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Decontamination Refresher

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Regional DCP Tutor

Aim

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To refresh the information on the topic of decontamination in general practice and local guidance documents pertaining to it.

Outcomes

By the end of the session you will:

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- Highlight the decontamination roles
- Outline the decontamination cycle
- Identify improvements in the LDU workflow
- Indicate the guidance for local decontamination
- Accurately complete Steriliser testing sheets
- Awareness of the IPC decontamination audit

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Learning content:

This training session is intended to create an understanding of the decontamination process within dental practice.

GDC outcome: C

Local Decontamination Guidance

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Northern Ireland Guidance on Decontamination in Primary Care Dental Practices: HTM01-05 2013 Edition

Ref: PEL (13) 13

The Team

The manager will appoint the following roles.

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- User e.g. practice manager/senior nurse
- Decontamination lead e.g. Practice manager/senior nurse
- Operator e.g. Dental nurse
- Authorising Engineer (decontamination)
- Competent Person/service engineer
- Microbiologist (Decontamination)
- Control of Infection Officer

Operator

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- Knowledge and skills are required to perform this role.
- Training: **Manager/User** provides
- Guidance and support
- Feedback
- Documentation maintained

Are they safe….

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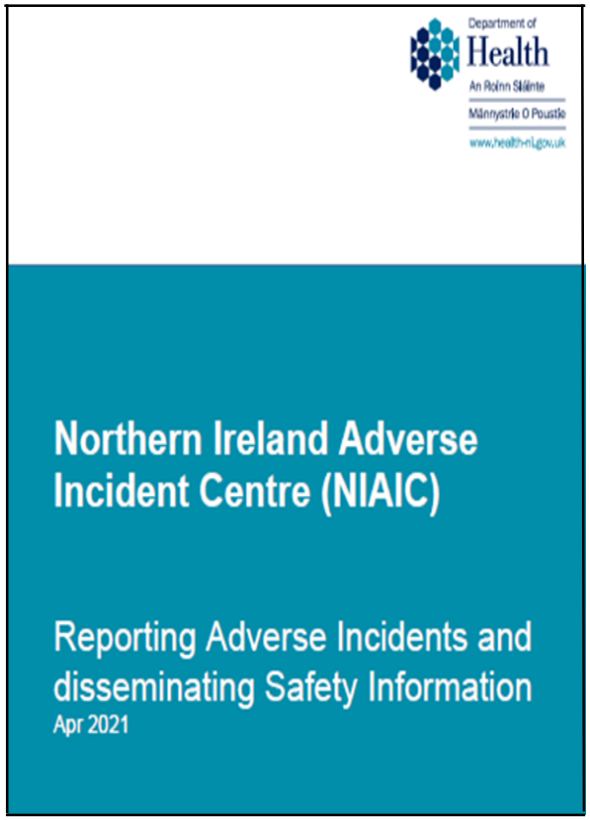
Incident Reporting



