

General			
Action	Yes	No	Comments/How?

Basic general hospital statistics

Hospital type			Secondary rural	8
Total number of beds			25	7
Number of operating theatres			1	7
Number of surgeries per year			360, 50 laparoscopic	7

CSSD general information

Number of CSSD staff			0	7
Number of OT nurses			3-4	8
Number of Biomedical technicians			0	8
Who reprocesses the laparoscopic instruments			OT nurses	8

Compliance with standards is verified against:

There is record keeping of sterile reprocessing		x		7
There is periodic review of reprocessing performance				
Product descriptions/documentation are available for all products to be sterilized				
There is a procedure for new materials/instruments				
Disposables are being reprocessed and reused				
What types?			Vessel sealers	
How often			Not known	
Number of reuses is documented				

For instruments that can be disassembled, (manufacturer) instructions are available for disassembly

There is a written protocol for manual cleaning		x		7
There is a protocol for repair of instruments				7

Cleaning facilities in and around the OT			
Action	Yes	No	Comments/How?

How often are the OT and cleaning areas cleaned?

Sinks are cleaned at the end of the day			After surgery	7
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Personal protection

Sufficient personal protection devices are available such as

Gloves of different materials				4,7
Watertight aprons with long sleeves			One type of glove	7
Safety goggles				7
Splash screen				7

Equipment in the OT

Compressed air gun		x		7
Water gun				7
Hand Shower				7
Ultrasonic cleaner				3
Flash autoclave				8
Compressed Air				8
Sink where instruments are rinsed				

Other equipment

	x		8
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The disinfectant trays (for Cidex) are kept near the OT

x		In the OT	
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What sort of disinfectant tray is used?

		Plastic Cidex container	
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How often are the disinfectant trays cleaned?

		Once per month	
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How often are the rinsing trays cleaned?

		Once per month	
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Description of the CSSD

Action	Yes	No	Comments/How?	Source
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There is a CSSD

	x			8
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All surgical instruments are fully processed in the CSSD

	x			
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The CSSD is cleaned daily

				7
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Sinks are cleaned at the end of the day

				7
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There are separate rooms for dirty, clean and sterile goods

	x			4,7
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Transport of sterile and contaminated goods is strictly separated

	x			1,4,7
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The instruments are only passed through machine hatches

	x			
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There is a storage area with racks

	x			1,4,8
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Personal protection

Sufficient personal protection devices are available such as

				4,7
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Gloves of different materials

	x			7
--	---	--	--	---

Watertight aprons with long sleeves

	x			7
--	---	--	--	---

Safety goggles

	x			7
--	---	--	--	---

Splash screen

	x			7
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Dirty area equipment available in CSSD

Water gun

	x			7
--	---	--	--	---

Hand Shower

	x			7
--	---	--	--	---

Sufficient materials for manual cleaning are available (brushes for external and internal cleaning)

	x			4,7
--	---	--	--	-----

Washer-disinfector

	x			3
--	---	--	--	---

Ultrasonic cleaner

	x			3
--	---	--	--	---

Drying machine

	x			8
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Compressed air gun

	x			7
--	---	--	--	---

Other equipment

	x			8
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How often is the ultrasonic cleaning fluid replaced?

				7
--	--	--	--	---

The used cleaning agents are suitable for the washer-disinfectors

				7
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Inspection and assembly area

Insulation tester

	x			
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Microscope

	x			
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Composition reference (paper or computer)

	x			
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There are composition basket sets of instruments

	x			7
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Instrument set compositions are documented

	x			7
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Of each set a photograph is available

	x			7
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The documentation of set compositions is

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Paper based

				7
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Based on electronic documents (database)

				7
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There are multiple laparoscopic instrument sets for consecutive surgeries

	x			
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Packaging materials available

	x			4,7
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Cotton sheets

x				7
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Crepe paper
 Non-woven sheets
 Sterilization paper bags
 Sterilization pouches
 Schimmelbush drums
 Filter drums
 Sterilization containers
 Heat sealer is available for sealing pouches

	x		7
	x		7
	x		7
	x		7
x			7
	x		
	x		7
	x		

Sterilizing area

Information is available on the chemical and physical behaviour of the items to be sterilized

