Infection Prevention and Control Curriculum for Core Infection and Higher Infection Trainees

This is not an exhaustive list but includes areas that should be covered during the course of training in microbiology. Opportunity to be involved in these areas of infection control will arise throughout the training period.

Each trainee should keep records (e-portfolio) of their experience by listing meetings attended, keeping episode summaries and writing reflective notes following incidents. Competence in many areas can be demonstrated through workplace-based assessments (CBD, DOP, ECE).

The listed "methods of learning" and "evidence of learning" are examples for guidance.

The basic understanding acquired during CIT (theoretical knowledge) should be developed during Higher Specialty training through active involvement in IPC, progressing from "working with supervision" to "performing with minimum supervision". The most senior trainees (post Part-2 FRCPath) should consider a period as acting Infection Control Doctor. **Trainees are expected to demonstrate that they have gained practical experience, not just didactic learning**.

Trainees should be able to demonstrate that they have read and understood the current guidance documents and major guidelines and are able to apply them to practice.

Clinical and Educational Supervisors should act as IPC mentors, or identify another individual who can act in this capacity. Attendance at meetings and shadowing of Infection Prevention and Control Nurses (IPCN)/ Infection Control Doctors (ICD) should be pro-actively scheduled in advance by contacting the appropriate members of the Infection Control and Prevention Team (IPCT).

Clinical and Educational Supervisors have a responsibility to release trainees from clinical duty in order to allow them to be involved in responding to incidents or outbreaks. Training Programme Directors should support this approach.

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1. General Principles and skills
2. Outbreak investigation and control
3. Surveillance
4. Commonly encountered Healthcare Associated Infection (HCAI) and specific organisms:
    (a) HA-MRSA & CA-MRSA and MSSA
    (b) Clostridium difficile
    (c) Glycopeptide resistant enterococci
    (d) Multi resistant Gram negatives (*Acinetobacter, Pseudomonas,* CPE)
    (e) HA- and CA- Tuberculosis
    (f) Viral infections
    (g) Other infections
5. Device-related infection
6. Environmental infection control:
    (a) Legionella
    (b) Other water issues:
    (c) Theatres and Ventilation
7. Decontamination of medical devices, equipment and the environment
8. Endoscopy service
9. Laundry service
10. Hospital Catering & food hygiene
11. Estates and facilities
12. The role of the laboratory
13. Epidemiology and surveillance
14. Communication between healthcare providers
15. Occupational Health Issues (OH)
16. Service evaluation/ research/audit in IPC
17. Leadership skills

1. **General Principles and skills**
    - Standard IPC Precaution.
    - Hand Hygiene.
    - PPE (from non-sterile gloves through to PPE for high-risk infections).
    - Patient placement: isolation, enhanced precautions, bed and bay closure, cohorting.
    - Preventing infection in immunocompromised patients.
    - Risk assessment (of patients & events).
    - Outbreak recognition and definition; management of cross-infection/clusters/outbreaks.
    - Root cause analysis (RCA).
    - Critical & serious incident investigation.
    - Occupational Health implications of staff carriage or exposure to infection.
    - Risk registers.
    - The role of the Care Quality Commission in setting / inspecting IPC standards
    - Detergent and Disinfectants.
    - Clinical governance and complaints.
    - Structure of the Infection Prevention and Control Team and Committee.
    - Accountability of the Infection Prevention and Control Team and Committees to the parent organisation (Trust/CCG) in both hospital and community settings.

CIT	HST	Method of learning	Indicative evidence of learning
• Understanding of general principles. • Attend root cause analysis meeting. • Attend IPCT meeting. • Involvement in and advising on management of clinical cases. • Perform Infection Control review with ICNs.	CIT plus: • Active involvement in managing cross-infection incidents. • Lead an RCA meeting and write report. • Answer a complaint related to IPC. • Active participation in IPCT. • Lead on guideline review/production.	• Local policies. • Local / Regional training. • Secondment to IPC Team. • IPC Committee attendance. • Management of clinical cases • Local study days (e.g. risk, complaints, SUI). • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course. • Mock CQC visit	• Reflection on event. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Evidence of active participation in and contribution to IPCT (e.g. committee minutes). • Author of outbreak report. • Author of RCA report. • Author of guideline. • Anonymised response to complaint.

