



European Society of  
Human Reproduction and Embryology



## **Approaching accreditation of a PGD centre**

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ESHRE Campus symposium  
London, United Kingdom  
22-23 March 2010

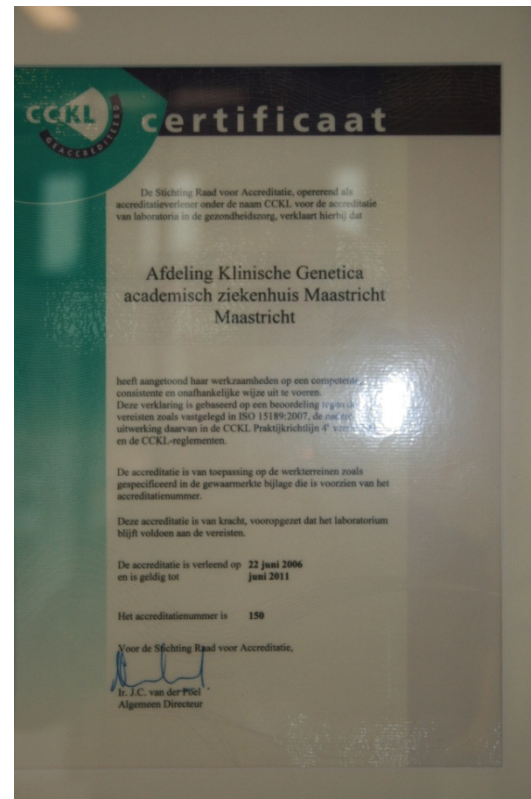
# Audits

- types of audits
- how to conduct an audit
- key indications of quality in PGD

# Types of audits

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PGD Workinggroup Maastricht, NL



# Accreditation in the Netherlands

- based on ISO 15189, outlined in CCKL Code of Practice
- CCKL, incorporated in Dutch Accreditation Council, accredits laboratories in health care sector



# Quality system – ISO 15189 standard

- Technical requirements
- Management requirements
  - ◆ internal audits 4.14

# Audit

Systematic, independent and documented process of obtaining **evidence** and evaluating it objectively to determine conformance against **criteria** set by the ISO standard.

# Evidence

- information that proves or demonstrates a truth
- is verifiable (same evidence can be collected by independent auditors)
- can be hold in your hand (records, statement of fact )



# Audit

Systematic, independent and documented process of obtaining evidence and evaluating it objectively to determine conformance against **criteria** set by the ISO standard.

# Criteria

- policies (general)
- procedures (detailed)
- requirements (what should be in place)

# Audit - functional parties

## Auditee

organization being audited

## Auditor

person with competence to conduct an audit

## Audit client

organization or person requesting audit

# Auditor

The person with the **competence** to conduct an audit

## Competence

Ability to apply the skills and knowledge gained through education, training, work experience and audit experience

# What does an auditor need to know

- knowledge of the standard
- knowledge of the process being audited
  - ◆ can't audit what you don't understand
  - ◆ field experts

# Types of audits - I

- vertical audit
- horizontal audit
- examination audit

# Vertical audit

- follow all elements of a process from one sample or case
  - ◆ top-down
  - ◆ bottom-up
- easy to start with
- used as regular activity and for training purposes
- time consuming, not all aspects covered each time

# Vertical audit – example

- PGD administration process (top-down)



- ◆ select random PGD case
  - start with patient *medical* IVF file
  - compare content to written procedures



# Vertical audit – example

- PGD administration process



- ◆ patient *laboratory* IVF file
  - compare content to written procedures

# Vertical audit – example

- PGD administration process

**IVF-formulier**

Punctie nummer		Punctie datum		Centrum		Ponsafdruk man + vrouw
Indicatie <small>(TUBA, MAN, PGD, etc)</small>		Aard <small>(IVF, ICSI, KID, XL, TRANS, PCR)</small>		Cyclusdag		
Controle gegevens door lab en kliniek						
Medewerker kliniek			Medewerker lab			
Geen follikelmonsters van vorige OPU's aanwezig in OPU-kamer!!!!		IVF-behandeling Eerder zwanger		Poging Infertiel vanaf:		
Gecontroleerd door medewerker kliniek (paraaf):		Aantal eerdere zwangerschappen:		Aantal levend geboren kinderen:		
ET-beleid		Datum startgesprek		MAN      VROUW		
○ "normaal": soms maar 1		Lengte en gewicht tijdens startgesprek				
○ anders, nl: altijd 1 / altijd 2		Gewicht vrouw tijdens punctie				
○ FET-beleid:		Alleen invullen bij PGD-punctie:		FSH:      EZ		