Reduction of general Adverse Incident Reporting

- NIAIC has updated:
  Adverse Incident Reporting form

- Reporting adverse Incidents and disseminating safety information updated

https://applications.healthni.gov.uk/NICAS/Public/Home.aspx

Decontamination cycle

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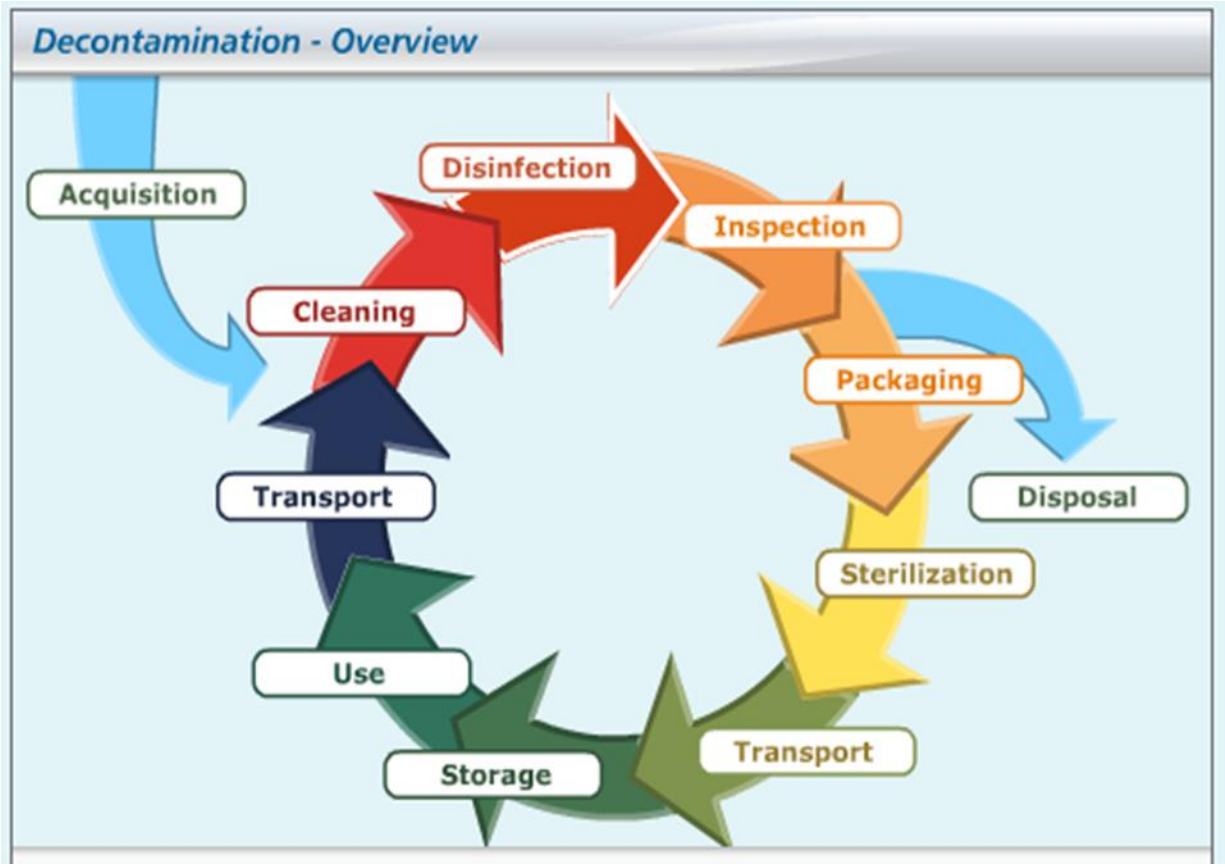

Acquisition / Procurement

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- Suitable for purpose / compatible with existing equipment
- Processed to meet standards / CE marked
- Commissioned/validated at installation on site
- Procured against relevant model engineering specification testing schedule
- Maintenance and servicing schedule in place
- Training included in price
- Running and testing costs if appropriate

Instrument Trays

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‘a separate clean/sterilised instrument tray should be used for each patient, alternatively a disposable tray may be used’

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How do you move your instruments from the bracket table to the dirty box and into the LDU

Is there room for improvement?

Dirty Instruments:

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Removal from chairside	Technique	Dirty/clean boxes
Sharps removal	To spray or not to spray!	Transport to decontamination room

Remember…..

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- Non refillable bottles:
- 6.58: It is not good practice to refill spray bottles used to apply cleaning or disinfecting solutions…..
- Such bottles should be single use.

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Do you manually clean or rinse before using the washer disinfector?

Do we read manufacturer instructions when we get a new item?

Cleaning

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‘DHSSPS do not accept manual cleaning as a validated process therefore, in order to achieve a validated cleaning/washing cycle, a washer disinfector must be used.’

(Best practice requires a washer disinfector) November 2012

Unchanged!