2. Outbreak investigation and control:

- Outbreak recognition and definition.
- Investigation of an outbreak.
- The outbreak committee and agenda.
- Basic epidemiological and microbiological investigations.
- Using Excel to construct outbreak timelines / epidemic curves.
- Risk factor analysis and simple case-control studies.
- Simple statistics (e.g. StatCalc).
- Undertaking and interpreting environmental, staff and patient samples.
- Implementation and assessment of outbreak control measures.
- Communications – internally, externally.
- Writing a press release.
- Writing the outbreak report.

CIT	HST	Method of learning	Indicative evidence of learning
• Understanding of general principles.	CIT plus: • Active involvement in managing an outbreak / significant cross-infection incident. • Active participation in the outbreak committee and reporting.	• Active participation in outbreak committee (specific tasks, taking notes, producing minutes). • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes). • Author of outbreak report. • Author of press release. • Taking and producing committee minutes.

3. Surveillance:

- Principles of day to day HCAI surveillance.
- Current mandatory reporting framework.
- Data required and data entry.
- DH and local targets and how they are set.
- Extracting and querying data.

CIT	HST	Method of learning	Indicative evidence of learning
• Understanding of mandatory surveillance.	CIT plus: • Experience of data entry. • Experience of data retrieval. • Involvement in local target negotiations.	• Secondment to IPC Team. • Local / Regional training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course.	• Reflection on event. • Evaluation of clinical events (ECE). • Author of written report.

4. Commonly encountered Healthcare Associated Infection (HCAI) and specific organisms:

(a) HA-MRSA & CA-MRSA and MSSA

- Epidemiology, clinical & IPC implications in healthcare settings and the community.
- Strategy aspects (national & local) and targets.
- Department of Health / UK / European and other guidelines.
- Mandatory reporting frameworks.
- Screening policies.
- Control measures.
- Root Cause Analysis.
- Occupational Health implications of staff carriage and infection.
- Laboratory detection methods and pros and cons of each.
- Treatment and decolonisation guidelines.
- Outbreak management.
- Panton Valentine Leukocidin - detection/management/treatment/infection control/public health.

CIT	HST	Method of learning	Indicative evidence of learning
• Understanding of HA-MRSA & CA-MRSA and MSSA in the healthcare setting. • Involvement in and advising on management of clinical cases / bacteraemia review. • Attend root cause analysis meeting. • Perform Infection Control review with ICNs.	CIT plus: • Lead a RCA meeting and write report. • Observe data input onto HCAI database. • Experience of data retrieval. • Involvement in local target negotiations. • Active involvement in managing an outbreak / significant cross-infection incident. • Laboratory experience.	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days. • Laboratory training. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Directly Observed Procedure (DOP). • Author of outbreak report. • Author of RCA report. • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes).

(b) *Clostridium difficile*

- Epidemiology, clinical & IPC implications in healthcare settings and the community.
- Definition of outbreak, community onset vs hospital onset, 48-hour rules, community vs healthcare-acquired/associated infection.
- Department of Health / UK / European and other guidelines.
- Principles of day to day HCAI surveillance.
- Control measures to address local increases in prevalence (e.g. hand hygiene, environmental and antibiotic audits).
- Cleaning methods and efficacy, persistence in patients, environmental persistence.
- Root Cause Analysis.
- Outbreak management.
- Laboratory detection methods and pros and cons of each.
- Strategy aspects (national & local) and targets.
- Mandatory reporting frameworks.

CIT	HST	Method of learning	Indicative evidence of learning
• Understanding of *C. difficile* in the healthcare setting. • Involvement in and advising on management of clinical cases. • Attend root cause analysis meeting. • Perform Infection Control review with ICNs.	CIT plus: • Lead a RCA meeting and write report. • Involvement in local target negotiations. • Active involvement in managing an outbreak / significant cross-infection incident. • Laboratory experience.	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Laboratory training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Directly Observed Procedure (DOP). • Author of outbreak report. • Author of RCA report. • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes).

(c) Glycopeptide resistant enterococci

- Epidemiology, clinical & IPC implications in healthcare settings and the community.
- Control guidelines.
- Department of Health / UK / European and other guidelines.
- Control measures to address local increases in prevalence (e.g. hand hygiene, environmental and antibiotic audits).
- Cleaning methods and efficacy, persistence in patients, environmental persistence.
- Outbreak management.
- Laboratory detection and identification methods.
- Local surveillance.

