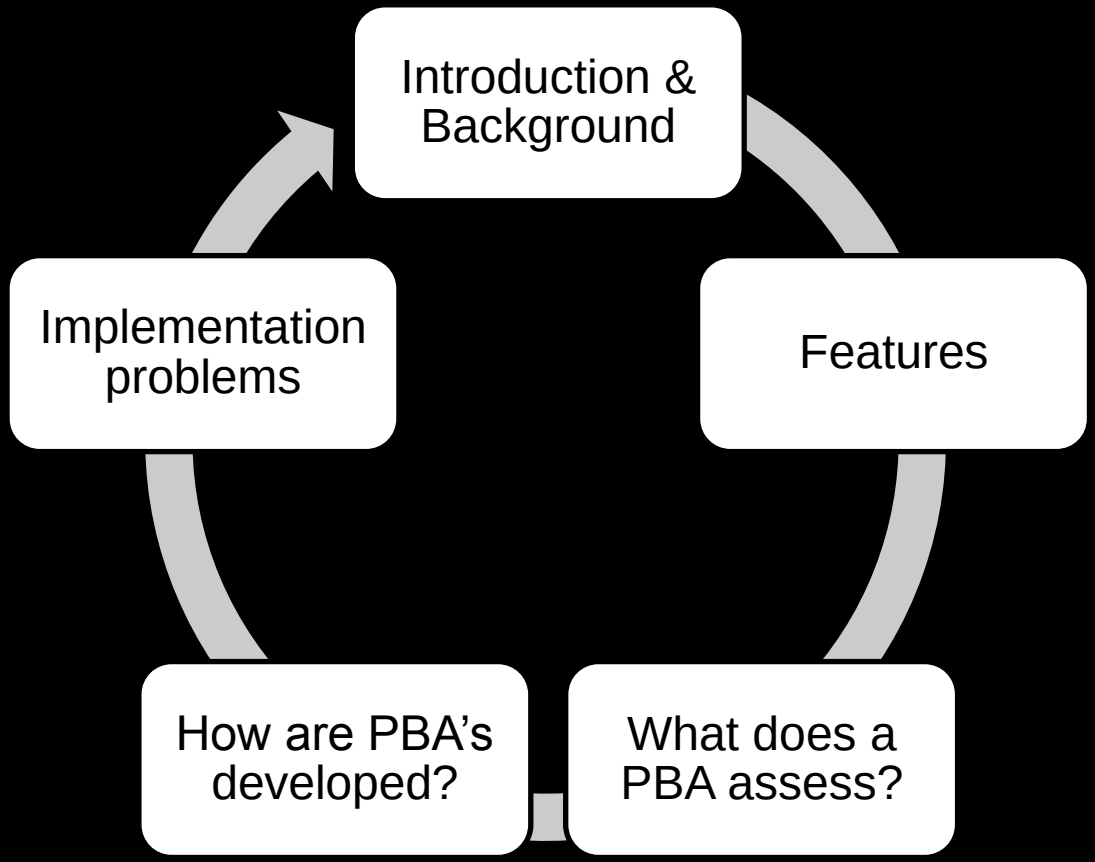
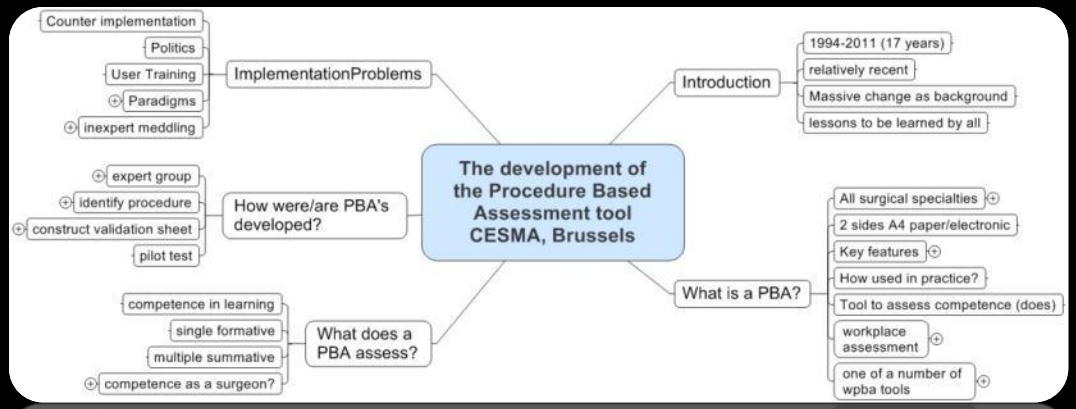
Developing Procedure Based Assessments

David Pitts
Royal College of Surgeons of Edinburgh
Creative Learning Associates

Overview


Introduction & Background
Features
What does a PBA assess?
How are PBA's developed?
Implementation problems

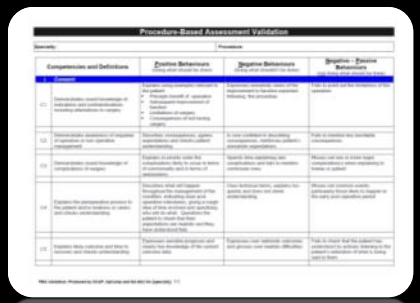
Documents


The development of the Procedure Based Assessment tool CESMA, Brussels
Introduction
1994-2011 (17 years)
relatively recent
Massive change as background
lessons to be learned by all
What is a PBA?
All surgical specialties
2 sides A4 paper/electronic
Key features
How used in practice?
Tool to assess competence (does)
workplace assessment
one of a number of wpba tools
How were/are PBA's developed?
expert group
identify procedure
construct validation sheet
pilot test
What does a PBA assess?
competence in learning
single formative
multiple summative
competence as a surgeon?
ImplementationProblems
Counter implementation
Politics
User Training
Paradigms
inexpert meddling


new assessment tools


New book from Ashgate: August 2009
Safer Surgery
Analysing Behaviour in the Operating Theatre


PBA 6: Total Hip Replacement

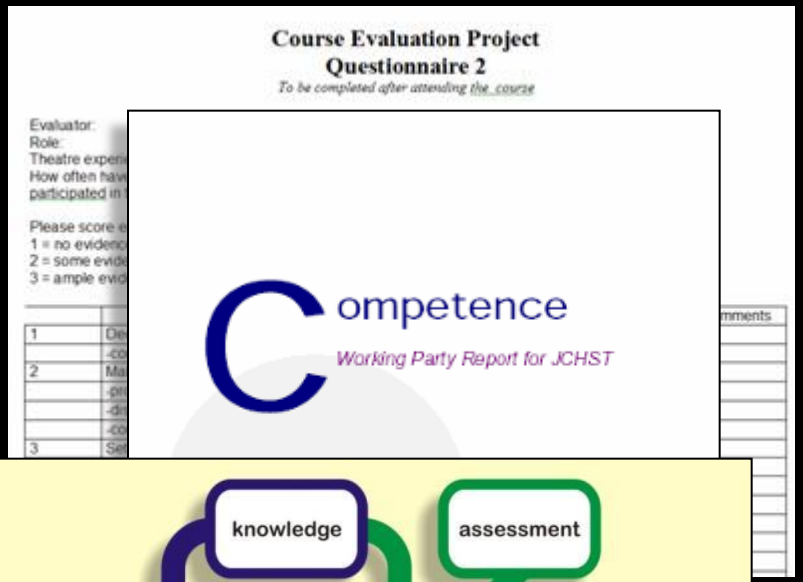

Procedure-Based Assessment Validation

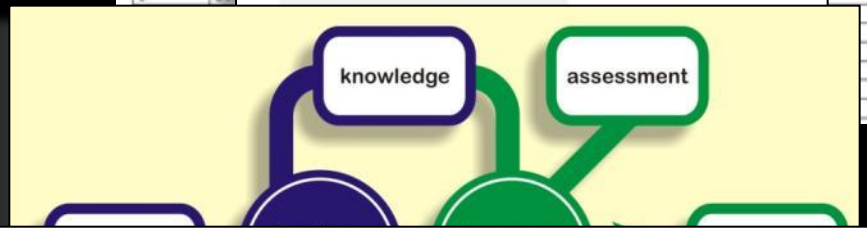
Introduction & Background

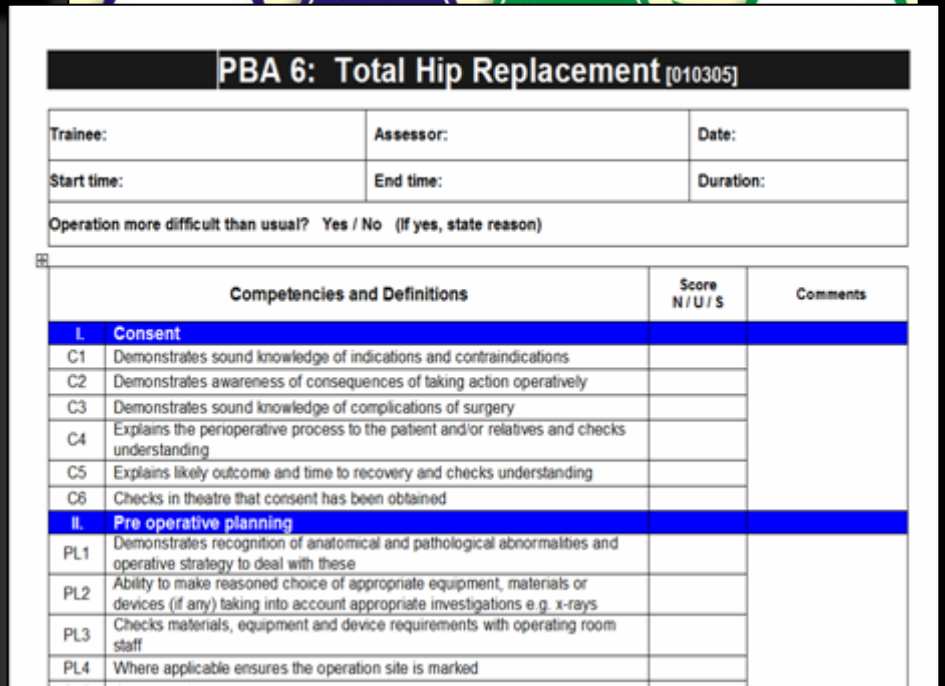
1994 – 2011(17 yrs)

- 1994 early “PBA” in orthopaedics
- 2001 JCHST Working Party report – experimental projects needed
- 2002-2011 OCAP
- Early 2005 – combined OCAP PBA & OPCOMP
- Sept 05 PBA writing workshops all specialties
- 2011 All specialties now have
  - Index procedures
  - PBA’s
- Development continues

Erasmus Wilson
FRCS 1837 (174)







PBA 6: Total Hip Replacement [010305]

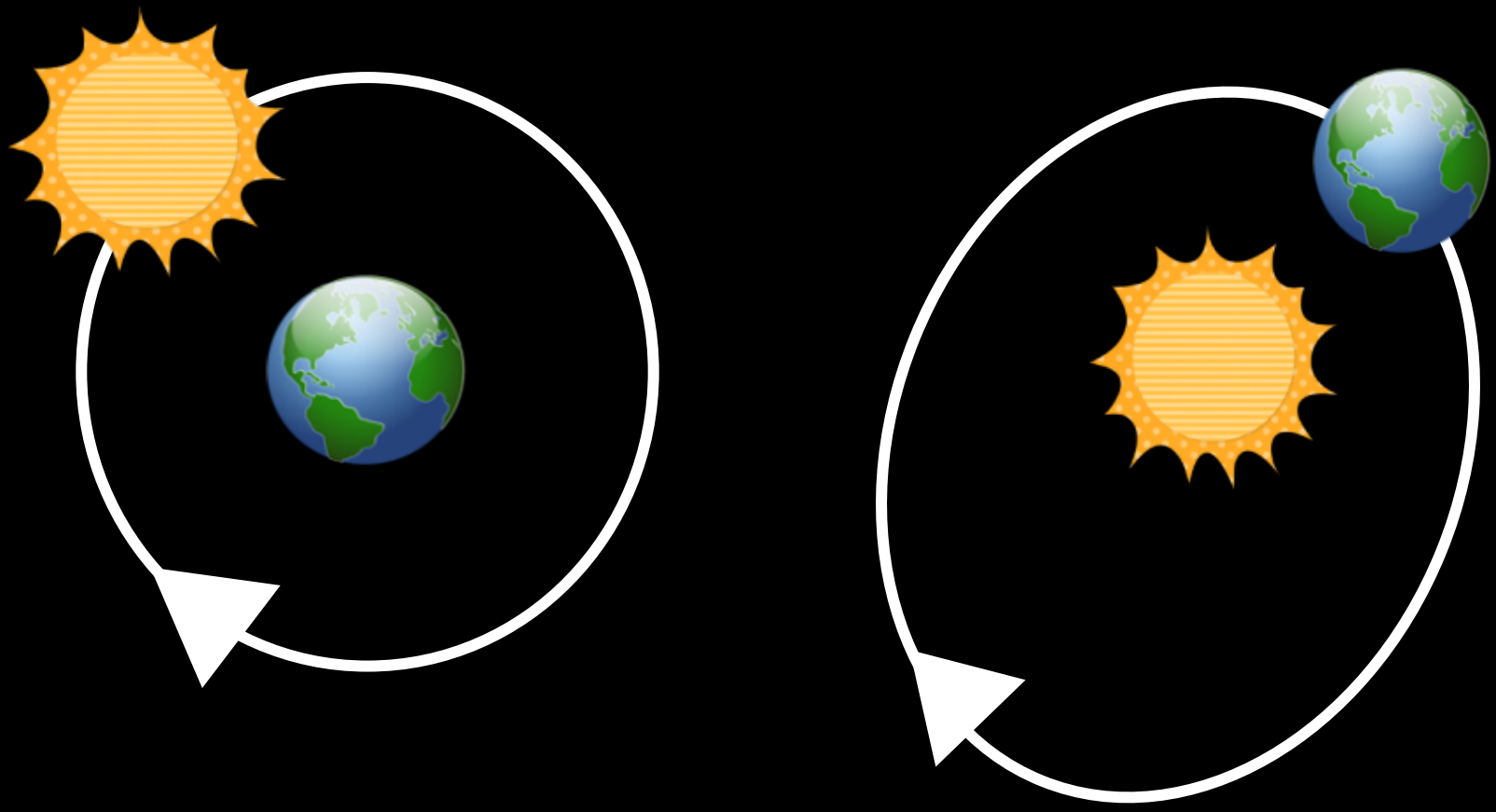
Trainee:	Assessor:	Date:
Start time:	End time:	Duration:
Operation more difficult than usual? Yes / No (If yes, state reason)		