Manual Cleaning

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- Can be hazardous to the operator:

Full PPE & heavy duty gloves

The process of manual cleaning:

- Only used specifically formulated detergent (neutral ph)
- Volume of water/detergent important, gradients on sink (ref to instructions on detergent)
- Temperature of water 45oC or lower
- Personal protective equipment: Household gloves/goggles/apron/mask
- Wash below the water line to avoid aerosol
- Use a long handled nylon bristle brush fit for purpose (no abrasive pads)
- Keep kits together be aware of sharp instruments
- Rinse in separate sink with good quality water i.e. RO water
- Dry with a lint free disposable cloth

Washer Disinfectors

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Test	Description	Performed by
Daily		
Remove & clean strainers and filters	Filters & strainers must be clean	User or delegated to operator
Cleaning efficiency	Visual examination of all load items	User or delegated to operator
Weekly (in addition to daily)		
Protein residue test	Confirms process retains the capability of removing proteins	User or delegated to operator
Safety checks	Check condition of door seal	User or delegated to operator

Washer Disinfector Service Engineer Requirements

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Test	Description
Quarterly (weekly tests plus)	
Safety checks	Check safe operation of door, seal
Cleaning efficiency test	
Chemical dosing	Confirm delivery of detergent/additives
Thermometric disinfection test	Use of thermocouples on worst case load to confirm disinfection parameters
Annually	
Completion of all validation tests above	

The Cycle

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FLUSH
- Removes gross contamination
- Water temp under 45°c

WASH
- Detergent wash
- Chemical processes loosen & break up debris

RINSE
- Removes detergent
- Good quality water should be used

Thermal Disinfection
- Temperature raised & held at pre-set disinfection temperature
- E.g. 80°c for 1 minutes or 90°c for 12 seconds

Drying
- Purges the load and chamber with heated air to remove residual moisture

Endodontic Reamers/Files

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Endodontic reamers/files should be treated as single use regardless of the manufacturer's designation

PEL (13) 1

Updated Guidance

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Medicines & Healthcare products Regulatory Agency

MHRA
Regulating Medicines and Medical Devices

Single-use medical devices: implications and consequences of reuse

January 2021

V2.4

Inspection

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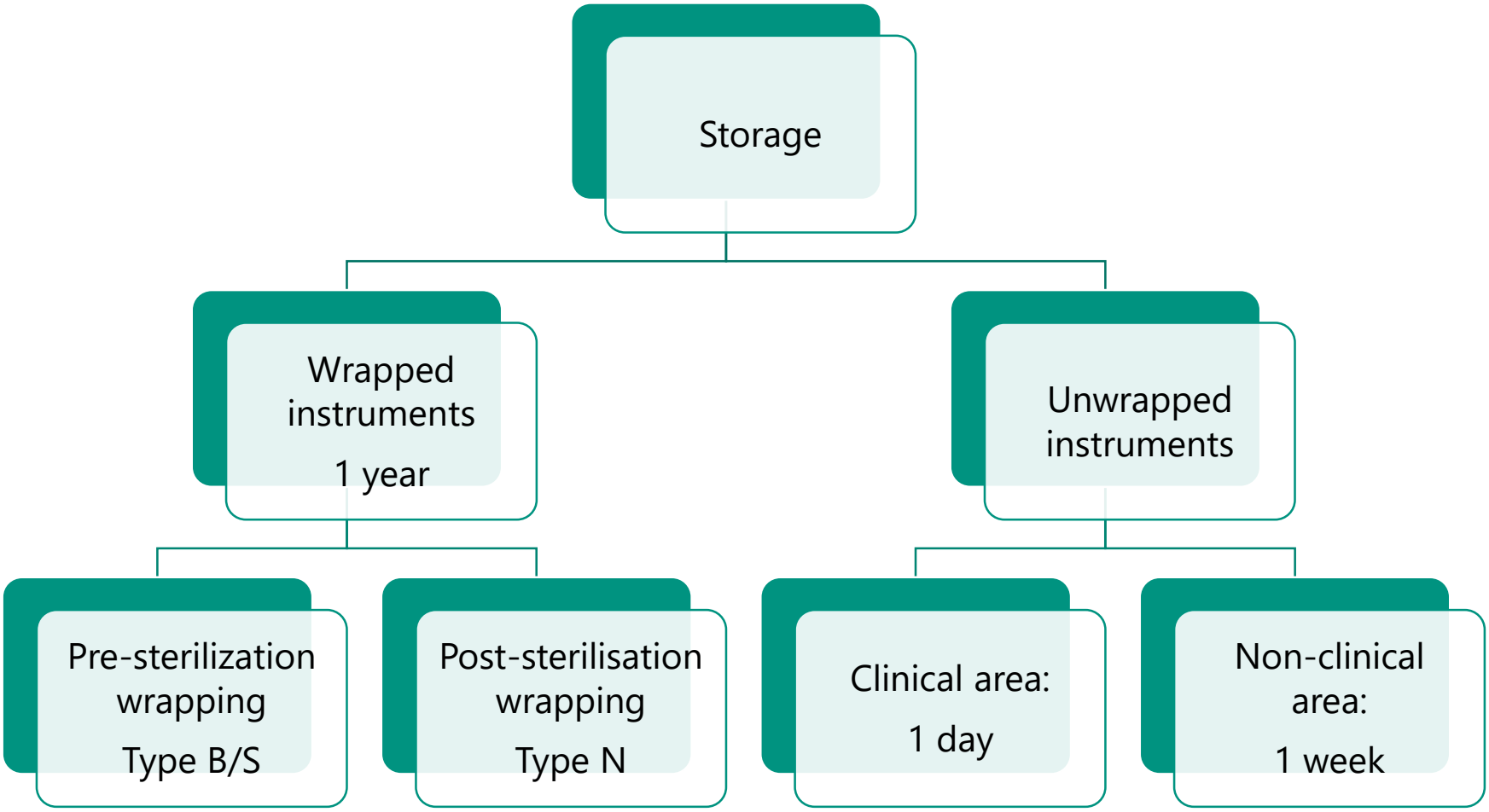
- Light magnifer

