



12:45

Infection Control Made Ridiculously Simple

Dr Sean Derrig

Chemex International

Stand 75

chemexuk.com



Agenda

- 1) Infection Control Made Easy
 - Outcome 8 without tears
- 2) Disinfection – What Works?
 - The science and the spin – fogging, UV, silver, copper...
- 3) Top Tips
 - How to stay compliant and save cash

About Chemex

- Hygiene specialists since 1985
 - Europe, Scandinavia, N America
 - Health, Hospitality, Food, Public, FM
 - Hygiene, infection control, warewash, laundry products
- Not a chemical supplier!
 - Solutions, systems, staff training, compliance
- **We're in the reputation business**



Our Clients



Ministry of
JUSTICE



DOUBLETREE
BY HILTON™



Mercedes-Benz

MELIÀ

HOTELS
INTERNATIONAL



Holiday Inn



Reputation

- Ambulance Sector
 - The CQC
 - Lazy journalists
 - Unregistered providers
- The next scandal?



Home > News > UK > Failure to properly inspect private ambulance services puts vulnerable people in peril

Failure to properly inspect private ambulance services puts vulnerable people in peril

DOZENS of private ambulance companies have never been inspected by the health regulator, leaving some of the most vulnerable people in the country at risk, it has been revealed.

By: Tammy Hughes
Published: Mon, 4



CQC Outcome 8

- You cannot afford to get this wrong
 - “People experience care in a clean environment, and are protected from acquiring infections”
 - Regulation 12 looks complex but is easier than you think
- Cost of non-compliance is high
 - It’s all a matter of public record



The screenshot shows a BBC News article from August 12, 2009. The headline is "Dirty ambulances 'infection risk'". The sub-headline reads: "An inspection has revealed the [redacted] is putting patients at risk of infection with dirty vehicles and poor training." The article text states that the Care Quality Commission (CQC) inspected 22 ambulances, with 9 found to be in a "very poor condition with visible dirt". It also mentions that 13 other ambulances were not cleaned to a good standard and one was taken out of service. The article notes that the ambulance service took the report "extremely seriously" and that the NWAS covers the Cumbria, Lancashire, Manchester, Merseyside, and Cheshire areas. It also states that inspectors found most staff were unaware of the ambulance service policy on cleanliness. The article lists the stations visited: Bolton, Bury, Stockport, Newton-le-Willows, Whiston, Warrington, Chorley, and Darwen. It also mentions that hospital inspectors looked at ambulances at Fairfield in Bury, Manchester Royal Infirmary, Whiston, the Royal Liverpool, and Lancaster Royal. A section titled "Ingrained dirt" quotes the report: "Nine out of the 22 (41%) were found to be in a very poor condition with visible dirt on the floors, walls, horizontal surfaces and door frames." It further states that the remaining 13 were not cleaned to a good standard and that it was clear from the level of dirt that these vehicles were not cleaned frequently.

Outcome 8 Made Ridiculously Easy

1. Train

- The **link** between **hygiene** and **infection** control



2. Tools

- Give them the **tools** (and training) to do the job



3. Record

- All systems, procedures, training, audits



4. Embed it in the **culture**

- Make sure people *understand* why they're doing it



Where It Goes Wrong

- What the CQC said:

...clear policy on cleanliness ... managers to lead it...

...antibacterial washes adequate ... laundry reached the required standards

...but staff were unaware.

- Subsequent CQC report:

*Staff have changed their approach and taken responsibility...
pride in making sure the premises are spotless...*

*Cleanliness and infection control is **embedded now in the culture** of the organisation...*

Infection Control in Four Words

You Can't Disinfect Dirt

- Holy Trinity
 - Hand, Respiratory and Surface Hygiene
- Assess Risk
 - Some are more susceptible than others
- Make it personal - anecdotes
 - Explain it protects them too



Norovirus



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Science Is Like Sex

...sometimes something useful comes out, but that's not the reason we do it.

Richard Feynman

Science

- It's a bar brawl...
 - Ideas are tested in a controlled and repeatable way
 - Hypotheses are testable (falsifiable) and **predictive**
 - Data is often confusing
- It's always a work in progress
 - We test ideas until they fall over – or not

Science v Evidence Based Practice

- EBP is intended to take quackery out of medicine
- Infection Control is not the natural home of EBP
 - Multiple interventions
 - Lack of controls
 - Publication bias
 - Publications suggest ‘miracle’ interventions
- Data can be confusing and complex
 - *and open to other interpretations....*

Fogging: Hydrogen Peroxide Vapour



Fogging: Hydrogen Peroxide Vapour

- Boyce et al 2008:
 - “intensive HPV disinfection followed by HPV disinfection of rooms vacated by patients with CDAD **reduced the incidence by 44%** in a high incidence ward
 - and by **38% in the hospital as a whole,**
 - and by 53% in months in which a particular strain was present during both the pre-intervention and intervention periods”.