	Competencies and Definitions	Score N / U / S	Comments
I.	**Consent**		
C1	Demonstrates sound knowledge of indications and contraindications		
C2	Demonstrates awareness of consequences of taking action operatively		
C3	Demonstrates sound knowledge of complications of surgery		
C4	Explains the perioperative process to the patient and/or relatives and checks understanding		
C5	Explains likely outcome and time to recovery and checks understanding		
C6	Checks in theatre that consent has been obtained		
II.	**Pre operative planning**		
PL1	Demonstrates recognition of anatomical and pathological abnormalities and operative strategy to deal with these		
PL2	Ability to make reasoned choice of appropriate equipment, materials or devices (if any) taking into account appropriate investigations e.g. x-rays		
PL3	Checks materials, equipment and device requirements with operating room staff		
PL4	Where applicable ensures the operation site is marked		

Against a background of massive change

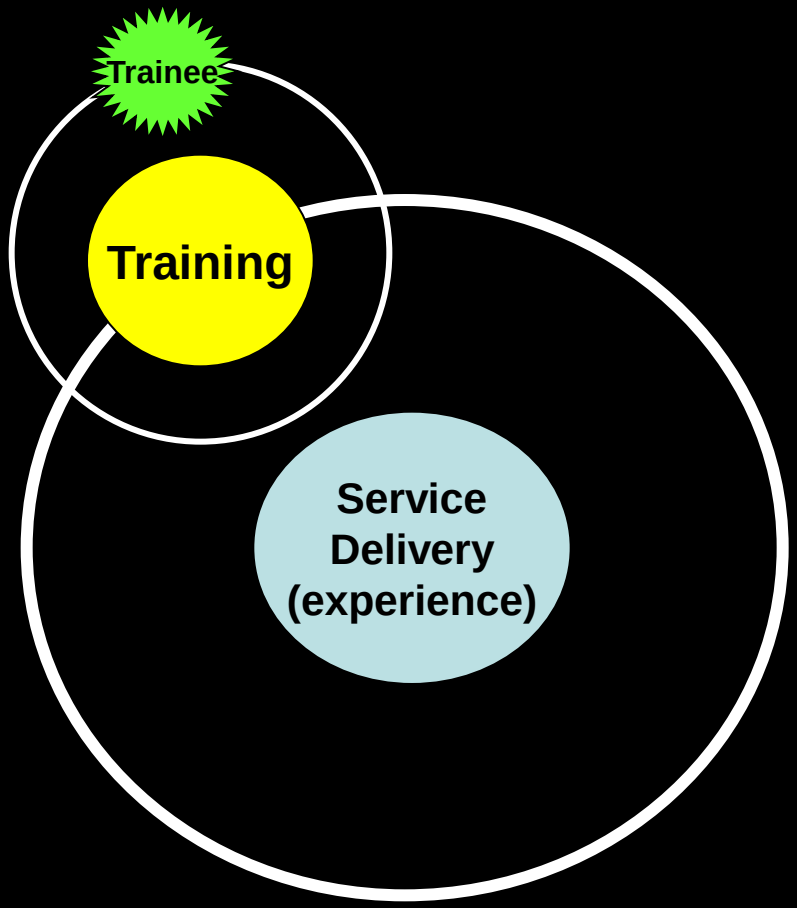
- Changing Public attitudes to doctors
- Changing training structures
  - Unfinished Business 2002
  - Modernising Medical Careers 2003
  - PMETB 2003
- Changing paradigm of service & training

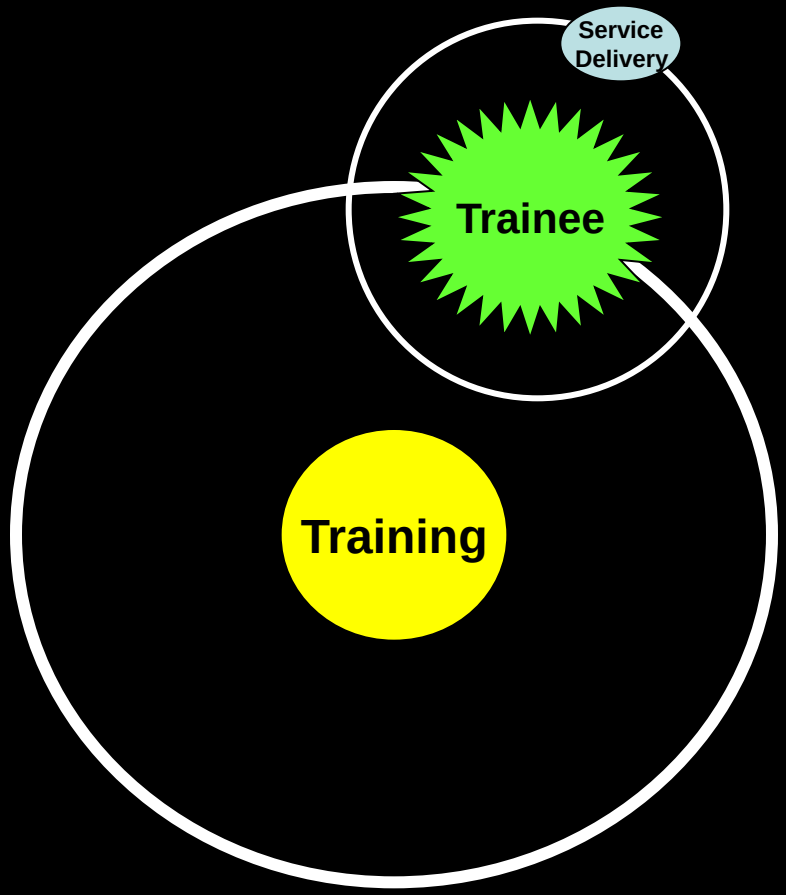
Paradigm: prevailing worldview, culture or pattern of thought that dictates the relevant questions to ask and the acceptable style or language of the answers



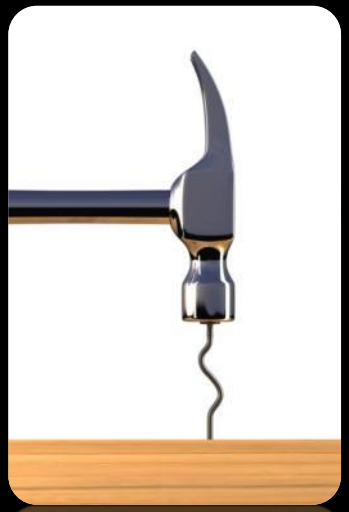
Pre vs. Post Copernican

Service & Training





Lessons to be learned



Failure

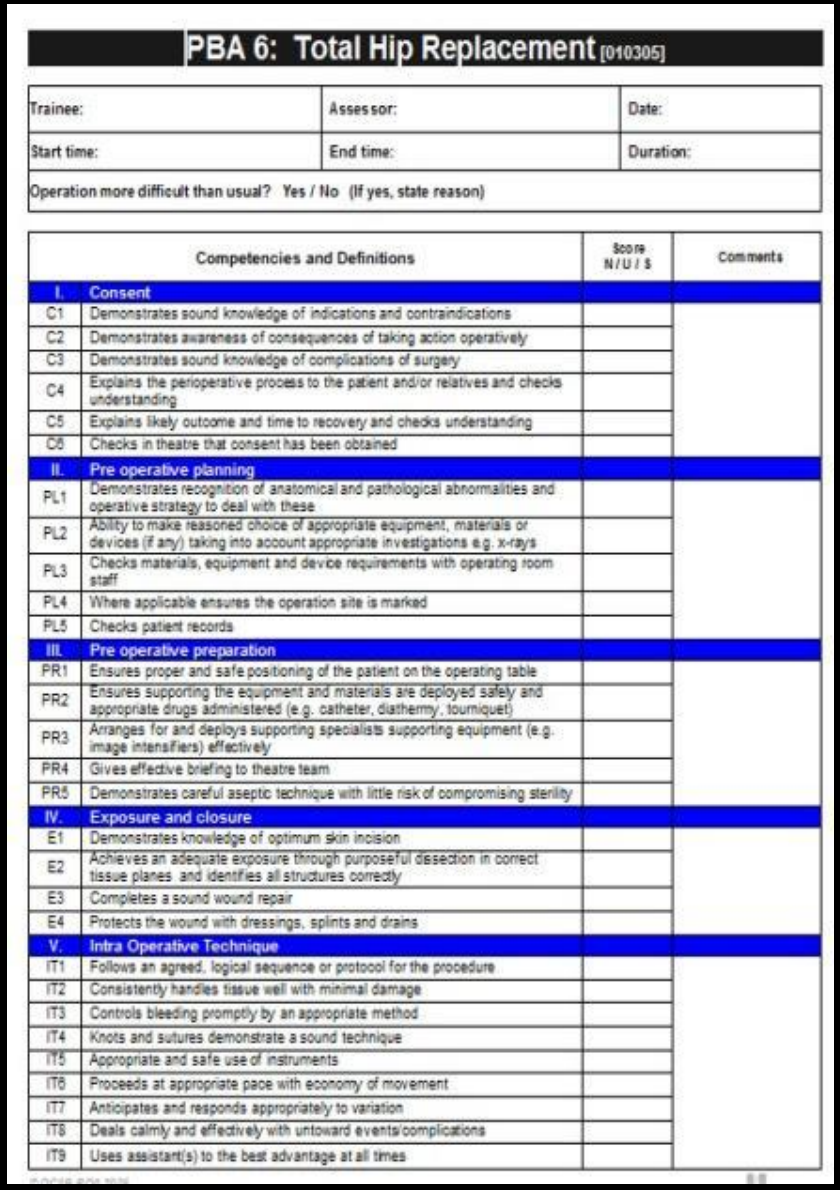
Success

Resonance

What is a Procedure Based Assessment (PBA)?