CIT	HST	Method of learning	Indicative e**vidence of learning**
• Understanding of GRE in the healthcare setting. • Involvement in and advising on management of clinical cases. • Perform Infection Control review with ICNs.	CIT plus: • Active involvement in managing an outbreak / significant cross-infection incident. • Laboratory experience.	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Laboratory training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Directly Observed Procedure (DOP). • Author of outbreak report. • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes).

(d) Multi resistant Gram negatives (*Acinetobacter, Pseudomonas,* CPE**)**

- Epidemiology, clinical & IPC implications in healthcare settings and the community.
- Definitions
- Public Health England (PHE) guidance on management.
- Department of Health / UK / European and other guidelines.
- Strategy for control in hospitals.
- Strategy for control in the community.
- Screening, isolation.
- Laboratory detection methods and pros and cons of each.
- Cleaning methods and efficacy, persistence in patients, environmental persistence.
- Outbreak management.

CIT	**HST**	**Method of learning**	Indicative e**vidence of learning**
• Understanding of MR-Gram negatives in the healthcare setting. • Involvement in and advising on management of clinical cases • Perform Infection Control review with ICNs.	CIT plus: • Active involvement in managing an outbreak / significant cross-infection incident. • Laboratory experience.	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Laboratory training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Directly Observed Procedure (DOP). • Author of outbreak report. • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes).

(e) HA- and CA- Tuberculosis

- Epidemiology, clinical & IPC implications in healthcare settings and the community.
- Public Health England (PHE) guidance on diagnosis, management and screening.
- Management of a TB exposure in a healthcare setting.
- Department of Health / UK / European and other guidelines.
- TB vs other mycobacteria: what needs isolating/contact tracing.
- Occupational Health implications of healthcare worker exposure.
- Multi-drug resistance issues.

CIT	HST	Method of learning	Indicative evidence of learning
• Understanding of mycobacterial infection in the healthcare setting. • Involvement in and advising on management of clinical cases. • Perform Infection Control review with ICNs.	CIT plus: • Active involvement in managing an outbreak or exposure incident (arising from either a patient or healthcare worker).	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Laboratory training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Directly Observed Procedure (DOP). • Author of outbreak report. • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes).

(f) Viral infections

- Norovirus
- Respiratory viruses in immunosuppressed
- SARS, smallpox, haemorrhagic fevers, MERS-CoV
- Respiratory viruses/RSV in children, VZV, measles, mumps, coxsackie
- Influenza and Pandemic 'flu
- Blood-borne viruses, including prevention of spread in the haemodialysis setting.

- Epidemiology, clinical & IPC implications in healthcare settings and the community.
- Occupational Health implications of healthcare worker exposure or infection, including accidental BBV exposure in dialysis or theatre.
- Department of Health / UK / European and other guidelines.

CIT	**HST**	**Method of learning**	Indicative e**vidence of learning**
• Understanding of viral infection in the healthcare setting. • Involvement in and advising on management of clinical cases. • Perform Infection Control review with ICNs.	CIT plus: • Active involvement in managing an outbreak / exposure incident.	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Directly Observed Procedure (DOP). • Author of outbreak report. • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes).

(g) Other infections

- Group A *Streptococcus*
- Pertussis
- Fungal infection e.g. Aspergillus and moulds
- Scabies, lice, bed bugs

- Epidemiology, clinical & IPC implications in healthcare settings and the community.
- Department of Health / UK / European and other guidelines.
- Occupational Health implications of healthcare worker exposure or infection.
- Preventing infection in immunocompromised patients.

CIT	HST	Method of learning	Indicative evidence of learning
• Understanding of these infections in the healthcare setting. • Involvement in and advising on management of clinical cases. • Perform Infection Control review with ICNs.	CIT plus: • Active involvement in managing an outbreak / exposure incident. • Laboratory experience.	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days • Laboratory training. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Directly Observed Procedure (DOP). • Author of outbreak report. • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes).

5. Device-related infection

- Understand the role of Invasive devices as sources of infection.
- Catheter related Blood Stream Infections (CR-BSI).
- Catheter Associated Urinary Tract Infections (CA-UTI).
- Ventilator associated pneumonia (VAP).

