital spent millions on the robot and 10K for the instrument-arms (good for 10 go's)
- What to do?
  - ❖ Not allow the robot
  - ❖ Use arms as disposables
  - ❖ Allow but watch and check re-processing closely

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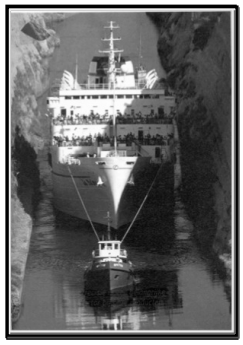
Incidence of SSI associated with robotic Surgery

- Third not-mentioned complication

Hermsen et al (Nebraska) ICHE 2010;31:822-27

Conclusion

Keep your customer's view in mind ..



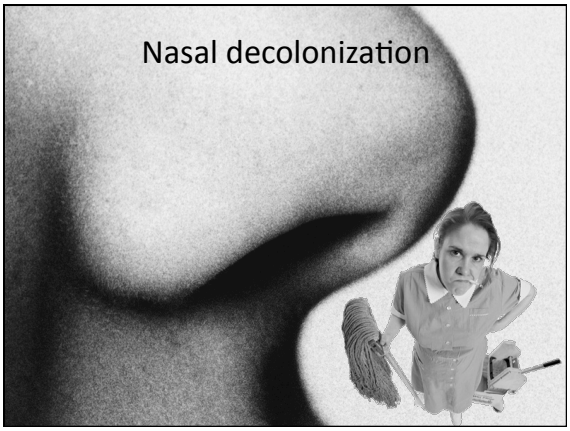
Lacking implementation skills

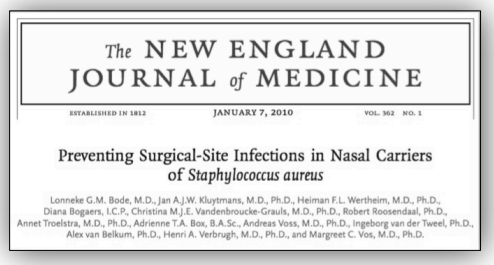
Implemtation & use of guidelines

- 100% Target audience
- 80% Heard about it
- 50% Seen it
- 30% Got it/bought it
- 20% Used it
- 5% Used it as intended

Henk-Jan Smid, ZonMw

Nasal decolonization





The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1812 JANUARY 7, 2010 VOL. 362 NO. 1

Preventing Surgical-Site Infections in Nasal Carriers of *Staphylococcus aureus*

Lonneke G.M. Bode, M.D., Jan A.J.W. Kluytmans, M.D., Ph.D., Heiman F.L. Wertheim, M.D., Ph.D., Diana Bogaers, I.C.P., Christina M.J.E. Vandenbroucke-Grauls, M.D., Ph.D., Robert Roosendaal, Ph.D., Annet Troelstra, M.D., Ph.D., Adrienne T.A. Box, B.A.Sc., Andreas Voss, M.D., Ph.D., Ingeborg van der Tweel, Ph.D., Alex van Belkum, Ph.D., Henri A. Verbrugh, M.D., Ph.D., and Margreet C. Vos, M.D., Ph.D.

Bode et al. NEJM 2010, January 7th

S. aureus decolonization

- Very few Dutch hospitals have implemented the intervention as described in the publication
  - some never implemented the intervention
  - many stopped screening and started treating every patient

Non-implementation or not according to protocol is not an exception but a frequent event

Difference – theory vs reality

Hospital Cleaning

Who is cleaning this in your hospital?

- Roomservice
- House keeping
- Registered nurse
- Nurse-assistent
- Cleaning

Vacant responsibility

Seperation MMB-ID-IC

Outsourcing of Clinical Micro

- One of the factors of success of CM/ID/IC was the integration within the hospitals
  - We are colleagues & advisors that help with all aspects of infections
- Outsourcing of CM is putting this elementary "trias" at risk
  - "Distance microbiology" is difficult
  - "Distance infection control" is impossible

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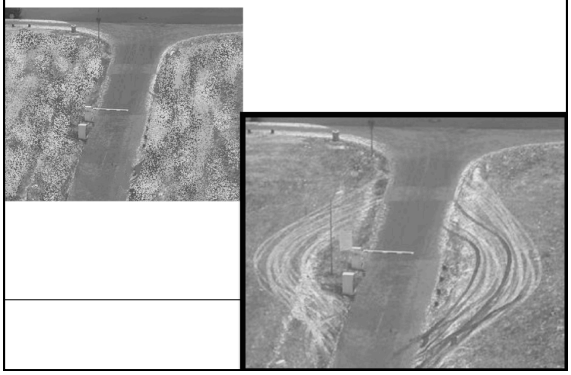
Ignoring behavioral science