Procedure Based Assessment

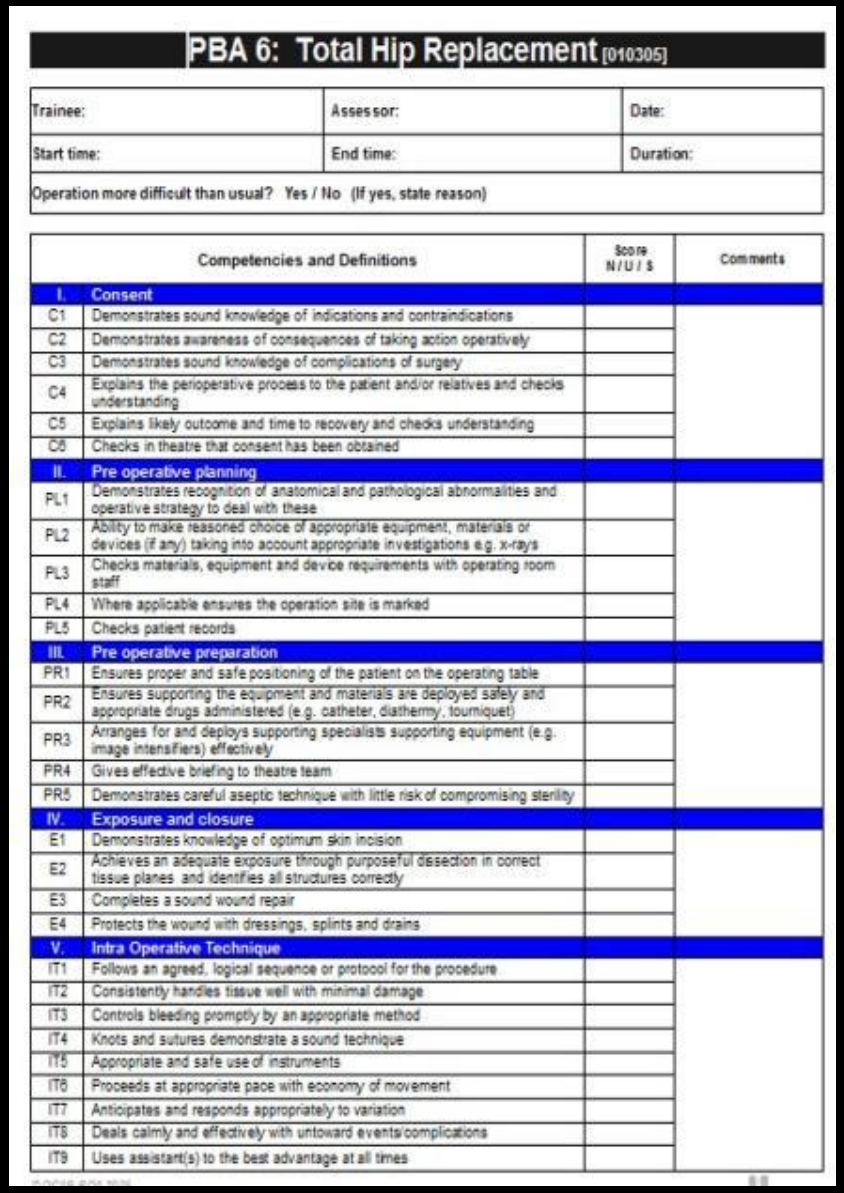
- A tool to give structured, formative feedback to a trainee which can then be used as evidence to RITA/ARCP of learning, progress and achievement



PBA 6: Total Hip Replacement [010305]

Trainee:	Assessor:	Date:
Start time:	End time:	Duration:
Operation more difficult than usual? Yes / No (If yes, state reason)		

	Competencies and Definitions	Score N / U / S	Comments
I.	**Consent**		
C1	Demonstrates sound knowledge of indications and contraindications		
C2	Demonstrates awareness of consequences of taking action operatively		
C3	Demonstrates sound knowledge of complications of surgery		
C4	Explains the perioperative process to the patient and/or relatives and checks understanding		
C5	Explains likely outcome and time to recovery and checks understanding		
C6	Checks in theatre that consent has been obtained		
II.	**Pre operative planning**		
PL1	Demonstrates recognition of anatomical and pathological abnormalities and operative strategy to deal with these		
PL2	Ability to make reasoned choice of appropriate equipment, materials or devices (if any) taking into account appropriate investigations e.g. x-rays		
PL3	Checks materials, equipment and device requirements with operating room staff		
PL4	Where applicable ensures the operation site is marked		
PL5	Checks patient records		
III.	**Pre operative preparation**		
PR1	Ensures proper and safe positioning of the patient on the operating table		
PR2	Ensures supporting the equipment and materials are deployed safely and appropriate drugs administered (e.g. catheter, diathermy, tourniquet)		
PR3	Arranges for and deploys supporting specialists supporting equipment (e.g. image intensifiers) effectively		
PR4	Gives effective briefing to theatre team		
PR5	Demonstrates careful aseptic technique with little risk of compromising sterility		
IV.	**Exposure and closure**		
E1	Demonstrates knowledge of optimum skin incision		
E2	Achieves an adequate exposure through purposeful dissection in correct tissue planes and identifies all structures correctly		
E3	Completes a sound wound repair		
E4	Protects the wound with dressings, splints and drains		
V.	**Intra Operative Technique**		
IT1	Follows an agreed, logical sequence or protocol for the procedure		
IT2	Consistently handles tissue well with minimal damage		
IT3	Controls bleeding promptly by an appropriate method		
IT4	Knots and sutures demonstrate a sound technique		
IT5	Appropriate and safe use of instruments		
IT6	Proceeds at appropriate pace with economy of movement		
IT7	Anticipates and responds appropriately to variation		
IT8	Deals calmly and effectively with untoward events/complications		
IT9	Uses assistant(s) to the best advantage at all times		



PBA 6: Total Hip Replacement [010305]

Trainee:	Assessor:	Date:
Start time:	End time:	Duration:
Operation more difficult than usual? Yes / No (If yes, state reason)		

	Competencies and Definitions	Score N / U / S	Comments
I.	**Consent**		
C1	Demonstrates sound knowledge of indications and contraindications		
C2	Demonstrates awareness of consequences of taking action operatively		
C3	Demonstrates sound knowledge of complications of surgery		
C4	Explains the perioperative process to the patient and/or relatives and checks understanding		
C5	Explains likely outcome and time to recovery and checks understanding		
C6	Checks in theatre that consent has been obtained		
II.	**Pre operative planning**		
PL1	Demonstrates recognition of anatomical and pathological abnormalities and operative strategy to deal with these		
PL2	Ability to make reasoned choice of appropriate equipment, materials or devices (if any) taking into account appropriate investigations e.g. x-rays		
PL3	Checks materials, equipment and device requirements with operating room staff		
PL4	Where applicable ensures the operation site is marked		
PL5	Checks patient records		
III.	**Pre operative preparation**		
PR1	Ensures proper and safe positioning of the patient on the operating table		
PR2	Ensures supporting the equipment and materials are deployed safely and appropriate drugs administered (e.g. catheter, diathermy, tourniquet)		
PR3	Arranges for and deploys supporting specialists supporting equipment (e.g. image intensifiers) effectively		
PR4	Gives effective briefing to theatre team		
PR5	Demonstrates careful aseptic technique with little risk of compromising sterility		
IV.	**Exposure and closure**		
E1	Demonstrates knowledge of optimum skin incision		
E2	Achieves an adequate exposure through purposeful dissection in correct tissue planes and identifies all structures correctly		
E3	Completes a sound wound repair		
E4	Protects the wound with dressings, splints and drains		
V.	**Intra Operative Technique**		
IT1	Follows an agreed, logical sequence or protocol for the procedure		
IT2	Consistently handles tissue well with minimal damage		
IT3	Controls bleeding promptly by an appropriate method		
IT4	Knots and sutures demonstrate a sound technique		
IT5	Appropriate and safe use of instruments		
IT6	Proceeds at appropriate pace with economy of movement		
IT7	Anticipates and responds appropriately to variation		
IT8	Deals calmly and effectively with untoward events/complications		
IT9	Uses assistant(s) to the best advantage at all times		

- Domains
  - Use all or selection
- Elements
  - Behavioural markers
- Simple scale
  - Not assessed
  - Unsatisfactory
  - Satisfactory

PM3	Records clear and appropriate post operative instructions		

N = Not observed or not appropriate
U = Unsatisfactory
S = Satisfactory

Global Summary (based on the observed/relevant parts of this procedure only)			
		Tick as appropriate	Comments
Level 0	Insufficient evidence observed to support a judgment		
Level 1	Unable to perform the entire procedure under supervision		
Level 2	Able to perform the procedure under supervision		
Level 3	Does not usually require supervision but may need help occasionally		
Level 4	Competent to perform the procedure unsupervised (can deal with complications)		

Signatures:

Trainee:	Consultant:	Other:

- Global summary
  - Qualitative commentary on completed elements
- NOT “signing off” as competent to do this procedure alone or “unsupervised”

PBA Key Features

- Common framework
  - Consent
  - Pre-operative planning
  - Pre operative preparation
  - Expose & close
  - Intraoperative technique
  - Post operative mgt
  - Global rating (performed elements)
- Procedure specific
- Cross mappable
- “Valid”

- Triggered
  - Trainee or trainer
- Objective
  - Passed / To be improved
- Repeatable
- Use whole or part
- Indicative of wider performance
- Formative individually
- Summative as whole collection

PM3	Records clear and appropriate post operative instructions		

N = Not observed or not appropriate
U = Unsatisfactory
S = Satisfactory

Global Summary (based on the observed/relevant parts of this procedure only)			
		Tick as appropriate	Comments
Level 0	Insufficient evidence observed to support a judgment		
Level 1	Unable to perform the entire procedure under supervision		
Level 2	Able to perform the procedure under supervision		
Level 3	Does not usually require supervision but may need help occasionally		
Level 4	Competent to perform the procedure unsupervised (can deal with complications)		

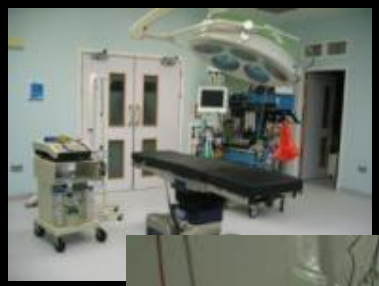
Signatures:

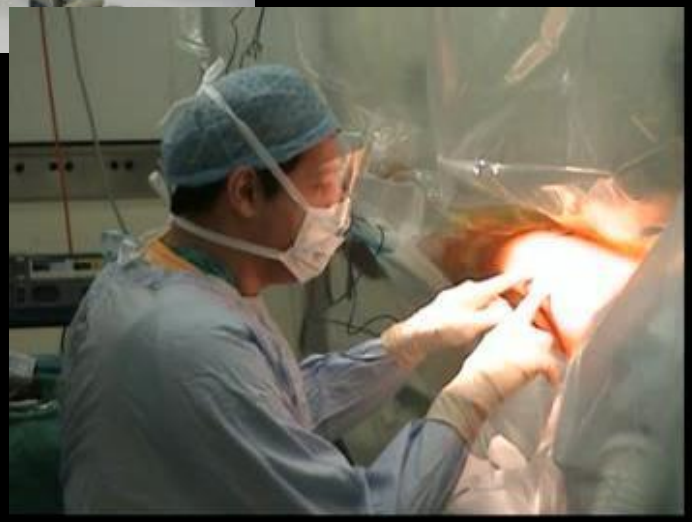
Trainee:	Consultant:	Other:

"an individual PBA is a formative assessment of a single event. As a full collection PBA's provide evidence to RITA of the competence of a trainee to learn procedures and perform them to a given standard or protocol"

PBA in “Real Life”

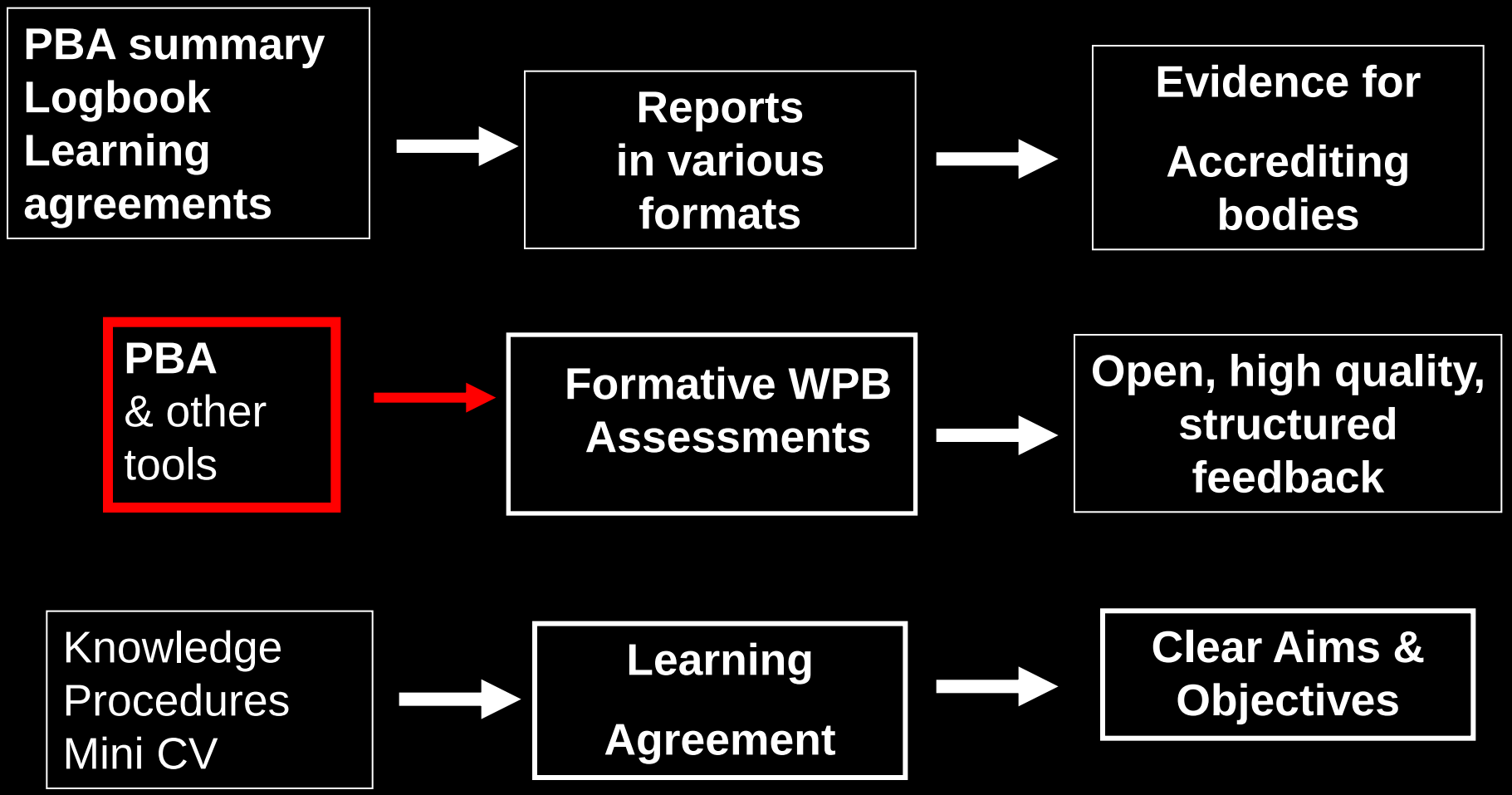
1. Trainer & trainee identify PBA (whole or parts) at start of attachment