Packaging and Storage



Quality Systems

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- Ensure correct processing
- Expiry date required on
- packaged items
- Rotation of instruments

Sterilisers

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Types

- Roles

Parameters

Daily House Keeping



Sterilisers

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Test	Type	Performed by
Daily		
Automatic Control Test	B,N,S	User or delegated to Operator
Steam Penetration Test	B, S	User or delegated to Operator
Weekly (in addition to daily)		
Air leakage	B, S	User or delegated to Operator
Residual air test	S, N	User or delegated to Operator

Sterilisers
Service Engineer Requirements

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Test	Type
Quarterly	
Thermometric test	B, N, S
Annually (quarterly test plus)	
Steam generator overheat cut out test	B, N, S
Thermometric Test Small load Large load	B, N, S
Dryness test Small load Large load	B, S
Full Validation Report	

HTM 01-05 testing

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Daily:

- Automatic control test
- Steam penetration (type B & S only)

Weekly:

- Safety checks: door seal/door closed interlock/ door pressure interlock
- Air leakage test (type B & S)*
- Residual air test (type B & S)*

* Only were the steriliser has an in-built self-test programme. Otherwise the test should be carried out by a engineer.

Automatic Control Test
(ACT)

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A daily observational test performed on all sterilisers to ensure the cycle is within the required specification:

Observation include:

The cycle times and temperatures are within the correct parameters.

Time & temperature, consistent with previous tests results.

No deviation from normal performance.

The machine displays ‘complete cycle’.