Boyce et al

INFECTION CONTROL AND HOSPITAL EPIDEMIOLOGY AUGUST 2008, VOL. 29, NO. 8

“intensive HPV disinfection... reduced the incidence by 44%”

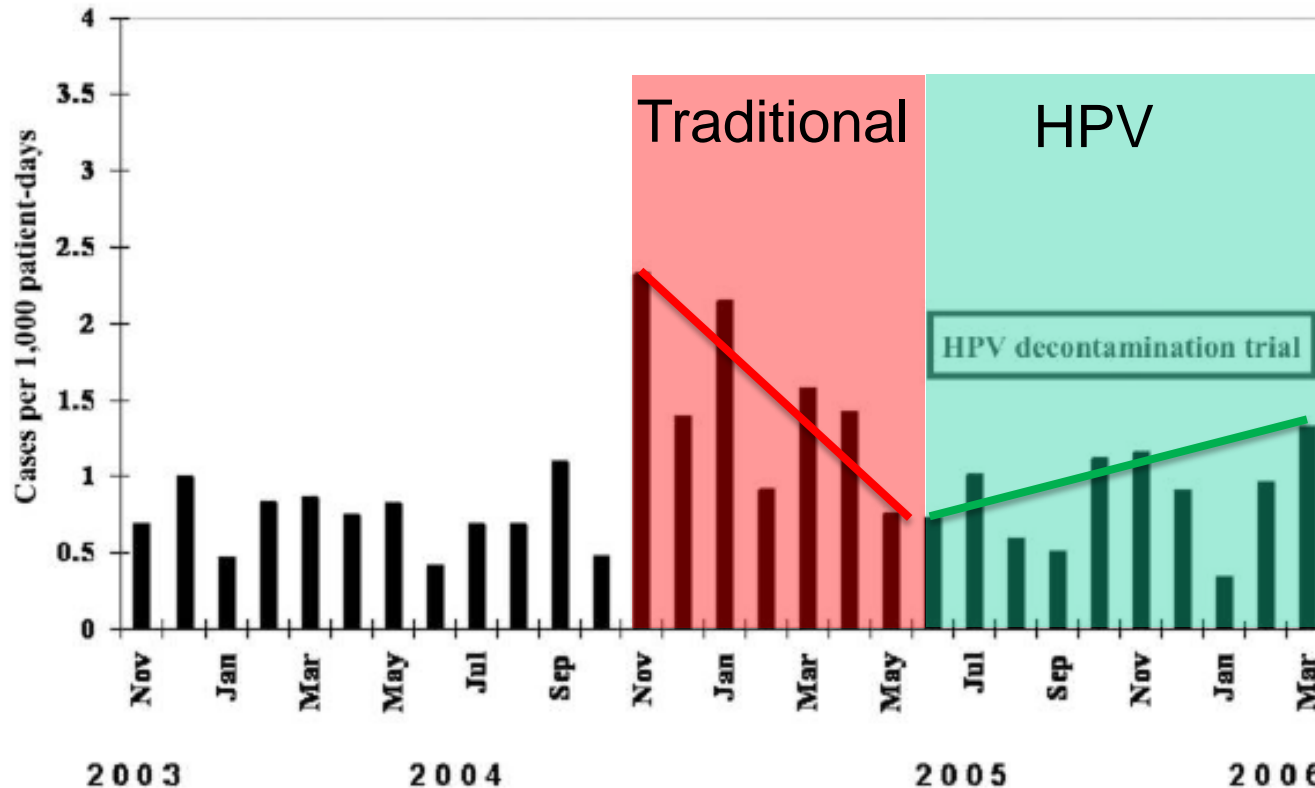
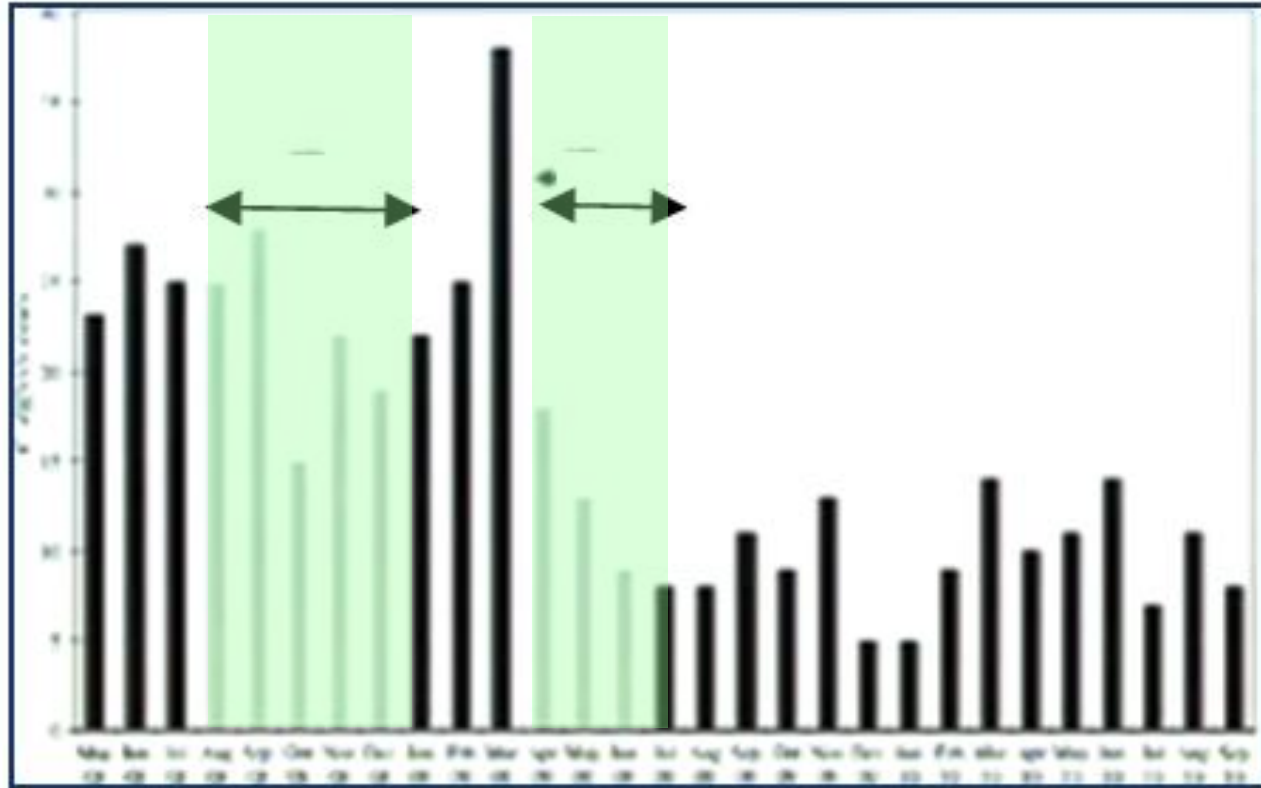