CIT	HST	Method of learning	Indicative evidence of learning
• Understanding of these infections in the healthcare setting. • Involvement in and advising on management of clinical cases.	CIT plus: • Lead a RCA meeting where device-related infection is a factor and write report. • Active participation in IPCT. • Lead on guideline review/production.	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days. • Laboratory training. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Evidence of active participation in and contribution to IPCT (e.g. committee minutes). • Author of RCA report. • Author of guideline.

6. Environmental infection control

(d) *Legionella*:

- Guidance, e.g.: HTM 04-01, L8.
- Attend Water Quality Committee meeting.
- Laboratory processing of water samples.
- Response to detection of Legionella in a water outlet.

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of the implications of Legionella in the healthcare setting. • Involvement in and advising on management of clinical cases.	CIT plus: • Understanding of guidance for Legionella control in healthcare premises. • Deal with episode of elevated level of Legionella detected in water samples. • Laboratory experience: processing environmental samples.	• Water Quality Committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days. • Laboratory training. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflection on event. • Evaluation of clinical events (ECE). • Directly Observed Procedure (DOP).• Evidence of active participation in and contribution to Water Quality Committee (e.g. committee minutes). • Document advice given in response to elevated level of Legionella detected in water samples.

(e) Other water issues:

- Ice machines and water coolers.
- Reverse Osmosis (RO) water.
- Dialysis Unit water quality.
- Birthing and hydrotherapy pools.
- New builds and water system validation.
- Endoscope Washer Disinfectors.
- Cardiac Heater Coolers.
- Pseudomonas control in high-risk units.

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of water quality in the healthcare setting and its implications.	CIT plus: • Understanding of guidance for ensuring water quality in healthcare premises. • Involvement in IPC issues relating to day-to-day water quality. • Involvement in estate reconfiguration or planning where water quality is addressed. • Active involvement in investigating/managing an incident.	• Secondment to IPC Team. • Water Quality Committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days. • Laboratory training. • Attendance at HIS Foundation Course.	• Reflective note. • Evaluation of clinical events (ECE). • Directly Observed Procedure (DOP). • Evidence of active participation in and contribution to Water Quality Committee (e.g. committee minutes). • Reflection on advice given in response to water quality problem or management of an incident.

(f) Theatres and Ventilation:

- Guidance, eg: HTM 03-01, HIS guidelines (e.g. Guidelines on the facilities required for minor surgical procedures and minimal access interventions 2012, Microbiological commissioning and monitoring of operating theatre suites 2002).
- Collection methods and laboratory processing of air samples.
- Ventilation design: conventional and laminar flow theatre (UCV) ventilation.
- Infection control aspects of design, work flow etc.
- Commissioning and annual verification test / interpreting reports.
- Validation after refurbishment/ major works.
- Ventilation in other settings: negative pressure isolation, HEPA filtration (e.g. Haematology).
- Other healthcare facilities: Review plans; involvement in design and build; final review; sign off: ongoing during build: final reviews and sign off.

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of ventilation quality in the healthcare setting and its implications.	CIT plus: • Active participation in IPCT. • Understanding of guidance for ensuring ventilation quality in healthcare premises. • Involvement in IPC issues relating to day-to-day air quality. • Involvement in estate reconfiguration or planning where ventilation is addressed. • Review annual verification reports for both conventional and ultraclean theatres. Identify any issues and suggest a suitable response. • Active involvement in investigating/managing an incident.	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days • Laboratory training. • Attendance at HIS Foundation Course. • Attendance at Estates planning or design meeting.	• Reflective note on involvement in planning or facilities design. • Evaluation of clinical events (ECE). • Evidence of active participation in and contribution to IPCT (e.g. committee minutes). • Reflection on advice given in response to ventilation problem or management of an incident.