Ways to do ACT

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Keep for 2 years

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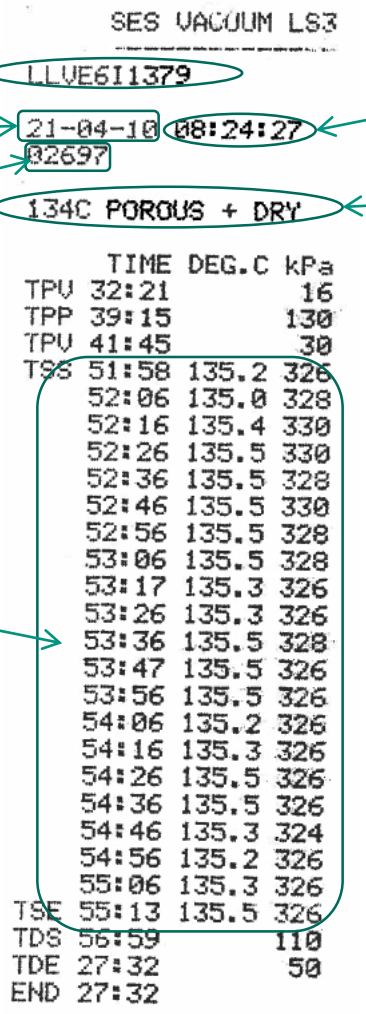
Serial Number (Unique Identifier of Steriliser)

Date

Cycle Number

Cycle start Time

Cycle Program



Mid-Point temp & pressure reading taken

Sterilisation Time
134 - 137°C

Example of Daily test sheet

Table A3 Daily test sheet

Tests to be carried out in accordance with HTM 01-05

Sterilizer location	Serial No.	Week beginning
Make/model		Ref. No.

		During sterilizing hold period		Sterilizing hold time		Automatic control test **result** Pass/Fail	Steam penetration test Pass/Fail/Not applicable	Certified fit for use by user
	Cycle number	Temp °C min/ max	Pressure bar	Min : sec				
Mon						P/F	P/F/NA	
Tue						P/F	P/F	
Wed						P/F	P/F	
Thur						P/F	P/F	
Fri						P/F	P/F	
Sat						P/F	P/F	
Sun						P/F	P/F	

Reservoir water changes (where applicable). Drain, rinse and refill with freshly distilled or RO water.			
	Cycle number when water changed	Comments	Water changed by
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

Faults – new or existing (also enter in plant history record)

Steam Penetration Test

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Use manufacturers` recommended test

SES VACUUM LS3

LLVE6I1379

21-04-10 08:24:27
02697

134C POROUS + DRY

	TIME	DEG.C	kPa
TPV	32:21		16
TPP	39:15		130
TPV	41:45		30
TSS	51:58	135.2	326
	52:06	135.0	328
	52:16	135.4	330
	52:26	135.5	330
	52:36	135.5	328
	52:46	135.5	330
	52:56	135.5	328
	53:06	135.5	328
	53:17	135.3	326
	53:26	135.3	326
	53:36	135.5	328
	53:47	135.5	326
	53:56	135.5	326
	54:06	135.2	326
	54:16	135.3	326
	54:26	135.5	326
	54:36	135.5	326
	54:46	135.3	324
	54:56	135.2	326
	55:06	135.3	326
TSE	55:13	135.5	326
TDS	56:59		110
TDE	27:32		50
END	27:32		

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		During sterilizing hold period		Sterilizing hold time		Automatic control test result Pass/Fail	Steam penetration test Pass/Fail/Not applicable	Certified fit for use by user
	Cycle number	Temp °C min/ max	Pressure bar	Min : sec				
Mon						P/F	P/F/NA	
Tue						P/F	P/F	
Wed						P/F	P/F	
Thur						P/F	P/F	
Fri						P/F	P/F	
Sat						P/F	P/F	
Sun						P/F	P/F	

What if?

Look at the information below: did it pass ACT?

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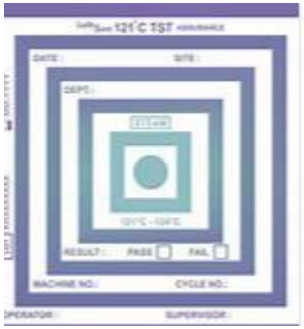
		During sterilizing hold period		Sterilizing hold time		Automatic control test result Pass/Fail	Steam penetration test Pass/Fail/Not applicable	Certified fit for use by user
	Cycle number	Temp °C min/ max	Pressure bar	Min : sec				
Mon	Not in Use					P/F	P/F/NA	
Tue	02698	134.8	326	3	08	P/F	P/F	
Wed						P/F	P/F	
Thur						P/F	P/F	
Fri						P/F	P/F	
Sat						P/F	P/F	
Sun						P/F	P/F	

What if?