FIGURE 1. Hospital-wide incidence of nosocomial *Clostridium difficile*-associated disease, November 2003 through March 2006.

Cooper et al 2011

“An abrupt increase in the number of C. diff cases was experienced when HPV deployment ended.”

The reintroduction of HPV contributed to returning the monthly number of cases to below the pre-outbreak baseline”



Fogging in Ambulances

- You need to wipe it off anyway
 - *So why not just clean the bloody thing in the first place?*
- It's wet
 - *Errrrmmm... electrical equipment?*
- Procedures often 'confused'
 - *"We fog it then we clean it"*
- Data not entirely supportive
 - Plus catalase-positive bugs?

Self-Disinfecting Surfaces

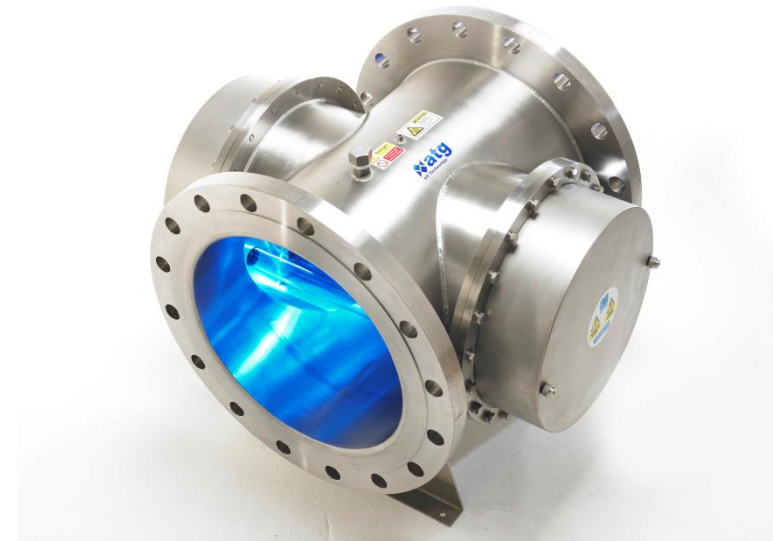
- Silver
 - Uniforms, dressings, catheters, intubation....
 - Uniforms: J Hosp Med. 2013 Jun 12. doi: 10.1002/jhm.2051
 - Doesn't work. Sorry.
- Copper
 - Handles, taps, grab rails etc
 - Biologically plausible, rubbish studies (1-2 log / 12h)