Virologie	MAN		VROUW		Toestemming patiënten voor:	
	datum test	uitslag	datum test	uitslag	medische info opvragen bevalling/kind	ja / nee / nvt
HIV1,2	pos / neg		pos / neg		cryopreservatie embryo's	ja / nee
HbsAg	pos / neg		pos / neg		onderzoek onbevuchte eicellen	ja / nee
anti-HBc	pos / neg		pos / neg		onderzoek abnorm. bevrucht	ja / nee
anti-HCV	pos / neg		pos / neg		onderzoek met rest-embryo's	ja / nee
TPHA	pos / neg		pos / neg		welk onderzoek met rest-embryo's?	
HTLV1,2	pos / neg / nvt		pos / neg / nvt			

VOORBEREIDINGEN														
Weekdag v d punctie	MA	DI	WO	DO	VR	ZA	ZON	Stoof / plank	2 <sub>UP</sub>	2 <sub>LOW</sub>	3 <sub>UP</sub>	3 <sub>LOW</sub>	4 <sub>UP</sub>	4 <sub>LOW</sub>
IVF medium (datum)	○ VG5:							Semenas medium (datum)	○ HTF Cambrex					
D13 medium (datum)	○ VG5:							Spoelmedium-IVF (datum)	○ anders:					
Wasdatum IVF-olie								Spoelmedium-IVF-albumine (datum)	○ HTF Hapes Cambrex					
D36 medium (datum)	○ VG5:							Spoelmedium-IVF-albumine (datum)	○ anders:					
									○ HTF Hapes Cambrex + GPO:					
									○ anders:					

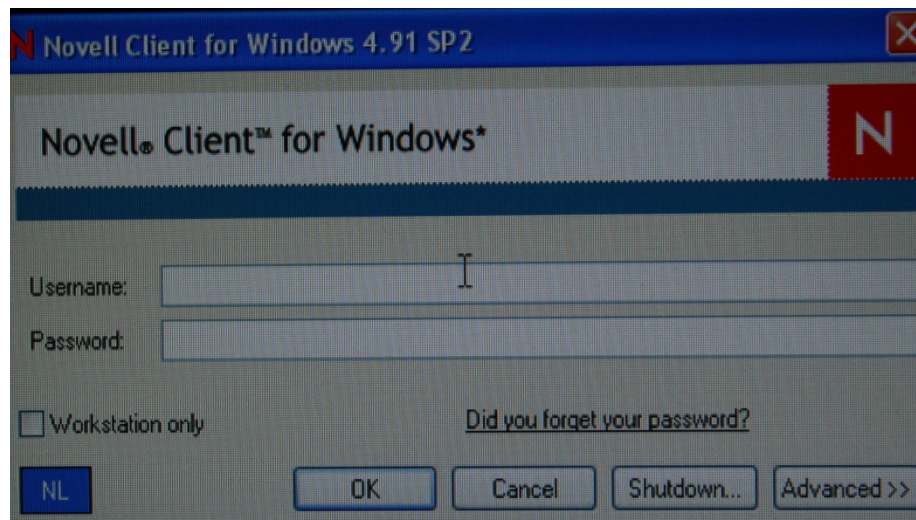
  

PUNCTIE												
Kliniek	Lab	Controle pincetten		Controle IVF-dish		Controle box		Controle ponsafdruk werkplek				
Tijdstippen	Begin			Eind								
	in stoof											
Aantal	butzen			eicellen								
IVF-druppels (aantal cumuli per druppel en eventueel afwijkend aspect cumulus)	A1	A2	A3	A4	A5	A6						
	B1	B2	B3	B4	B5	B6						
FORMULIER NAAR FIV								JA ?    O				