7. Decontamination of medical devices, equipment and the environment:

- Sterile services department (SSD).
  - Guidance, eg: HTM01-01
  - Organisation of SSD
  - Infection control aspects of design, work flow etc
- Roles and Responsibilities (Microbiologist, DIPC, Decontamination Lead, Authorised Person/AE(D)).
- Methods of decontamination/disinfection/sterilisation.
- Ultrasound probes.
- New equipment: how to review decontamination requirements including ward based equipment, endoscopes and surgical instruments.
- Pharmacy and manufacturing.
- Role and function of environmental detergent/disinfectants.
- Evaluation of effectiveness and safety of environmental detergent/disinfectants.
- Automated Room Decontamination Devices (ARDD) including Ultraviolet & Hydrogen Peroxide Vapour (HPV)
- Decontamination of different types of medical device (surgical instruments / ventilation equipment / intracavity devices).
- Decontamination of dental instruments (primarily in the community) e.g. guidance HTM01-05.
- Creutzfeldt Jakob Disease (CJD/vCJD) and instrument decontamination.
  - DH guidance
  - Management and follow up of a suspected case
  - Assessment of CJD risk in patients undergoing invasive procedures
  - Management of patients deemed to be at risk of vCJD/CJD
  - Surgical equipment tracking

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of the management of medical devices and equipment in the healthcare setting. • Awareness of the need for pre-procedure CJD risk assessment.	CIT plus: • Understanding of relevant guidance and its application to practice. • Active participation in Decontamination Group meetings. • Active participation in Medical Equipment Management Group meetings. • Involvement in IPC issues relating to	• Secondment to IPC Team. • Visit to SSD. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at Decontamination	• Evaluation of clinical events (ECE). • Evidence of active participation in and contribution to Decontamination Group, MEMG and incident control meeting (e.g. committee minutes). • Reflection on advice given in response to decontamination problem or management of an incident.

	day-to-day management of medical devices • Able to make preoperative CJD risk assessment. • Active involvement in investigating/managing an incident relating to medical equipment (including CJD exposure).	Group meetings. • Attendance at Medical Equipment Management Group meetings (MEMG). • Attendance at HIS Outbreak course.	• Reflective note on the IPC aspects of new equipment acquisition. • Reflective note on response to a CJD exposure incident.

8. Endoscopy service:

- Guidance, e.g.: HTM 01-06.
- Roles and Responsibilities (Microbiologist, DIPC, Decontamination Lead, Authorised Person/AE(D)).
- Infection control aspects of design, work flow etc.
- Decontamination of endoscopes - process, equipment & validation.
- Detergent and Disinfectants.
- Rinse water testing.
- Assessment and management of patients at risk of Creutzfeldt Jakob Disease (vCJD/CJD).

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of clinical issues relating to decontamination of endoscopes. • Awareness of the need for pre-procedure CJD risk assessment.	CIT plus: • Understanding of relevant guidance and its application to practice. • Involvement in IPC issues relating to endoscopy. • Able to make pre-endoscopy CJD risk assessment. • Active involvement in investigating/managing an incident relating to endoscopy. • Assessment of TVC reports for final rinse waters (endoscope washer disinfectors).	• Secondment to IPC Team. • Visit to Endoscopy department. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days • Laboratory experience. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Evaluation of clinical events (ECE). • Reflection on management of an incident relating to endoscopy. • Reflection on response to high TVC count for final rinse waters (endoscope washer disinfectors).

9. Laundry service:

- Guidance and literature, e.g.: HSG(95)18, Dry cleaning JHI (1993) 23; 255-262, Laundry JHI (1994) 27; 219-235.
- Roles and Responsibilities (Microbiologist, DIPC, Decontamination Lead, Authorised Person/AE(D)).
- Infection control aspects of design, work flow etc.
- Process & temperatures of washing and drying cycles.
- Equipment.
- Validation and quality control.
- Role of detergents and disinfectants.
- Microbiological testing of laundered linen and the interpretation of the results.
- The properties of different fabrics used in the healthcare setting.
- Prevention of infection and injury to staff handling used linen.

CIT	HST	Method of learning	Indicative evidence of learning
n/a	• Understanding of relevant guidance and its application to practice. • Involvement in IPC issues relating to laundry e.g. requests for domestic washing machines on wards.	• Secondment to IPC Team. • Visit to laundry facility. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days. • Laboratory experience. • Attendance at HIS Foundation Course.	• Reflective note. • Evaluation of clinical events (ECE). • Reflection on management of a query or incident relating to laundry services.