Self-Disinfecting Surfaces

- ISO 22196
 - *Measurement of antibacterial activity on plastics and other non-porous surfaces*
 - 24hrs contact in SDW – log 3 pass?
 - This standard has no relevance to real life
- **Why bother to clean a self-sterilising surface?**

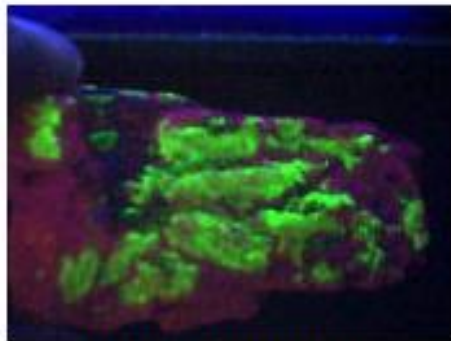
UV Disinfection

- UV good at killing microorganisms
- Long –established for water and air disinfection
 - Major concerns re **practicality** in use on surfaces
 - Major concerns re **safety** in use



UV Detection of Bacteria

- Biologically plausible
 - Many bacteria **do** fluoresce
 - Used in pest control, CSI...
 - You can see the evidence!



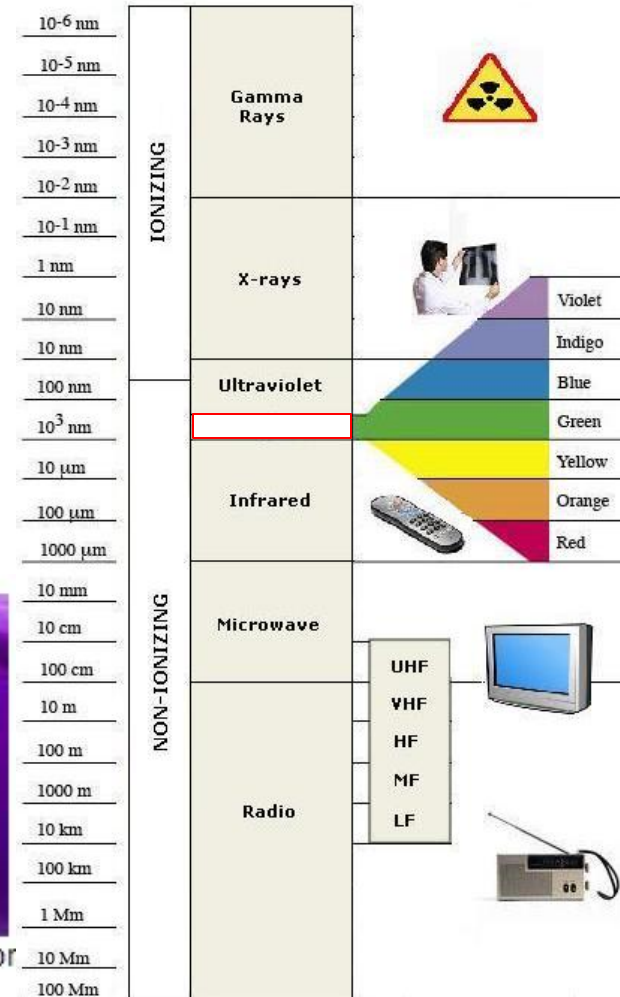
UV detection of mold



UV detection of bacteria



UV detection of a dirty bathroom



'Touchless' Disinfection

- The Problem:
- **You Can't Disinfect Dirt**
 - Technologies rely on the surface being clean to start with
 - If you need to physically clean them anyway, just use a proper sanitiser!