- check all necessary forms - complete, witnessed

# Vertical audit – example

- PGD administration process



- ◆ patient privacy
- ◆ computerfiles protected

# Vertical audit – example

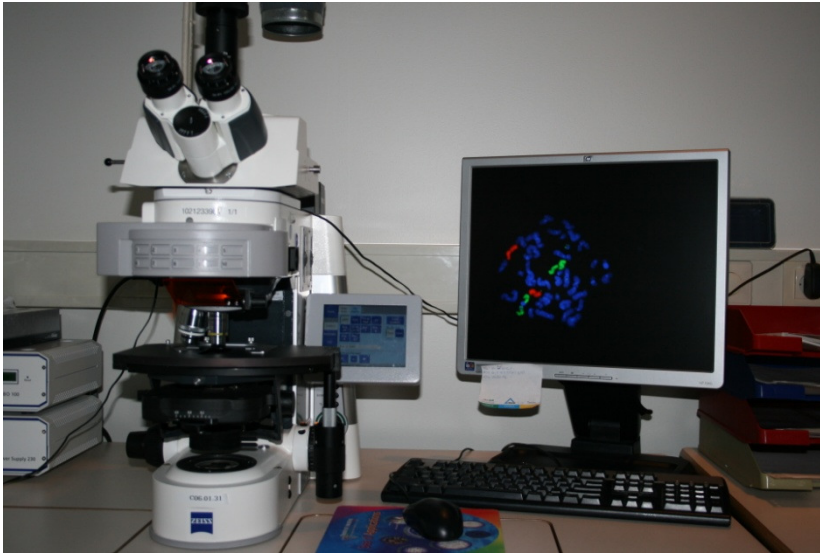
- PGD administration process



- ◆ patient *laboratory* genetics file
  - compare content to written procedures

# Vertical audit – example

- PGD administration process



- ◆ PGD data storage

# Vertical audit – example

- PGD administration process

**azM** PGD FISH uitslag Afdeling Klinische Genetica Formulier: FC07.4

Naam: \_\_\_\_\_ Indicatie : \_\_\_\_\_ Datum OPU: \_\_\_\_\_  
Geb. datum: / / PGD nr: \_\_\_\_\_ IVF / ICSI aantal eicellen: \_\_\_\_\_  
Punctie nr: \_\_\_\_\_ IVF kliniek: \_\_\_\_\_ Aantal gebiopteerde embryo's: \_\_\_\_\_

embryo nr	PN	embryo t-bioptie	bioptie	genotype			fenotype	vrijgegeven voor ET

paraf: \_\_\_\_\_

**AUTORISATIE**

datum: \_\_\_\_\_ naam: \_\_\_\_\_ handtekening: \_\_\_\_\_

azM Cytogetenica 03/12/2008 Versie 7

- ◆ check all necessary forms - complete, witnessed



# Vertical audit – example

- PGD administration process



- ◆ cryopreservation PGD embryos

## VERTICAL ASSESSMENT FORM

Ref.No.		Department title	
Section of department		Examination or procedure	
Report number		Reporting assessor	
Laboratory Accession no.		Date and signature of assessor	

### INSTRUCTIONS

1. Select a laboratory accession number either from the computer record or from work sheets/day book etc.
2. Audit from receipt of request to issuing of report.

Audit area	Standard	Records/methods checked & procedures witnessed	Findings	Obs&NCs Sheet No.



## Horizontal audit

- check one element of a process for multiple samples or cases
- used for follow-up on shortcomings from vertical audit

# Horizontal audit – example

- IVF-Genetics transfer of blastomeres and embryo data



azM  
PGD analyse formulier  
Afdeling Klinische Genetica  
Formulier: FC07.5

Naam patiënt:  
geb. dat:  
IVF lab

type glasje:  
binnen:  
open:

embryo nr	nr cellen kwaliteit MNB	nr geblop teerd	nr nuclei	opmerkingen	bl1	bl2
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
					<input type="checkbox"/>	<input type="checkbox"/>
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					<input type="checkbox"/>	<input type="checkbox"/>

Totaal aantal glaasjes: paraaf IVF: paraaf cytogenetica

azM Cytogenetica 10 september 2008 Versie: 14 Pagina 2 van 3

◆ complete, signed, witnessed



# Examination audit

- witnessing an examination as it is performed  
and comparing to the written SOP
- used to ensure that
  - ◆ what is being done reflects what is described in the procedure
  - ◆ the person carrying out the examination has a good understanding of all aspects of the procedure