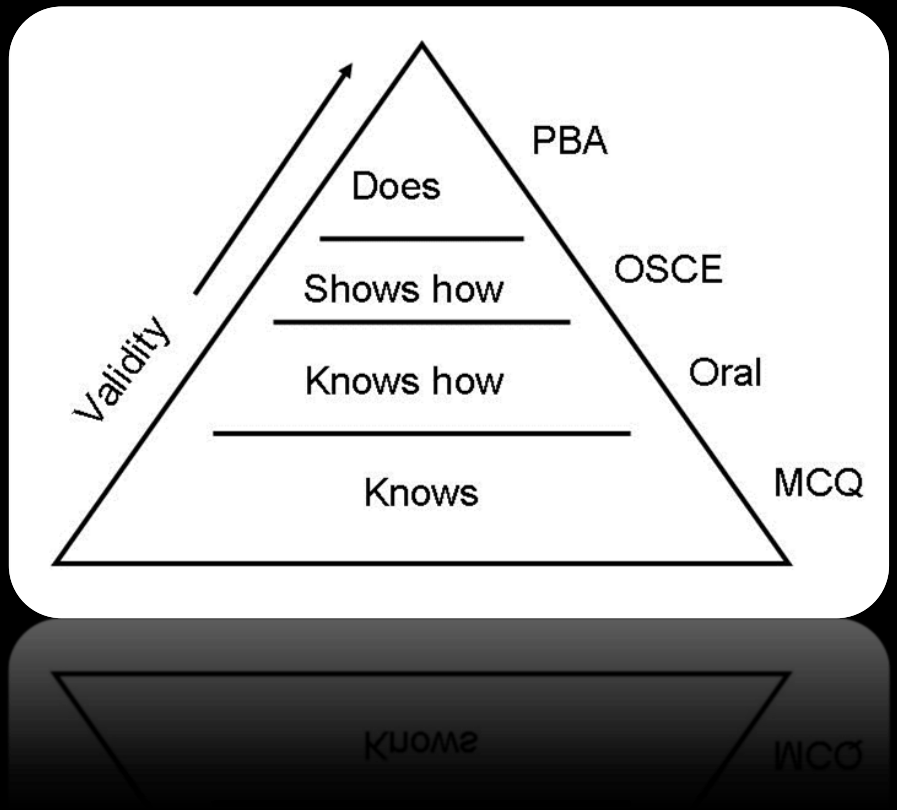


2. Trainee downloads forms beforehand (no surprises)
3. Trigger specific assessment
   - Trainer or trainee can initiate
   - Agree elements of PBA to be assessed
4. Conduct assessment
   - Trainer scrubbed (usually)
   - Instruct trainee to verbalise
   - Prompt trainee to verbalise
5. Record assessment immediately following procedure
6. Immediate feedback to trainee
7. Both sign PBA form
8. Scores transferred to PBA summary sheet by trainee

What is a PBA? – Evidence & Feedback

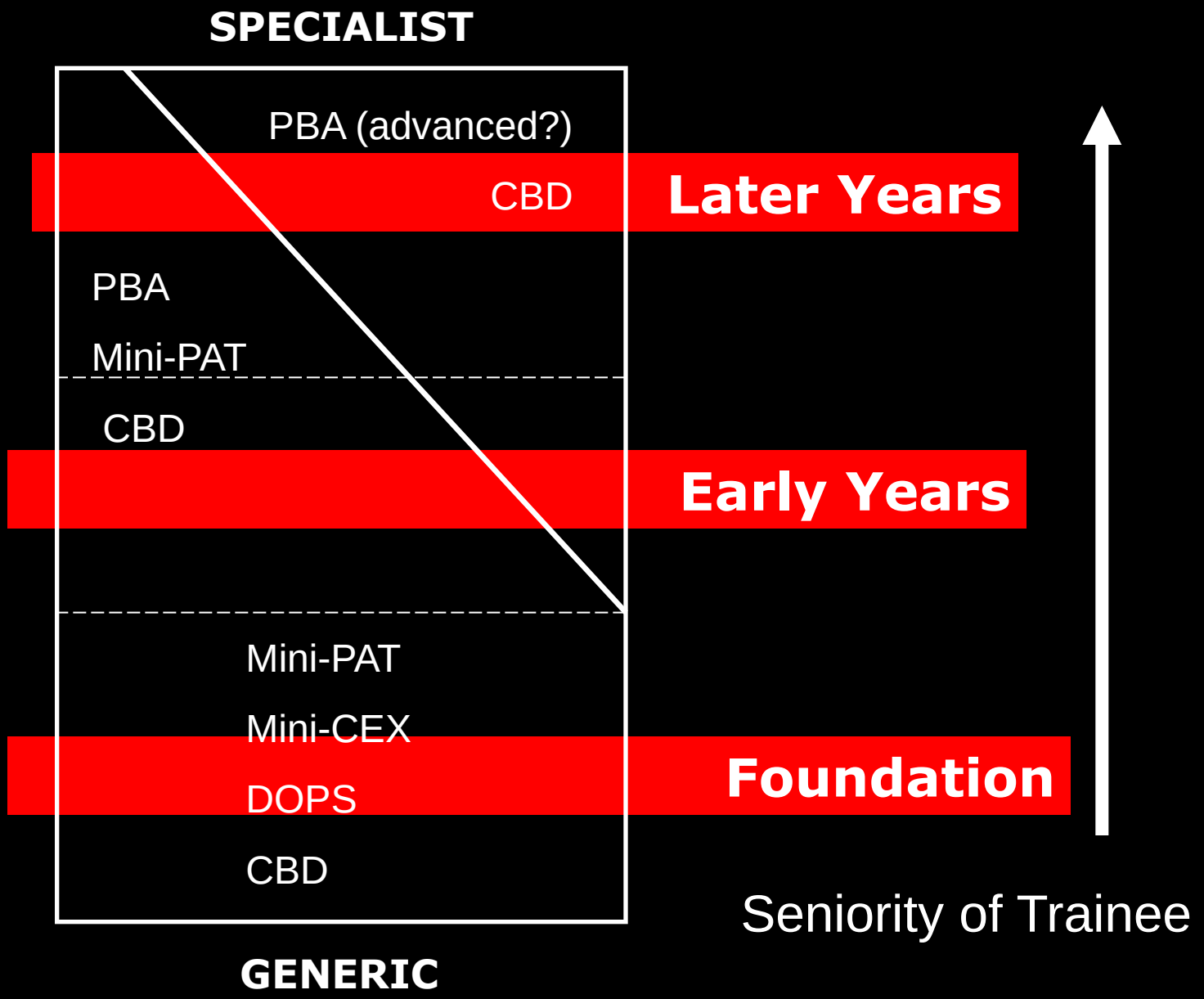


A tool to assess competence



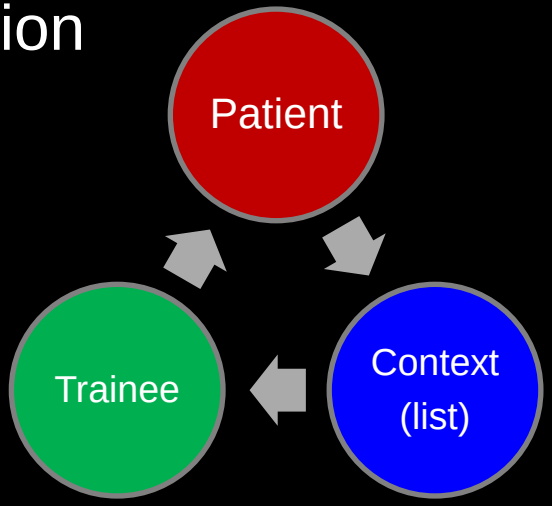
Miller's Pyramid

One of a number of Workplace Assessment Tools



PBA's used in a variety of contexts

- Undergraduates
  - Observation sheet
- Early years trainees
  - Selected sections
  - Pre operative preparation



- New trainee
  - Commentary
  - Trainee gives feedback to trainer
- Senior trainees
  - Whole PBA
  - Difficult procedures

What does a PBA assess?

What is a PBA?

- Formative assessment
  - In**forms** the trainee on how they are doing
- Structured feedback
- Coaching tool
- Guiding evidence for the trainer on trainee's need for supervision
- Snapshot of performance on a particular occasion
- A record to be added to portfolio
- PART of the evidence considered at RITA

- A formal requirement of training (not optional)

- A set of key indicators
  - If these are right then the rest will (probably) be right
  - Understanding (or lack of it) can be seen at this vantage point
  - not a checklist of how to perform procedure

What is a collection of PBA's, assembled over several years with different trainers and collected as evidence through the PBA summary sheet presented to RITA or ARCP committee?

- A **Summative** assessment of the trainees competence in learning to perform operative procedures using the correct protocol to the correct standards
- Key part of evidence on which panel will base decision to approve individual's training progress

What does a completed PBA mean?

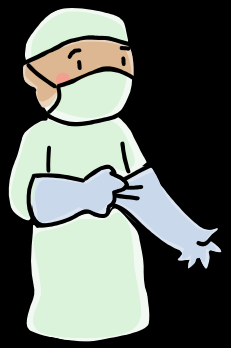
- NOT a license to operate unsupervised!
- DOES give trainer confidence to allow trainee greater responsibility
- “Completed set demonstrates competence to learn procedures and perform to set protocol and standard”

What is a PBA not?

- A checklist of how to perform a specific procedure
- Trainee's only chance to succeed
- A pass / fail situation
- Summative assessment of operative competence
- License to operate unsupervised
- A stand-alone assessment
  - Correlates across index procedures
  - Set in context of learning agreement
  - One element of overall T&O curriculum

Multiple roles, assessed by whole curriculum requirements

- “Skilful Technician”
- Decision maker
- Team leader
- Patient advocate
- Researcher
- …



- MRCS
- FRCS
- Logbook
- Research
- PBA
- Other wpba

How were/are PBA's developed?