Sounds Convincing But Is Utter, Utter B

- Antimicrobial Surfaces *Iffy concept, unproven*
- Vapour Fogging *Unproven*
- Steam *Fine in an autoclave*
- Droplet Fogging *Definite 'woo' – gravity?*
- Electrolysed Water *Utter rubbish*
- Magnetic Water Softeners *Utter rubbish*

New Technologies

- Traditional methods work
 - Traditional methods more effective than one-off, high impact interventions aimed at total environmental sterility
 - I have issues with ‘self-cleaning / sterilising’ surfaces
- Hospital products / protocols aren’t always applicable to ambulances
 - Beware the emperor’s new clothes
 - EBP confuses the issue

Evidence Based Practice

Parachute use to prevent death and major trauma related to gravitational challenge: systematic review of randomised controlled trials

Smith & Pell

– BMJ 327, 20–27 December 2003, 1459-61



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Saving Cash 1

- Do a glove audit
 - Inappropriate glove use does more harm than good
 - Most glove use is unnecessary and ill-informed
- The ‘Superhero Complex’
 - **Wash hands on removal**

Saving Cash 2

- Sanitisers: what's the standard?
 - **BSEN 1276** or 13697 a good start!
 - What's the dilution and contact time?
- Pay no more than 10-20p!
- **ALWAYS** use automatic dilution



Cash vs Compliance

- You can save money *and* do it right
 - Gloves are expensive, sanitisers are cheap
- Staff Training
 - Compliance goes up, costs come down
 - Less staff sickness

Reputation

- Inspections are a sales tool
 - ...or toxic content
 - Systems and staff training
 - Scripting staff and service users
- Beware of Outcome 21
- Visual Cues....






Chemex
 Chemex International Limited
 Hygiene Control Programme
 Cleaning & Maintenance - Hygiene - Hygiene Products
ARRIVA

DO NOT REMOVE FROM SITE

Client: North Thames Railway Limited
 Site: T.1
 Station: APT 0123



Chemex with **ARRIVA**
Quick Guide to Chemical First Aid

Read the label and follow the instructions. If you are unsure, ask for help. The full colour copy of this guide can be found in the Hygiene Pack.

Product	First Aid	First Aid	First Aid
Hand Sanitising Foam
...

The Golden Rules of COSHH

NEVER MIX SUBSTANCES
READ THE LABELS
USE PROTECTIVE EQUIPMENT
NEVER USE CHEMICALS
NEVER USE THE CHEMICALS
NEVER WORK ALONE
NEVER EAT, DRINK OR SMOKE

NEVER USE CHEMICALS
 NEVER USE CHEMICALS IN A BATH OR SHOWER.
 NEVER USE CHEMICALS IN A KITCHEN OR DINING AREA.
 NEVER USE CHEMICALS IN A VEHICLE.
 NEVER USE CHEMICALS IN A PUBLIC AREA.
 NEVER USE CHEMICALS IN A CHILDREN'S PLAY AREA.
 NEVER USE CHEMICALS IN A PUBLIC AREA.
 NEVER USE CHEMICALS IN A PUBLIC AREA.

Chemex with **ARRIVA**
Mop and Bucket Infection Control

Store mops
CLEAN, DRY and HEAD UPWARDS

Store buckets
WASHED OUT and UPSIDE DOWN

DON'T FORGET THE COLOUR CODES:

RED	Toilets and Showers
YELLOW	Ambulance Interiors
GREEN	Kitchen and Dining Areas
BLUE	General Areas
BLACK	Vehicle Exteriors

Chemex with **ARRIVA**
Which Product Where?

Hand Sanitising
 Use in Public Areas, Toilets and Showers, Reception Areas, Waiting Areas, etc.

Hand Washing
 Use in Public Areas, Toilets and Showers, Reception Areas, Waiting Areas, etc.

Hand Disinfection
 Use in Public Areas, Toilets and Showers, Reception Areas, Waiting Areas, etc.

Hand Protection
 Use in Public Areas, Toilets and Showers, Reception Areas, Waiting Areas, etc.

Hand Cleaning
 Use in Public Areas, Toilets and Showers, Reception Areas, Waiting Areas, etc.

Chemex
 Chemical Management Station

Three dispensers for different products: Hand Sanitising Foam, Hand Washing, and Hand Disinfection.



Chemex
 Hand Sanitising Foam dispenser



Chemex with **ARRIVA**
Hand Hygiene Station

Hand Sanitising Foam

Please use the hand foam

1. Wet hands with water and turn off the tap.
 2. Apply a small amount of foam to your palms.
 3. Rub your palms together for at least 20 seconds.



When? Recommended prior to & Moments of Hand Hygiene

- Before handling a patient
- Before a clinical procedure
- After a clinical procedure
- After handling a patient's care
- After touching a patient's environment

Hand Sanitising Foam
 Chemex
 Hand Sanitising Foam



DANGER HOT WATER
 Chemex



Questions?

Dr Sean Derrig

Visit us and our friends from Churchill Make Ready on Stand 75

chemexuk.com