Sterilisers available

- Steam steriliser (size in liters)
- ETO steriliser
- Sterrad steriliser
- Formaldehyde steriliser
- Other

The steam steriliser is:

The steam steriliser has a readout

The steam steriliser has a vacuum cycle

Sterilisers with toxic gasses are given time to vent

	x		7
	x		
	x		
	x		
	x		
	x		
	x		
		Pressure cooker	8
	x		1
	x		1

Routine sterilizer performance testing

How often is a Bowie Dick test carried out?

The result of the Bowie-Dick test is documented

Routine sterilization performance testing is done by

- Standard Bowie and Dick test pack (textile)
- Disposable Bowie and Dick test pack
- Chemical indicator strips
- Process challenge device such as GKE with chemical indicator
- Helix with chemical indicator
- Electronic process challenge device such as ETS (3M), EBI 16 (Ebro) or DPCD (Interster)
- Process challenge device with Biological Indicator
- If in use: x per week per sterilizer

		Never	7
			7

	x		7
	x		7
	x		7
	x		7
	x		7
	x		7
	x		7
			7

How often is maintenance performed on the autoclaves?

Is there record keeping of the maintenance?

			7
			7

Disinfection in Cidex trays is done in the CSSD

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Reprocessing procedure lap equipment

Before start of first surgery

Action	Yes	No	Comments/How?	Source
Lap equipment is HLD'd	x		Soaked in Cidex	8
Lap equipment is sterilised		x		8

In Surgery & Pre-cleaning

Action	Yes	No	Comments/How?	Source
Gloves of OT nurses are changed for surgery after cleaning	x	x	Between cases, not during surgery	1
After surgery, used lap instruments are stored in a soaking solution		x	Directly cleaned	4,7
What solution is this?			water	4,7
The transport containers are leak proof, can be cleaned well		x	No container	4,7

Transport to cleaning

Action	Yes	No	Comments/How?	Source
Laparoscopic equipment is transported to CSSD		x		8
Regular surgical equipment is transported to CSSD			Regular instruments are also placed in form. chamb	8
Where is the lap equipment moved?			Sink next to OT	4
Equipment is kept moist	x			3,4

Cleaning of lap equipment

Action	Yes	No	Comments/How?	Source
Disinfecting				
Lap equipment is disinfected before cleaning		x		4
What disinfectant is used?				4
Lap equipment is rinsed after disinfecting				4
Removing gross soil				
Whenever possible, lap instruments are disassembled.	x			8
Hollow instruments are flushed with water using a spray gun		x		7
Gross soil is removed by rinsing	x			7
Gross soil is removed using tools	x			4
What tools are used?			Toothbrush	
Automatic methods				
Equipment is ultrasonically cleaned		x		3
Lap equipment is cleaned in washer/disinfector		x		3
Lumens are connected for mechanical flow		x		4
Instruments are loaded in open position		x		4
Manual Cleaning				
What cleaning solution is used?			Soap powder	3,4
Manufacturer instructions for the agent are followed				4
Instruments are fully disassembled	x			3,4
Cleaning solution is deep enough to submerge instruments				4
Appropriate quantity of detergent is used				4

Sufficient brushes for manual cleaning are present for external and internal cleaning)

	x	Toothbrush	
	x		4
x			4

The lumens are brushed (submerged)

The instrument tips are brushed

Rinsing

Instruments are rinsed

x			3,4
		In sink	4
		Tap	3,4

In what basin

What water is used?