Form an “Expert Group”

- Surgical experts
- Assessment professionals
- Educationally competent

- Collaboration
- Consensus

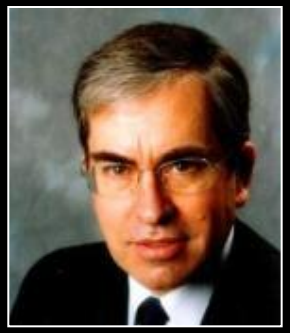













Identify “Index Procedure”

- Not possible to assess all procedures
- “Index Procedure”
  - Accessible
  - Assessable
  - Indicative

- T & O
  - Total Knee Replacement
  - Compression Hip Screw
  - External Fixator
- General Surgery
  - Hernia repair
  - Laparotomy for acute abdomen
  - Blunt/penetrating abdominal trauma

Construct validation sheet from generic template

Procedure-Based Assessment Validation

Specialty:	Procedure:

Competencies and Definitions		Positive Behaviours (doing what should be done)	Negative Behaviours (doing what shouldn't be done)	Negative – Passiv Behaviours (not doing what should be
I.	**Consent**			
C1	Demonstrates sound knowledge of indications and contraindications including alternatives to surgery	Explains using examples relevant to the patient: ▪ Principle benefit of operation ▪ Subsequent improvement of function ▪ Limitations of surgery ▪ Consequences of not having surgery	Expresses unrealistic views of the improvement in function expected following the procedure	Fails to point out the limitatio operation
C2	Demonstrates awareness of sequelae of operative or non operative management	Describes consequences, agrees expectations and checks patient understanding	Is over confident in describing consequences, reinforces patient's unrealistic expectations	Fails to mention key inevitabl consequences

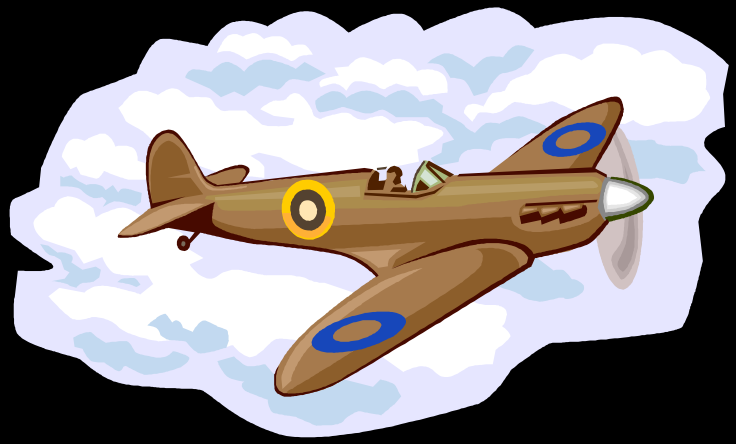
Example: Total Shoulder Replacement (work in progress)

Communicates clearly and consistently with the scrub team	Sets positive tone with appropriate greeting. Asks for instruments clearly. Informs as to next steps. Asks for instruments by correct name	Uses rough or inappropriate tone of voice or words. Uses slang or 'local' descriptions of instruments	Gives no greeting, does not ask fo anything (but expects to be given it
Communicates clearly and consistently with the anaesthetist	Sets positive tone with appropriate greeting. Sets clear goals and expectations	Proceeds with next step of procedure without anaesthetic advice (where required)	Fails to inform anaesthetist of key phase requiring anaesthetic cooperation
Dislocates shoulder	Performs a good release and dislocates without excess force	Attempts to force the dislocation by tearing tissues	Fails to perform an adequate dislocation and gives a poor exposure of the head
Prepares humerus appropriately to match design of implant	Places jigs correctly and prepares the proximal humerus safely	Prepares bone without adequately protecting the soft tissues. Places jigs in the wrong position	Fails to excise osteophytes befo preparing bone
Demonstrates familiarity and understanding of glenoid preparation	Obtains good exposure of the glenoid and uses guides appropriately to adequately prepare the glenoid	Prepares the glenoid inadequately	Fails to expose the glenoid appropriately before starting preparation
Uses trials and checks component orientation properly	Inserts the appropriate trials and assesses adequacy appropriately	implants trials in an incorrect postion and does not correct error	Is unable to assess adequacy of trials or fails to trial implants
Fixes components appropriately	Inserts the components using a	Moves the implant during cement	Does not insert cement correctly

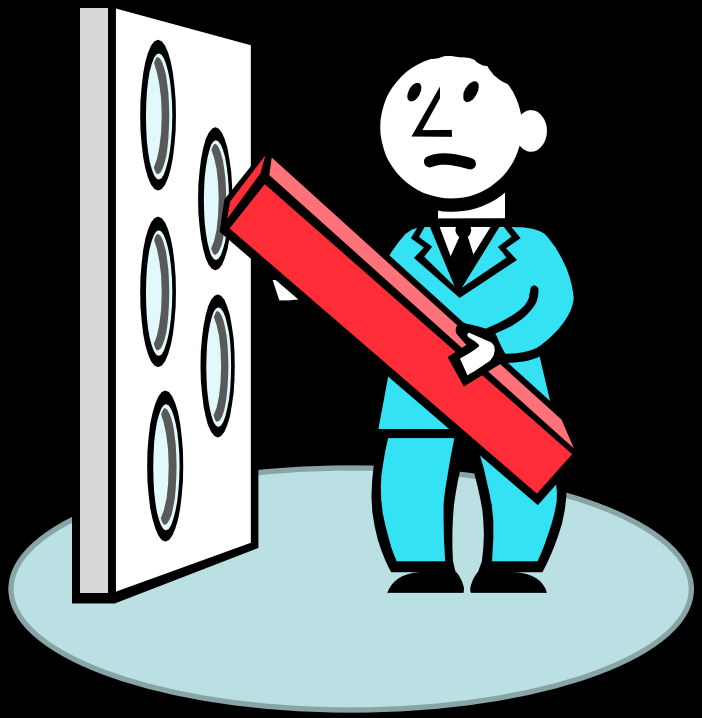
NB:Focus on Behaviours!

Pilot Test

- Time
  - debrief
- Observeability
- Unexpected problems



Implement!



“Pirates, not the navy”

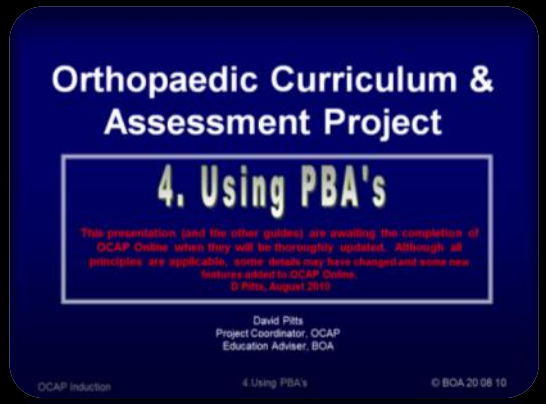
Problems we faced/are facing

Politics & Counter implementation

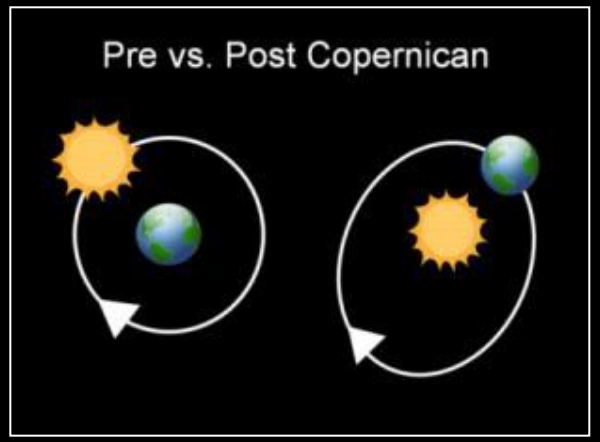
- “its my ball…”
- One size must fit all

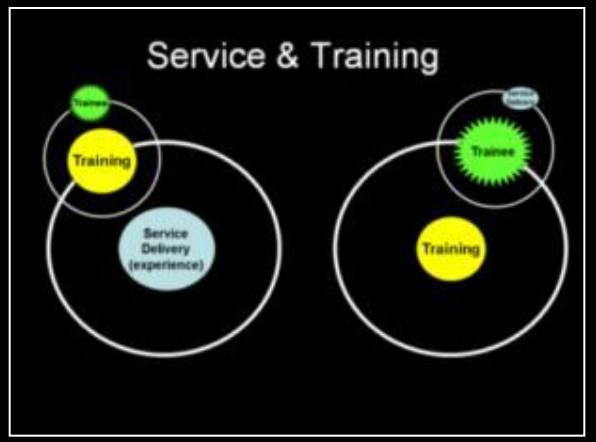
User Training

- Powerpoint guides
- Briefings
- Opportunistic
- RCSEd initiative



Paradigms





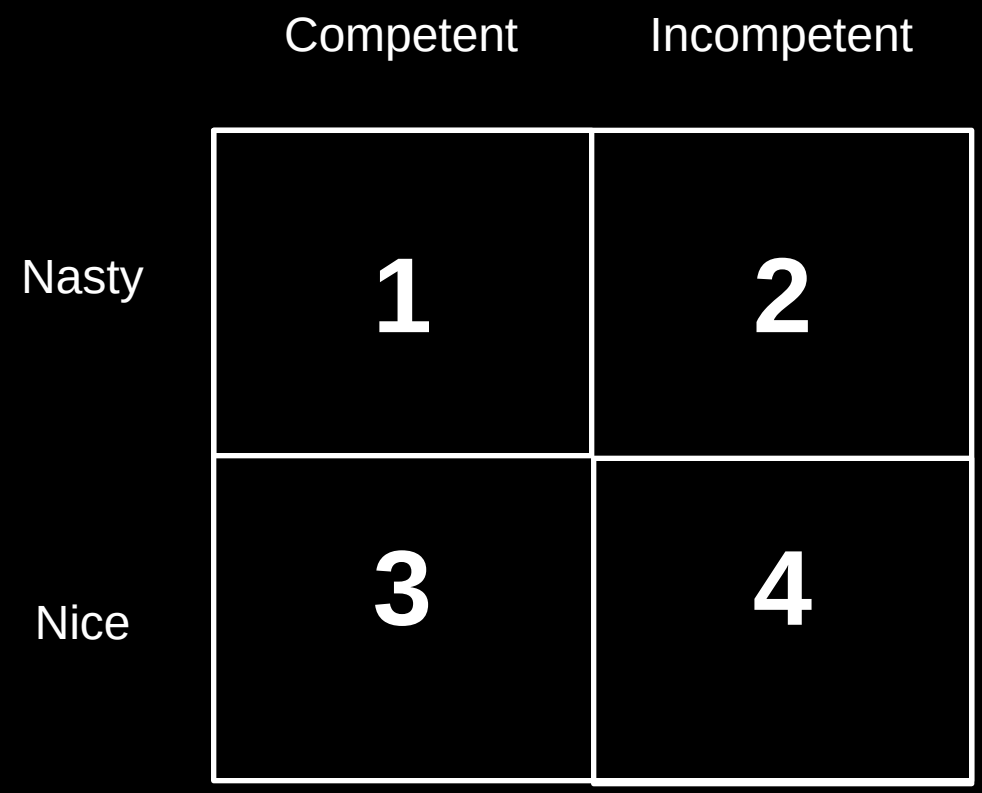
“The innovator has for enemies those who did well in the old situation and faint friends in those who might do well in the new”

Machiavelli, The Prince

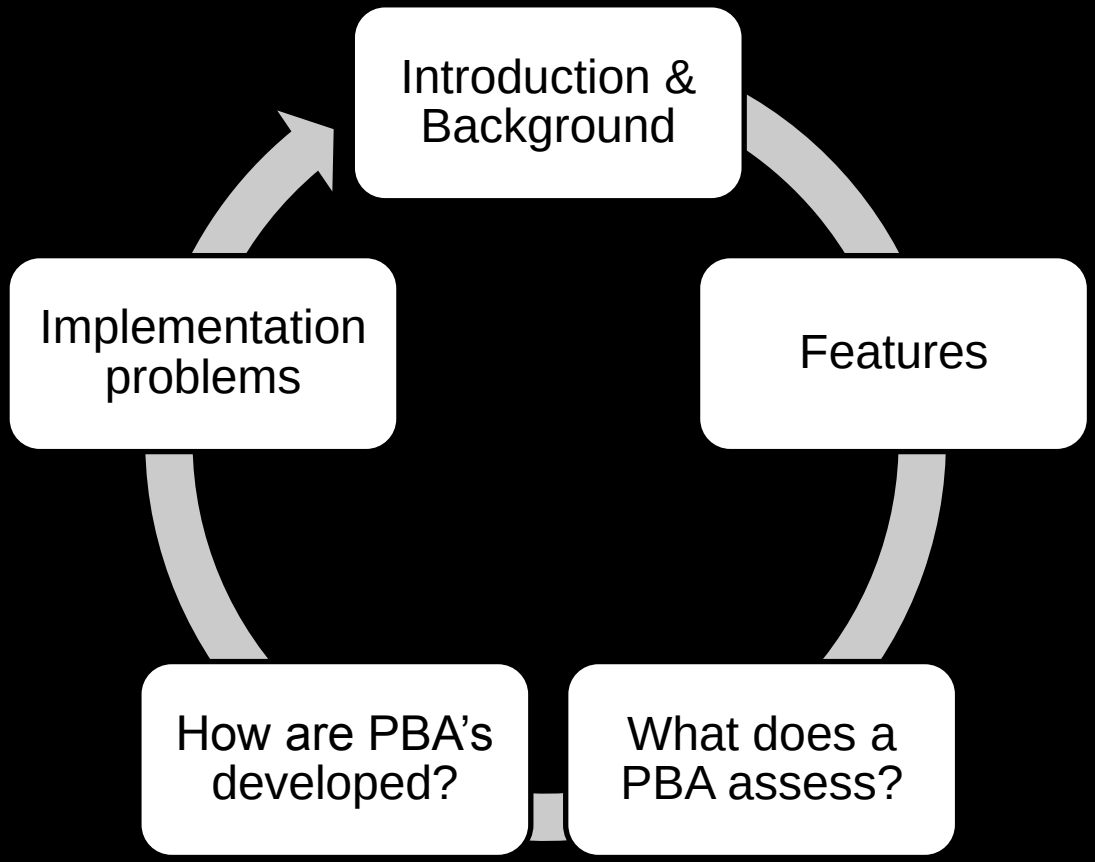
Inexpert meddling

- Evolution?
- Entropy?