Clinicians & Infection Control



Dangerous micro-organism: MRMS

MRMS

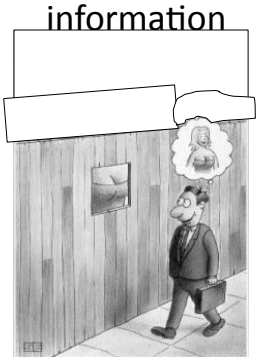
- Resistant to good advice
- Allergic to (professional) guidelines
- Non-compliant with IC measures
- Blind to HAIs (especially their own)
- Other prioroties

Behaviour

- While we wish to make the most thoughtful, fully considered decision possible …

  we frequently resort to comply on basis of a single piece of information (trigger)

Reaction to single piece of information



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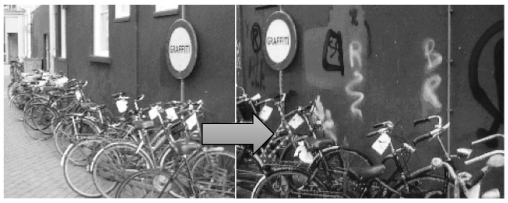
The Broken Windows Theory

- Signs of chaos and disorder lead to "unwanted behavior"
- Chaos spreads...?
- When we see others ignoring rules and guidelines we tend to do the same!

www.sciencexpress.org / 20 November 2008 / Page 1 / 10.1126/science.1161405

The Spreading of Disorder



We need "order" in our hospitals and people showing appropriate behavior !

How to change HCWs behavior?

- " People are willing to change if they feel:
  good, flattered, powerful or sexy"
  - not when they are bombarded with facts

Hodgkin 1999

Gimme an Rx!

Cheerleaders Pep Up Drug Sales

Onya, the **Redskins cheerer** (who asked that her last name be withheld, citing team policy), has her picture on the team's Web site in her official bikini-like uniform and also reclining in an actual bikini. Onya, 27, who declined to identify the company she works for, is but **one of several drug representatives** who have cheered for the Redskins

By STEPHANIE SAUL
Published: November 28, 2005
The New York Times

Infection Control Team in my hospital

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Re-act instead of acting

Re-act instead of acting

- Understaffing, outbreaks, (re-)emering threats, increasing surveillance and data collection for patient safety/insurences → prioritizing of work
- Re-acting instead of acting is less of a choice than a must …

Are we so used to re-act that we can't act anymore?

Better promote IC

Better advertisement

"For the little things you forget"

Hand hygiene campaigne

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Don't get the wrong idea !

- You, your society, we all do a great job, actually bending backwards for patient's safety, but we can still improve …

They old measures work ! #1

Hand hygiene
With bed-side dispensers and pocket-bottles any excuse to not *reach out* for the alcohol handrub is gone. Thus, …. "Just do it!" Furthermore, hand hygiene should be seen as only **one of** the classical preventive measures **all of which deserve** our **attention** and HCW's compliance.

Surveillance #2

HAI-surveillance
Internal quality versus public reporting. Reporting real HAI rates (e.g. VAP) instead of low public rates and creating new diseases such as ventilator-associated trachea-bronchitis

GI Infections #3

GI-tract infections
Increasing rates of *C. difficile* and norovirus. With regard to norovirus: impact on the patient outcome as well as the overall possibility to deliver care is frequently underestimated

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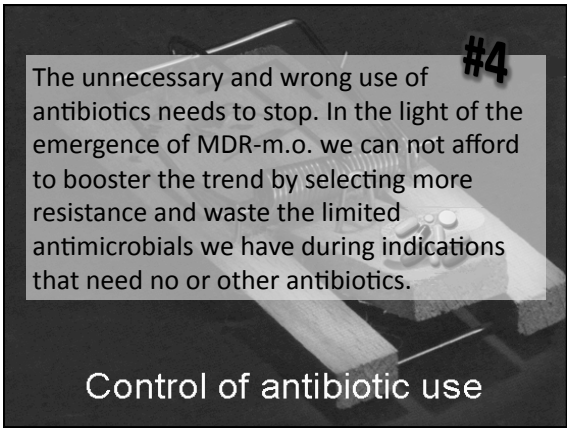