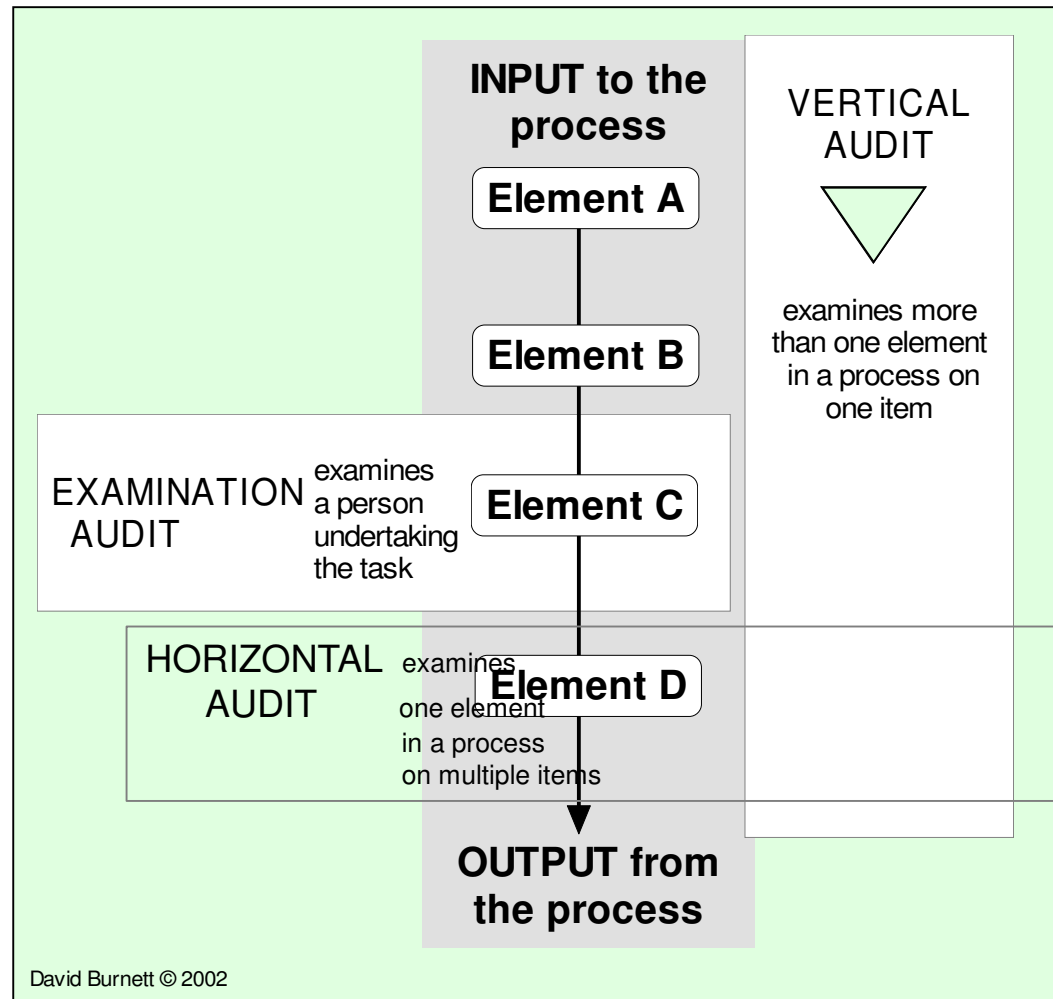
# Examination audit – example

- preparing PGD probe combination



- ◆ observe
- ◆ ask questions
- ◆ compare to SOP
- ◆ check documentation

# Types of audits - I



## Types of audits - II

- internal audit
- external audit

# Internal audit

- organized by own organization
- conducted by own staff
- one (two) auditor(s)
- one day
- preferably independent of the work being audited
- less formal
- used for full system review at fixed intervals (annual)
- re-assessment of procedures, work instructions and day-to-day working practice (on-going)

# External audit

- 2<sup>nd</sup> or 3<sup>rd</sup> party surveillance
- conducted by colleagues in the field / quality professionals
- multiple auditors (different experts)
- multiple days
- formal
- used for assessment / (prior to) accreditation



# Audit process

- selecting matters for audit
- deciding the timing of the audit
- planning the audit
- executing the audit
- reporting the audit results
- follow-up and evaluation of audit findings, conclusions and recommendations

# Audit program

- main elements of QMS should be audited every year (system review)
- make annual **audit calendar** (audit master plan)

# Audit calendar

Infoland  
Document Manager  
Improving your business

Document: Academisch Ziekenhuis Maastricht > 03 IVF > 02 Sop's IVF > document 'SOP 078.B04' versie 2  
Titel: Audit SOP overzicht