- £200k
- >£3.5million



Questions & Discussion



PBA design and validation

Procedure Based assessment in the workplace faced a design problem – what's a "Procedure"?

- No such thing as a "procedure"
- Conflicting variables from:
  - patients
  - presenting conditions
  - complexity of procedure
  - theatre teams
  - Trainers / Consultants
  - workplace equipment
  - "Uneven playing field"
- Implications for assessment
  - What's possible in practice
  - What the assessment means

Design “solution” : Index Procedures?

- Indicative of competence or ability across the broad spectrum of the specialty
- Useable by trainers
- Accessible to trainees (i.e. significant numbers available)
- If they can demonstrate that they learned to do procedure X, can they be trusted to learn procedure Y without assessment?

How were index procedures selected?

- Delphic process using approx 150 trainers plus logbook evidence
- Index procedure
  - Indicative
  - Unique
  - observable
  - accessible
- Orthopaedics 14 at present, may rise to 20

NE PBA ANALYSIS

	PROCEDURE	Groups										Total
		1	2	3	4	5	6	7	8	9	10	
1	DHS	✓	✓	✓*	✓*	✓*	✓*	✓	✓*	✓*	✓ (x2)	11
2	Uncomplicated primary THR	✓*	✓*	✓*	✓	✓*	✓	✓	✓	✓*	✓*	10
3	Uncomplicated primary TKR	✓*	✓	✓*	✓*	✓*		✓	✓	✓	✓*	9
4	Hip hemiarthroplasty	✓*	✓	✓*	✓			✓*	✓	✓	✓	8
5	Simple fasciectomy	✓	✓*	✓*	✓	✓		✓		✓	✓*	8
6	Carpal tunnel release	✓	✓			✓*	✓	✓		✓*	✓*	7
7	Closed manipulation & plaster Colles #		✓		✓*	✓	✓ (x2)			✓	✓	7
8	Diagnostic knee arthroscopy	✓		✓*	✓*	✓*		✓*		✓	✓*	7
9	Ex-fix tibia	✓*	✓		✓	✓	✓	✓*		✓		7
10	Internal fixation of Weber B ankle #	✓	✓	✓*	✓		✓		✓		✓	7
11	Discectomy (lumbar)			✓	✓	✓	✓	✓		✓		6
12	Fasciotomy for compartment syndrome	✓	✓			✓			✓	✓*	✓	6

Establishing PBA validity

- Valid selection of index procedures
  - Delphic group(s)
  - Availability – logbook evidence
- Internal validity
  - Delphic groups
  - Validation worksheets
    - Behavioural markers
    - Positive / negative / negative passive

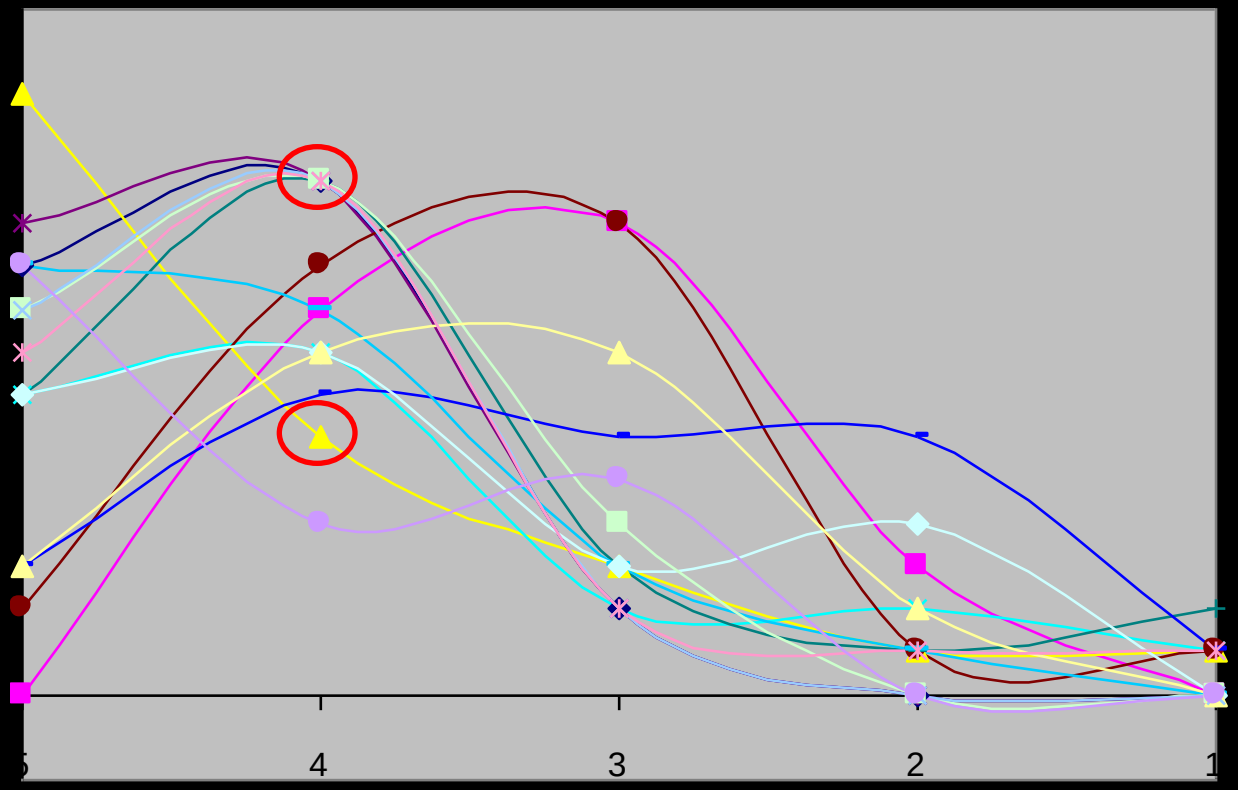
- Number of assessments
- Number of assessors

- Further studies in progress

PBA Validation worksheet to establish internal face validity by detailed consensus

	Competences and Definitions	Positive Behaviours (doing what should be done)	Negative Behaviours (doing what shouldn't be done)	Negative – Passive Behaviours (not doing what should be done)
I.	**Consent**			
C1	Demonstrates sound knowledge of indications and contraindications	Explains using examples relevant to the patient: ▪ Principle benefit of operation ▪ Subsequent improvement of function ▪ Limitations of surgery ▪ Consequences of not having surgery	Expresses unrealistic views of the improvement in function expected following the procedure	Fails to point out the limitations of the operation
C2	Demonstrates awareness of consequences of taking action operatively	Describes consequences, agrees expectations and checks patient understanding	Over confident in describing consequences, reinforces patient's unrealistic expectations	Fails to mention key inevitable consequences
C3	Demonstrates sound knowledge of complications of surgery	Is able to explain in priority order the complications likely to occur in terms of commonality and in terms of seriousness	Spends time explaining rare complications and fails to mention commoner ones	Misses out one or more major complications when explaining to trainer or patient

Responses:
NE Trainers June 03

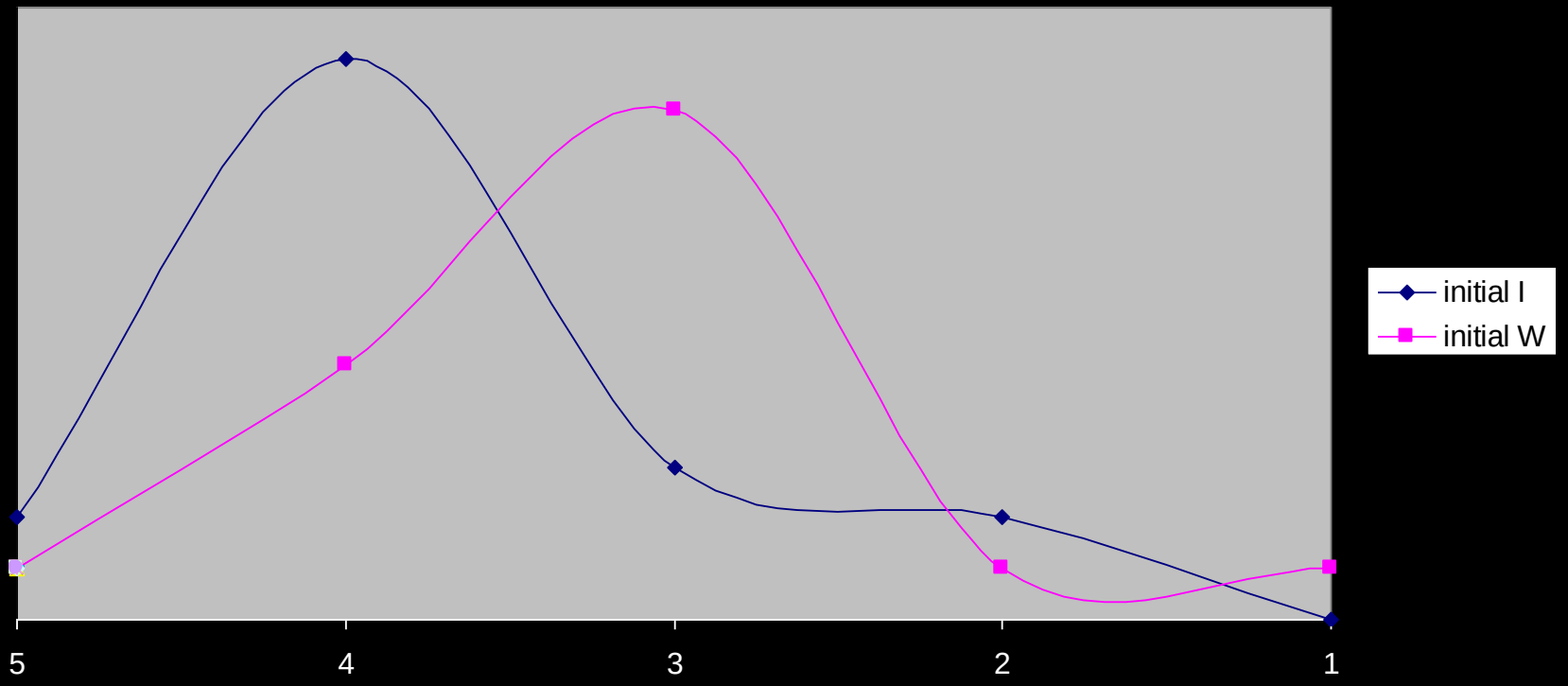


initial I
initial W
CV I
CV W
Procedures I
Procedures W
Knowledge I
knowledge W
Contract I
Contract W
PBA I
PBA W
Useful
Helpful