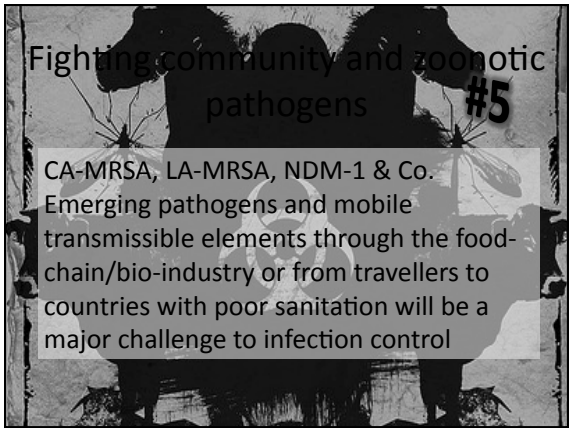

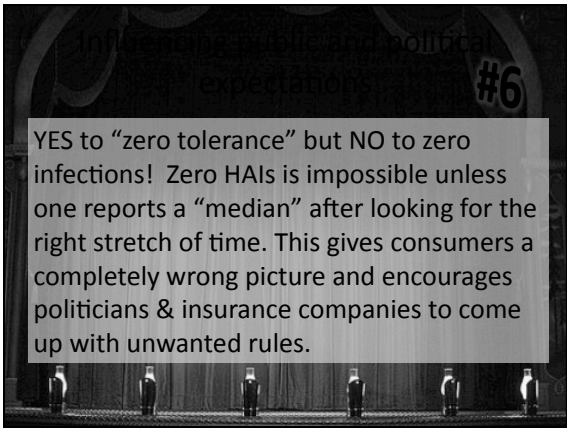

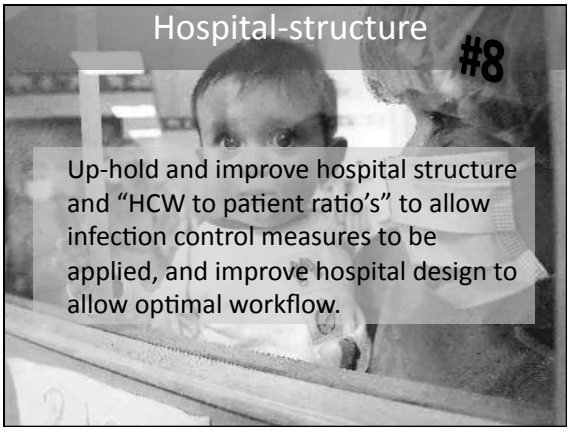

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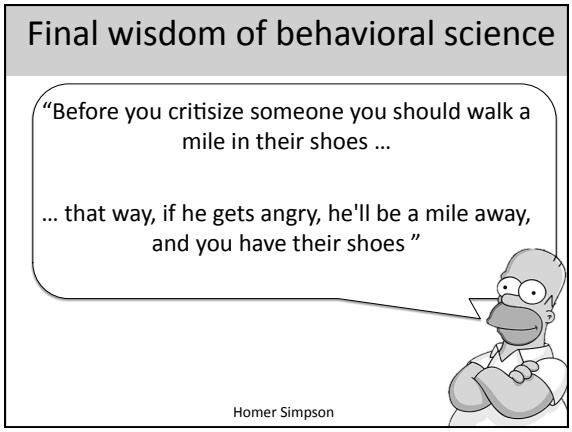

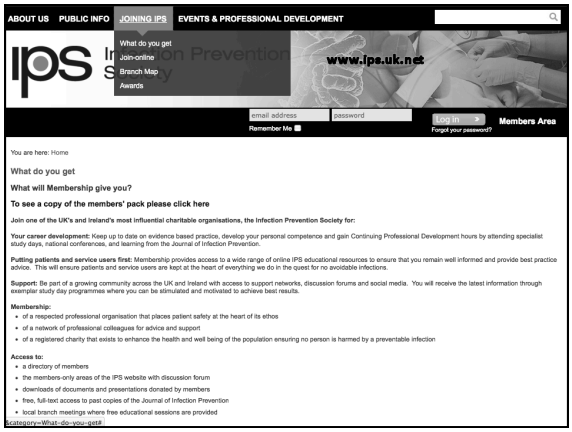

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