10. Hospital Catering & food hygiene

- Understanding of food production & supply: Hospital Central Production Unit / Cook-chill and cook-freeze / ward meal service / retail outlets
- Quality Assurance
- Regulation eg. British Standards ISO 9001: 2015, Food Safety Act 1990, Food Hygiene (England) Regulations 2006, General Food Regulations 2004, EU Food Information for Consumers Regulation 1169/2011, EC Regulation 852/2004 Hygiene of Food Stuffs, EC Regulation 178/2002 General Food Law Regulation, EC Regulation 2073/2005 Microbiological Criteria of Foods, Chilled and Frozen: Department of Health Guidelines on Cook-Chill and Cook-Freeze Catering Systems 1989 (ISBN 0 11 321161 9).
- Understanding of the role of HACCP analysis in food production.
- Role of microbiological monitoring – pathogens and hygiene indicator organisms (eg. HPA Guidelines for Assessing the Microbiological Safety of Ready-to-Eat Foods Placed on the Market, 2009)
- Role of the Food Standards Agency and Local Authority
- Outbreaks associated with institutional catering

CIT	HST	Method of learning	Evidence of learning
n/a	• Understanding of relevant guidance and its application to practice. • Involvement in IPC issues relating to catering	• Secondment to IPC Team. • Visit to catering facility. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days. • Laboratory experience • Attendance at HIS Foundation Course • Attendance at HIS Outbreak course	• Reflective note. • Evaluation of clinical events (ECE). • Reflection on management of a query or incident relating to catering services.

11. Estates and facilities:

- Guidance and literature, e.g.: HBN00-09.
- The role of IPC in advising estates.
- Review of plans: design and function e.g. spacing, flow.
- Advice on choice of fittings (e.g. taps, sinks, flooring) .
- Pest control (e.g. fleas, bed bugs, flies).
- Waste disposal.
- Dust control measures during building work / refurbishment.
- Specifications for different types of isolation room.

CIT	HST	Method of learning	Indicative evidence of learning
n/a	• Understanding of relevant guidance and its application to practice. • Involvement in IPC issues / incidents relating to Estates and facilities management. • Involvement in Estates design and planning group for reconfiguration or new build. • Review of plans for new or upgrade work .	• Secondment to IPC Team. • IPCT committee attendance. • Local policies. • Local / Regional training. • Attending HIS Trainee Days. • Laboratory experience. • Attendance at HIS Foundation Course. • Involvement in Estates design and planning group. • Attendance at HIS Outbreak course.	• Reflective note. • Evaluation of clinical events (ECE). • Reflection on management of a query or incident relating to Estates and facilities management e.g. waste disposal, pests, dust control. • Reflection on participation in design and planning group for reconfiguration or new build.

12. The role of the laboratory

- Understand available detection methods for both clinical and targeted environmental samples.
- Understand the principles of different typing methods, which methods are appropriate for specific organisms and how typing aids infection control investigations.
- Able to make appropriate recommendation for additional microbiology testing to support and inform control measures in response to newly diagnosed infections.

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of laboratory methods available locally and from reference laboratories.	CIT plus: • Understanding of relevant guidance and its application to practice. • Formulate opinion on which methods/typing to use in different scenarios to support IPC needs.	• Laboratory experience. • Local SOPs. • Local / Regional training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflective note. • Directly Observed Procedure (DOPS). • Evaluation of clinical events (ECE).

13. Epidemiology and surveillance

- Collecting data: use of spreadsheets and databases.
- Presenting data.
- Using data to influence practice.
- Using a timeline or epidemic curve.
- When and how to use a case control study.
- Epidemiology & infection control aspects of surgical site infections (SSI): definitions, relationship to IPC.

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of surveillance as a means for changing or improving practice. • Advise on management of a case of SSI.	CIT plus: • Able to record data in spreadsheet or database. • Ability to extract and present data in an appropriate format.Deal with a cluster of SSI in a specialty.	• Laboratory experience. • Local SOPs. • Local / Regional training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course. • Perform a Quality Improvement (QI) project in SSI reduction.	• Reflective note. • Directly Observed Procedure (DOPS). • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • QI project report.

14. Communication between healthcare providers

- Liaison with GPs/ CCG and Public Health.
- Investigation and management of clusters / outbreaks in the community.
- The role of the HPU.
- Notifiable disease regulations.
- Infection prevention and control in the community and non-acute settings.
- The role of the Environmental Health Department in the investigation of infection.