Drying

Instruments are dried

	x		4
	x		5,7

Lumens are dried

Brushes are cleaned at the end of the day

	x		4
	x		4

Cleaning tools are disinfected

Inspection

Action	Yes	No	Comments/How?	Source
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Instruments are inspected for cleanliness

	x		4,7
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Dirty instruments are reprocessed

	x		
--	---	--	--

Instruments are lubricated. Which lubricant?

	x		3,4
--	---	--	-----

Insulation in inspected

		Not seen	3,4
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Instruments are assembled

	x		4
--	---	--	---

Instruments are being opened and spread out for functionality checks

	x		7
--	---	--	---

Instrument set compositions are consulted during set assembly

	x	No compositions available	7
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Damaged instruments are removed from a set and replaced by an adequate replacement.

		Not seen	7
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Packaging and Sterilisation or HLD

Action	Yes	No	Comments/How?	Source
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Steam sterilisation

How often are the lap instruments steam sterilised?

		Never	8
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Packaging of sets and packs is done in

			4,7
--	--	--	-----

Cotton sheets

			7
--	--	--	---

Crepe paper

			7
--	--	--	---

Non-woven sheets

			7
--	--	--	---

Sterilization paper bags

			7
--	--	--	---

Sterilization pouches

			7
--	--	--	---

Schimmelbush drums

			7
--	--	--	---

Filter drums

--	--	--	--

Sterilization containers

			7
--	--	--	---

None

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Packs using reusable materials are double-wrapped

			4
--	--	--	---

Indicator tape (autoclave tape) is used for closing the packs packaged in sheets

			7
--	--	--	---

Indicators are used on every pack

			4
--	--	--	---

Packs are dry after sterilization

			7
--	--	--	---

Chemical Disinfection

Instruments are chemically high-level disinfected

x			
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Gloves are changed when handling instruments in disinfectant

What disinfectant is used?

Soaking times are tracked

How is time tracked?

Number of soaks is tracked

When is liquid discarded?

Date of the liquid activation is noted

When was the liquid last discarded?

Chemical indicators are present

Chemical indicators are used periodically

The lumens are filled with disinfectant

There is flow present in the disinfectant

Disinfectant is deep enough to submerge instruments

How are the disinfectant trays cleaned?

Gloves are changed before rinsing instruments

Instruments are rinsed

What type of water is used?

Are the lumens flushed? How?

How many times is the instrument rinsed

Water is discarded after each use

Drying

How are the instruments dried?

How are the lumens dried?

What air source is used?

Formalin

Formalin chambers are used

How many tablets are used

Date of tablet placement is noted

How long are the instruments in the chamber?

Time in chamber is tracked

Chambers are opened between surgeries

Instruments are stored in Formalin chambers until the next day

	x		
		Cidex and Formalin	
	x		
		Clock on the wall	
	x	Few cases, new bottle is opened each time	
		After every day of surgery, no multiple surg days	
	x		
		New bottle	
	x		
	x		
	x		
	x		
	x		
	x		
x			
		Sterile saline	
	x	Soaked in a container	
		Left to soak	
	x	Kept for next day	

		Not seen	4
		Not seen	5,7
			7

x		On all instruments, regular and lap	8
		Multiple tablets in various containers	8
	x	No, kept for 1 week to 1 month	
		Overnight for storage	8
	x		
x			8
x			8

Transport and storage			
Action	Yes	No	Comments/How?

In what state are the instruments stored at the end of the day?

Sterilised instruments are kept in storage

		Cleaned and soaking in Cidex	4
		Stored in formalin chamber	4,7

Comments

Gasless laparoscopy was performed

Bravin took his own instruments and cleans them. Also seen local team clean some lap instruments

Formalin tablets are changed when they don't smell anymore

Instruments are left to dry after Cidex and rinsing

Sources

- 1 Expert opinion
- 2 Cidex OPA technical info
- 3 ASTM F1744
- 4 WHO Decontamination and reprocessing of medical devices for Health-care facilities
- 5 APSIC guidelines for disinfection and sterilization of instruments in health care
- 6 Guideline for Disinfection in Healthcare facilities
- 7 SVN Sterilisation assessment form
- 8 Observations in pilot study