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		During sterilizing hold period		Sterilizing hold time		Automatic control test result Pass/Fail	Steam penetration test Pass/Fail/Not applicable	Certified fit for use by user
	Cycle number	Temp °C min/ max	Pressure bar	Min : sec				
Mon	02699	135.0	328	3	14	P/F	P/F/NA	
Tue						P/F	P/F	
Wed						P/F	P/F	
Thur						P/F	P/F	
Fri						P/F	P/F	
Sat						P/F	P/F	
Sun						P/F	P/F	

Only what is required?

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Reflect?

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REFLECT

- Where are your burs stored & for how long?
- Can you say all unwrapped are used within times scale?
- Items are correctly dated?
- Instruments with parts are separated out?

Audit

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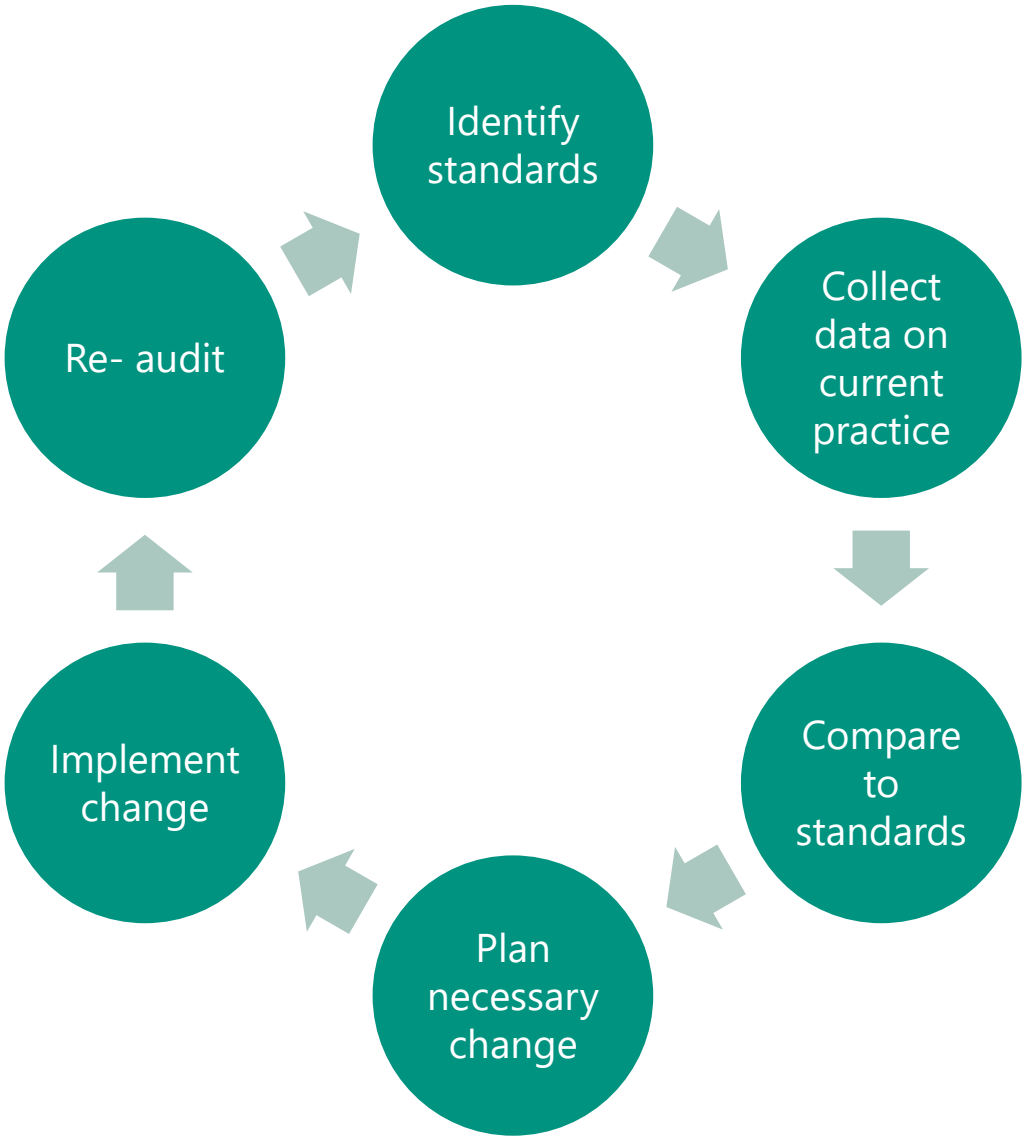