	A	B	C	D	E	F	G
1	<b>AUDIT SOP OVERZICHT sop 078.B04 Alleen digitaal beschikbaar</b>						
2	Document ID	Titel	audit datum 2008	audit datum 2009	audit datum 2010	audit datum 2011	audit datum 2012
3	SOP 001	regels tav wetenschappelijk onderzoek	22.04.2008			april	
4	SOP 002	Procedure voor inwerken nieuwe medewerkers					
5	SOP 002 B01	Inwerkformulier In Vitro Fertilisatie	22.04.2008			oktober	
6	SOP 002 B02	Inwerkformulier ICSI		25.05.2009			
7	SOP 002 B03	Inwerkformulier intra-uteriene inseminatie (IUI)			november		
8	SOP 002 B04	Inwerkformulier semen analyse	18.03.2008			meert	
9	SOP 002 B05	Inwerkformulier cryopreservatie semen		08.09.2009			
10	SOP 002 B06	Inwerkformulier PGD biopsie		25.03.2009			
11	SOP 002 B07	Opleidingschema inwerkprocedures nieuwe medewerkers					
12	SOP 002 B08	Controle inwerkprocedure SA: interobserver variatie	nvt	nvt	nvt	nvt	
13	SOP 002 B09	Inwerkformulier PGD spreiden		05.11.2009			
14	SOP 002 B10	Inwerkformulier Algemeen & Arbo IVF lab					
15	SOP 003	Werkafspraken algemeen					
16	SOP 003 B01	Taakomschrijving IVF-, SA- en Algemeen- en Algemeen-Extra-diensten					
17	SOP 004	Afspraken Congresbezoek	nvt	nvt	nvt	nvt	
18	SOP 005	Gebruiksaanwijzing weekrooster programma					
19	SOP 007	Aanschaf en gebruik van goederen				april	
20	SOP 007 B01	VooronderzoeksMap: Checklijst vooronderzoek van gebruiks- en verbruiksgoederen gebruikt bij behandelingen en/of diagnostiek				april	
21	SOP 007 B02	VooronderzoeksMap: Checklijst vooronderzoek van duurzame goederen				april	
22	SOP 007 B03	Voorbeeld LAB Artikel MAP				april	
23	SOP 007 B04	Voorbeeld Chemicalien MAP				april	
24	SOP 007 B05	Verschillende bestelwijzen				april	
25	SOP 008	Protocol In Vitro Fertilisatie: laboratorium procedures	06.10.2008			oktober	

Documenten in een werkgebied  
Werkgebied: 02 Sop's IVF  
Nieuwe Documenten | Mijn gegevens

- ◆ list of all quality documents
- ◆ documented audit date

# Audit – related quality documents

- implement policy for planning and performing audits,  
for reporting audit results, corrective and preventive actions and  
for communication of audit findings
  - ◆ audit calendar
  - ◆ SOP ‘how to perform an audit’
  - ◆ SOP ‘how to report audit results’
  - ◆ SOP ‘how to report corrective and preventive actions’
  - ◆ SOP ‘how to communicate audit findings’

# Audit approach

- find information that enables the auditor to judge whether the laboratory is operating in compliance with the Standards
- record audit findings in report
  - ◆ clear, timely, concise and objective
  - ◆ investigate findings thoroughly
  - ◆ record them accurately
  - ◆ attribute findings to the Standard
- use terms compliances, non-compliances or observations
  - ◆ classify the level of non compliance

# Audit report

- compliance

- non-compliance

‘the failure to fulfil the requirements of a Standard, in whole or in part’

- ◆ critical non-compliance

- ◆ non-critical non-compliance

- observations

## Critical non-compliance

‘a failure to fulfil the requirements of the Standards to such a degree that, in the opinion of the auditor, there is evidence of a **system failure**’

- evidenced by the failure to comply with the whole Standard and is a reason for referral

# System failure

evidenced by

- inability of a department to meet the agreed needs and requirements of its users ‘or’
- inability to ensure a safe environment for staff , patients or visitors ‘or’
- inability to ensure the quality of all the laboratory examinations performed



# Audit report

- compliance

- non-compliance

‘the failure to fulfil the requirements of a Standard, in whole or in part’

- ◆ critical non-compliance

- ◆ non-critical non-compliance

- observations

## Non-critical non-compliance

‘a failure to fulfil the requirements of the Standards at a level that would not lead to a *system failure*’

# Audit report

- compliance

- non-compliance

‘the failure to fulfil the requirements of a Standard, in whole or in part’

- ◆ critical non-compliance

- ◆ non-critical non-compliance

- observations

# Observation

‘are records of deficiencies noted by auditors, that have the potential to affect the functioning of the department’

- are reported to the department and form part of the final report

## Corrective / preventive actions

Audits generate corrective / preventive actions that should be described and implemented

## **Corrective action**

Taken to eliminate or reduce the effect of existing non-compliances and prevent recurrence of a known non-compliance

# Preventive action

Action to prevent the occurrence of a potential  
non-compliance



Thank you

“Naughty, nice, nice, nice, naughty, nice...  
This you call an audit report?”