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of the routes of informal and formal communication required to deliver ICP and manage incidents across organisational boundaries. • Understand and apply Notifiable Disease Regulations in routine practice.	CIT plus: • Active involvement in managing an outbreak / significant cross-infection incident. • Deal with IPC issue in non-acute setting (e.g. nursing/residential home) in conjunction with community ICN.	• Attachment to HPU. • Visit to/liaison with Environmental Health Department. • Active participation in inter-organisational outbreak (specific tasks, taking notes, producing minutes). • Community IPC Committee attendance. • Local / Regional training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflective note. • Evaluation of clinical events (ECE) • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes).

15. Occupational Health Issues (OH)

- Pros and cons of Staff Screening.
- Confidentiality issues.
- MRSA.
- Diarrhoea.
- Rashes.
- Tuberculosis.
- Influenza and respiratory viruses.
- Issues of potential conflict between OH and IPC e.g. dermatitis, chemicals.
- Needle-stick/Blood borne virus (BBV) exposure incidents.
- Infections in healthcare workers attributable to occupational exposure (RIDDOR).

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of the role of the Occupational Health Department in managing staff with infection. • Awareness of the interface between IPC and occupational health in screening or managing staff with infection. • Awareness of the potential for infected or colonised staff to transmit infection to or between patients. • Awareness that staff are at risk of acquiring infection from patients.	CIT plus: • Active involvement in managing an outbreak / significant cross-infection incident where staff members have been affected.	• Active liaison with Occupational Health Department. • Local policies. • Secondment to IPC Team. • IPCT committee attendance. • Active participation in inter-organisational outbreak (specific tasks, taking notes, producing minutes). • Local / Regional training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course.	• Reflective note referencing occupational health issues. • Evaluation of clinical events (ECE). • Case-based discussion (CBD). • Evidence of active participation in and contribution to outbreak / incident control (e.g. outbreak committee minutes).

16. Service evaluation/ research/audit in IPC

- The role of audit and service evaluation in IPC
- Critical appraisal of new technology or product related to IPC

CIT	HST	Method of learning	Indicative evidence of learning
• Awareness of audits being undertaken as part of the IPC programme. • Participate in hand hygiene or environmental audit.	CIT plus: • Undertake a critical evaluation of a proposed new product (e.g. hand hygiene product or wipe) or of the proposed decontamination method for a new piece of equipment.	• Secondment to IPC Team. • IPCT committee attendance. • Local / Regional training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course. • Perform an audit, service evaluation or quality improvement (QI) project on an aspect of infection control practice.	• Reflective note. • Evaluation of clinical events (ECE). • Evaluation/appraisal report. • Audit, service evaluation or quality improvement (QI) report.

17. Leadership skills

- Effective communication with clinical and other professional colleagues, individually and in a team setting
- Works effectively and provides clinical leadership in a multidisciplinary team
- Makes effective decisions in a team setting and take responsibility for them
- Effective team-working skills, including influencing, negotiating, setting priorities and managing complex situations.
- Highly organised
- Delegates appropriately
- Completes tasks reliably

CIT	HST	Method of learning	Evidence of learning
• Understanding of general principles. • Organises work effectively. • Works effectively with team members to deliver the service. • Takes responsibility for own actions. • Reliable and conscientious. • Completes allocated tasks to a satisfactory standard. • Communicates clearly verbally and in writing. • Understands the limits of own knowledge and competence and seeks advice appropriately.	CIT plus: • Active involvement in managing a significant cross-infection or laboratory incident. • Active participation in an outbreak / incident committee • Active participation in multidisciplinary guideline production • Involvement in committees (eg. Laboratory management team, antimicrobial stewardship team, water management team)	• Secondment to IPC Team. • IPCT committee participation • Active participation in committees and working groups (specific tasks, taking notes, producing minutes). • Local / Regional training. • Attending HIS Trainee Days. • Attendance at HIS Foundation Course. • Attendance at HIS Outbreak course. • Undertake management skills course. • Undertake assessment of personality type / management style	• Reflective note. • Evaluation of clinical events (ECE) eg. setting agenda /minute taking / write up / writing reports / evaluations. • Evidence of active participation in and contribution to outbreak / incident control /guideline development /committee business