Self-Assessment Audits

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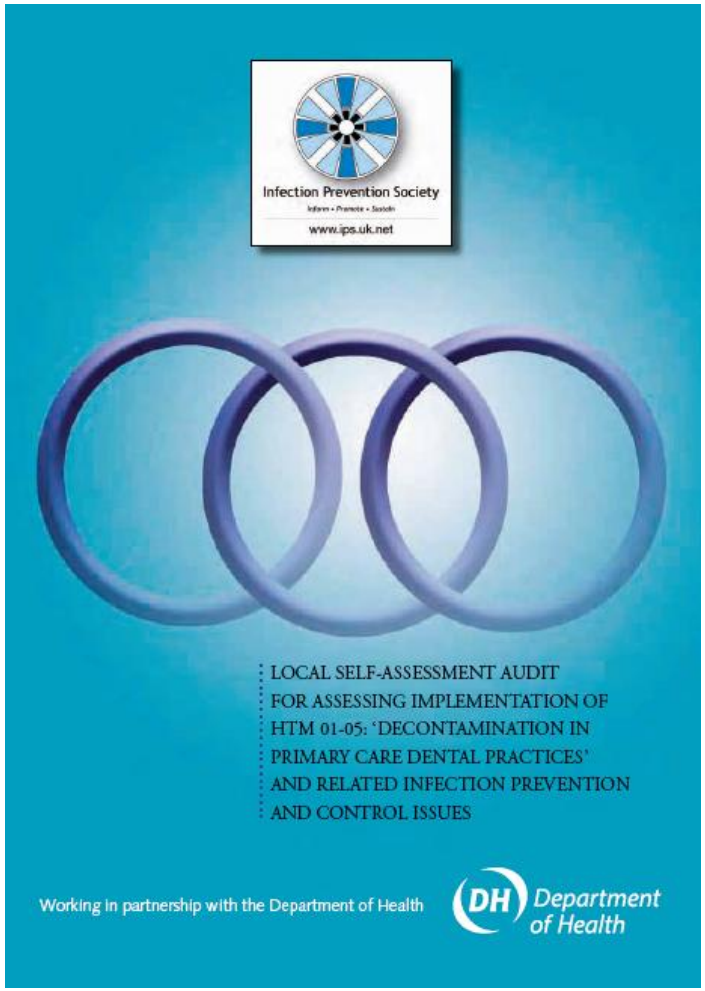
- Every six months using IPS audit tool that can be downloaded from DOH/ DHSSPS website
- Audit records should be kept for at least 2 years
- Headed up by the infection control lead
- Helpful for RQIA inspection



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ACTION PLAN

- Keeps focus so improvements are implemented
- Electronic version of IPS audit tool indicates HTM guidelines
- Re audit

Reflection

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- What did you learn?
- Did you identify any changes to your daily work?
- What was confirmed?
- Any benefit to your work/patients from this activity?

References

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- HTM 01-05
- PEL (13) (13)
- https://www.gov.uk/government/publications/decontamination-in-primary-care-dental-practices

Photos

- https://www.dreamstime.com/stock-photos-dentist-tools-drawer-4-image7580843
- https://www.walmart.com/ip/Mgaxyff-10pcs-Dental-High-Speed-Bur-Diamond-Polishing-Tooth-Preparation-Bur-Dental-Equipment-High-Speed-Bur-Dental-Equipment/238311116?wmlspartner=wlpa&selectedSellerId=101006085