1. *Is it a good idea?*
2. *Will it work?*

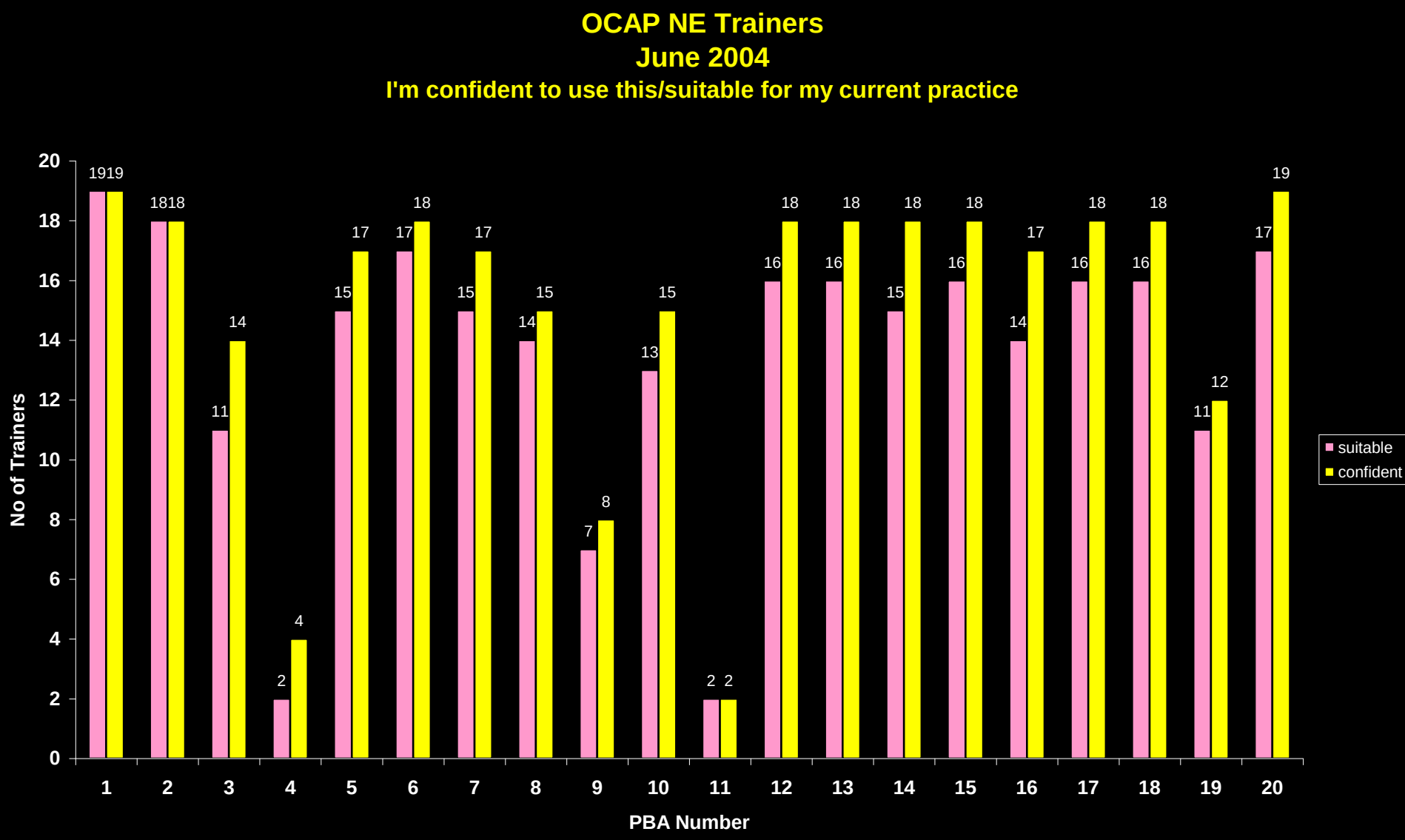
Yes → No

SW Thames Trainees Jan 04

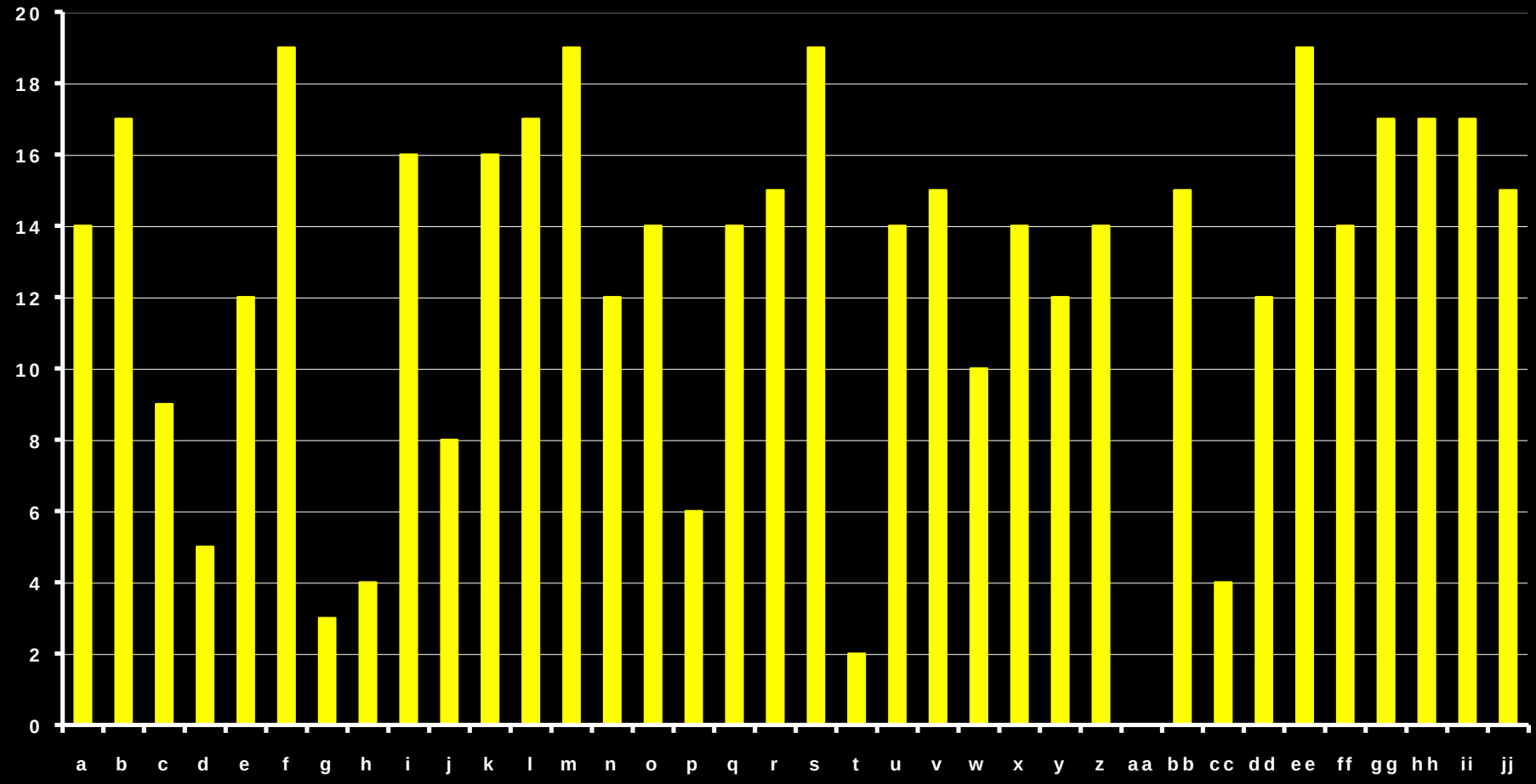


1. *Is it a good idea?*
2. *Will it work?*

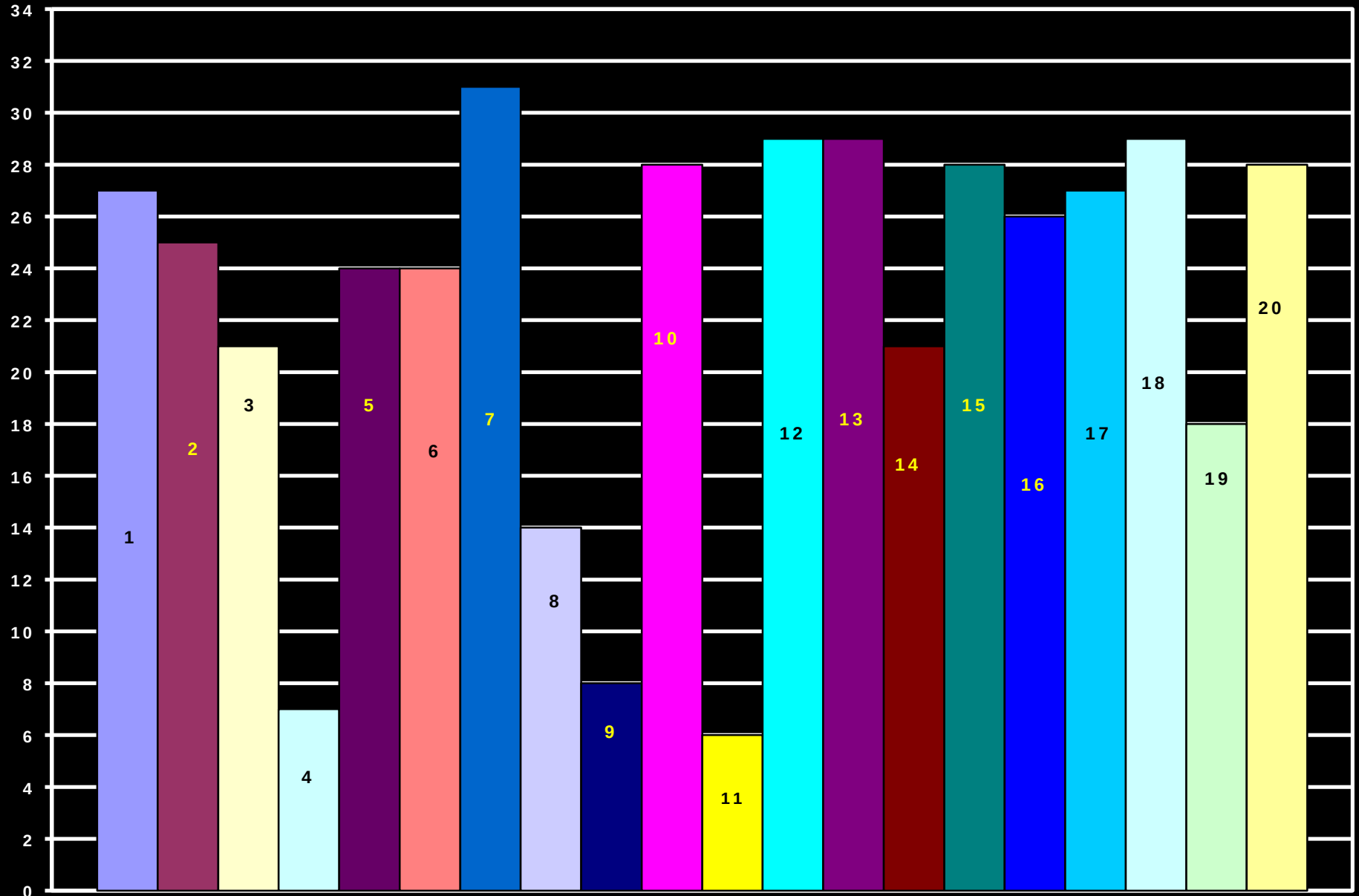
Yes → No


OCAP NE Trainers
June 2004
I'm confident to use this/suitable for my current practice
No of Trainers
PBA Number
suitable
confident
0
2
4
6
8
10
12
14
16
18
20
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
19 19
18 18
11 14
2 4
15 17
17 18
15 17
14 15
7 8
13 15
2 2
16 18
16 18
15 18
16 18
14 17
16 18
16 18
11 12
17 19

SW Thames May 04, Trainers able to use how many pba's?



SW Thames How many trainers able to use which pba's



David Pitts

PBA External Reliability & Validity Study

Do’s & Don’ts

How NOT to use a PBA

1. Fail to discuss or identify target procedures
   - No learning agreement
2. No assessments triggered
   - Too busy?
   - Inappropriately fearful
3. Trainer not scrubbed
   - Inadequate view of procedure
   - Patient at risk
4. Inadequate observation

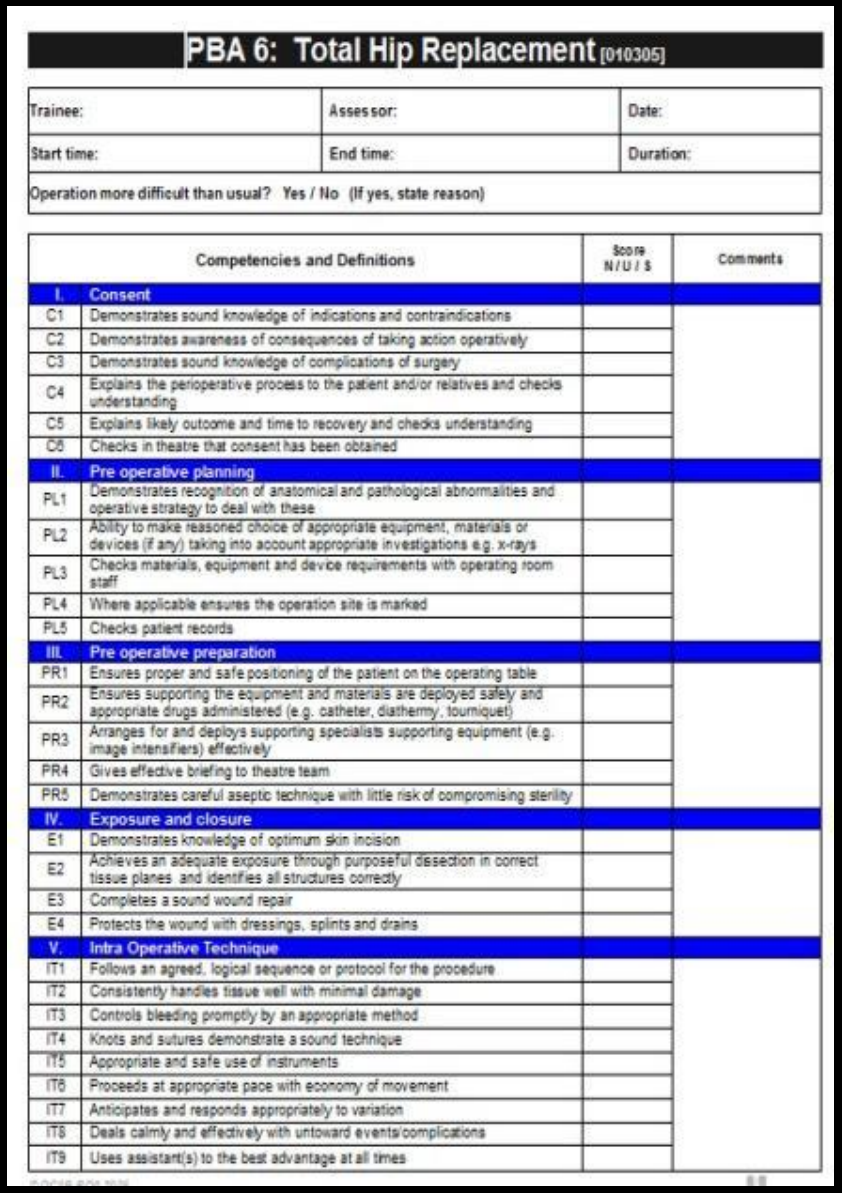
   Judge on basis of evidence on the day, not personal view of what trainee could have done
5. Inappropriate prompting
   - guidance by retractor
6. Over-use of “not assessed”
   - Evidence for intervention
7. Delaying recording to later date
   - Memory test
   - Paperwork will take longer
8. Delaying feedback to later date
   - Less effective
   - Argument pantomime
9. Turning feedback into teaching session
   - Laudable
   - Will take longer
10. Fail to transfer scores to PBA summary sheet
    - RITA cannot see progression

How long should a PBA take?

- Same time as the procedure usually takes when done by trainee
- 10-15 minutes afterwards to review, fill forms
- NB may be more demanding at the early stages of a trainee's career, where very few assessments have taken place for a lengthy period or at start of whole project when trainer is unfamiliar
- 45 minutes??
- If you don't do it immediately after the procedure it will take longer
  - Don't remember what happened
  - Don't agree what happened
- Completing a PBA is not a teaching session!

PBA in practice

- Trainer or trainee triggers PBA
- NB Trainer agrees to the PBA
- Trainee conducts agreed parts of procedure observed by trainer
- Trainer usually scrubbed
- Trainee verbalises, explains what intentions are
- Trainer steps in as/where necessary
- Forms completed and feedback given immediately after procedure
- Trainee includes all forms in portfolio, notes in logbook and updates PBA summary sheet

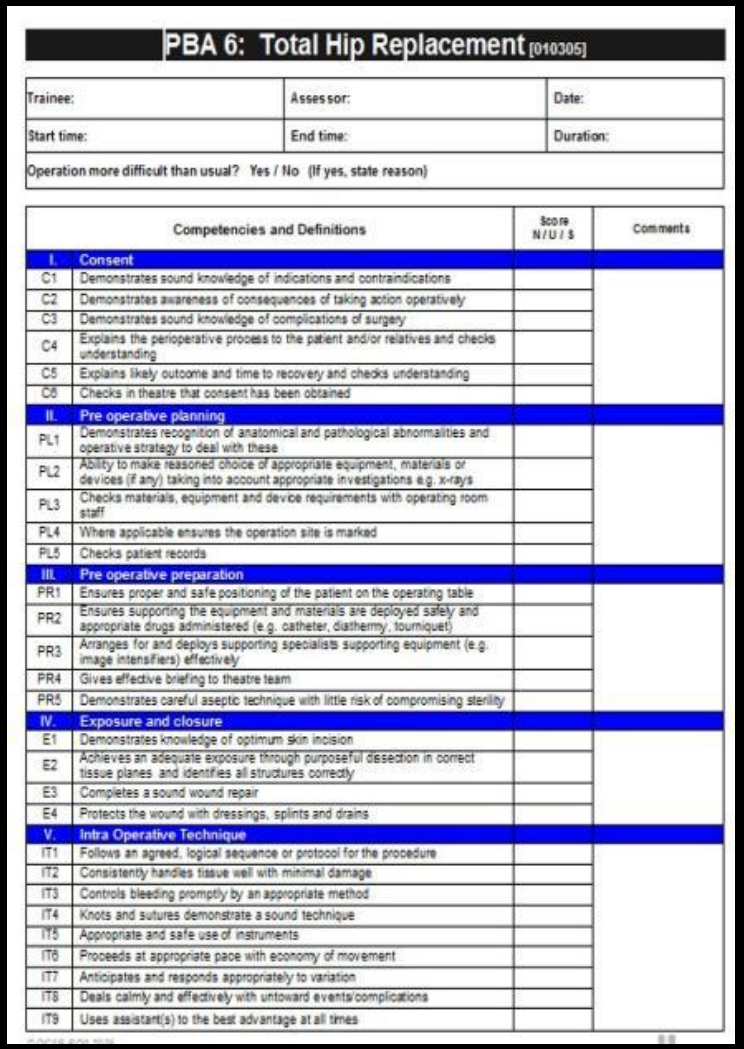


PBA 6: Total Hip Replacement [010305]

Trainee:	Assessor:	Date:
Start time:	End time:	Duration:
Operation more difficult than usual? Yes / No (If yes, state reason)		

	Competencies and Definitions	Score N / U / S	Comments
I.	**Consent**		
C1	Demonstrates sound knowledge of indications and contraindications		
C2	Demonstrates awareness of consequences of taking action operatively		
C3	Demonstrates sound knowledge of complications of surgery		
C4	Explains the perioperative process to the patient and/or relatives and checks understanding		
C5	Explains likely outcome and time to recovery and checks understanding		
C6	Checks in theatre that consent has been obtained		
II.	**Pre operative planning**		
PL1	Demonstrates recognition of anatomical and pathological abnormalities and operative strategy to deal with these		
PL2	Ability to make reasoned choice of appropriate equipment, materials or devices (if any) taking into account appropriate investigations e.g. x-rays		
PL3	Checks materials, equipment and device requirements with operating room staff		
PL4	Where applicable ensures the operation site is marked		
PL5	Checks patient records		
III.	**Pre operative preparation**		
PR1	Ensures proper and safe positioning of the patient on the operating table		
PR2	Ensures supporting the equipment and materials are deployed safely and appropriate drugs administered (e.g. catheter, diathermy, tourniquet)		
PR3	Arranges for and deploys supporting specialists supporting equipment (e.g. image intensifiers) effectively		
PR4	Gives effective briefing to theatre team		
PR5	Demonstrates careful aseptic technique with little risk of compromising sterility		
IV.	**Exposure and closure**		
E1	Demonstrates knowledge of optimum skin incision		
E2	Achieves an adequate exposure through purposeful dissection in correct tissue planes and identifies all structures correctly		
E3	Completes a sound wound repair		
E4	Protects the wound with dressings, splints and drains		
V.	**Intra Operative Technique**		
IT1	Follows an agreed, logical sequence or protocol for the procedure		
IT2	Consistently handles tissue well with minimal damage		
IT3	Controls bleeding promptly by an appropriate method		
IT4	Knots and sutures demonstrate a sound technique		
IT5	Appropriate and safe use of instruments		
IT6	Proceeds at appropriate pace with economy of movement		
IT7	Anticipates and responds appropriately to variation		
IT8	Deals calmly and effectively with untoward events/complications		
IT9	Uses assistant(s) to the best advantage at all times		

PBA: What to write



PBA 6: Total Hip Replacement [010305]

Trainee:	Assessor:	Date:
Start time:	End time:	Duration:
Operation more difficult than usual? Yes / No (If yes, state reason)		

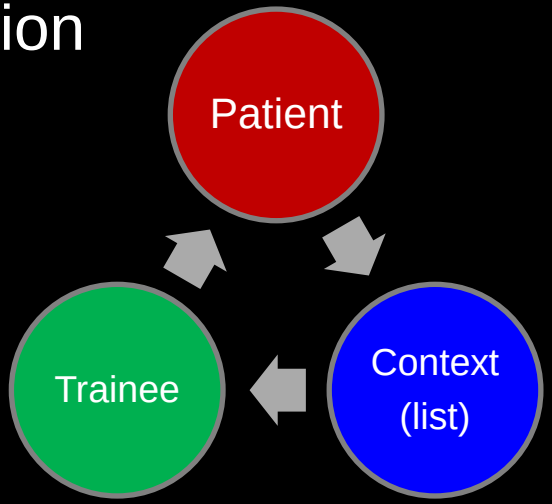
	Competencies and Definitions	Score N / U / S	Comments
I.	**Consent**		
C1	Demonstrates sound knowledge of indications and contraindications		
C2	Demonstrates awareness of consequences of taking action operatively		
C3	Demonstrates sound knowledge of complications of surgery		
C4	Explains the perioperative process to the patient and/or relatives and checks understanding		
C5	Explains likely outcome and time to recovery and checks understanding		
C6	Checks in theatre that consent has been obtained		
II.	**Pre operative planning**		
PL1	Demonstrates recognition of anatomical and pathological abnormalities and operative strategy to deal with these		
PL2	Ability to make reasoned choice of appropriate equipment, materials or devices (if any) taking into account appropriate investigations e.g. x-rays		
PL3	Checks materials, equipment and device requirements with operating room staff		
PL4	Where applicable ensures the operation site is marked		
PL5	Checks patient records		
III.	**Pre operative preparation**		
PR1	Ensures proper and safe positioning of the patient on the operating table		
PR2	Ensures supporting the equipment and materials are deployed safely and appropriate drugs administered (e.g. catheter, diathermy, tourniquet)		
PR3	Arranges for and deploys supporting specialists supporting equipment (e.g. image intensifiers) effectively		
PR4	Gives effective briefing to theatre team		
PR5	Demonstrates careful aseptic technique with little risk of compromising sterility		
IV.	**Exposure and closure**		
E1	Demonstrates knowledge of optimum skin incision		
E2	Achieves an adequate exposure through purposeful dissection in correct tissue planes and identifies all structures correctly		
E3	Completes a sound wound repair		
E4	Protects the wound with dressings, splints and drains		
V.	**Intra Operative Technique**		
IT1	Follows an agreed, logical sequence or protocol for the procedure		
IT2	Consistently handles tissue well with minimal damage		
IT3	Controls bleeding promptly by an appropriate method		
IT4	Knots and sutures demonstrate a sound technique		
IT5	Appropriate and safe use of instruments		
IT6	Proceeds at appropriate pace with economy of movement		
IT7	Anticipates and responds appropriately to variation		
IT8	Deals calmly and effectively with untoward events/complications		
IT9	Uses assistant(s) to the best advantage at all times		

- Mark elements as “**S**” if there is observable evidence that performance is satisfactory
- Mark element as “**U**” if the trainee failed to perform satisfactorily, or provided evidence that they were about to perform unsatisfactorily (NB Patient care and safety is never compromised)
- Mark elements or sections as “**N**” if they were not assessed, either by agreement beforehand or by circumstances which prevented the trainee from completing the procedure
- If a trainer has to offer guidance or intervene on any element the trainee may continue (having received “**U**” for that element) at the trainer’s discretion.
- Comments should be added where possible to help the trainee to improve

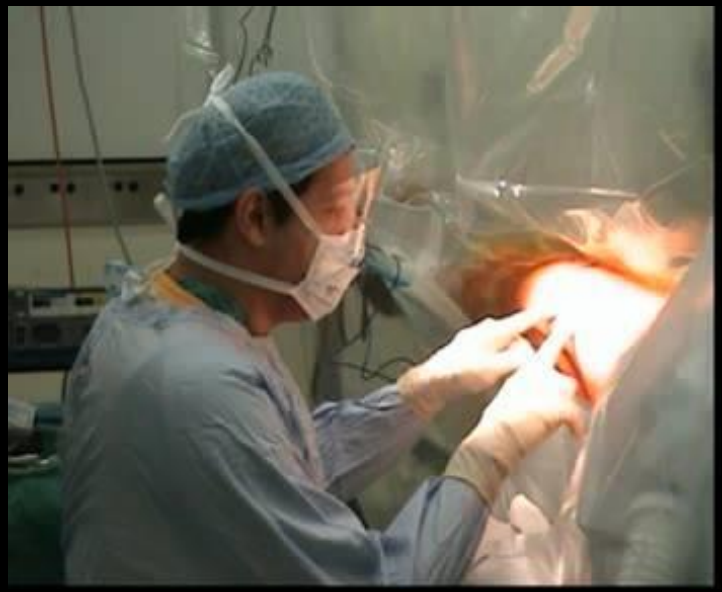
When & How to use them

When to use PBA's

- Undergraduates
  - Observation sheet
- Early years trainees
  - Selected sections
  - Pre operative preparation



- New trainee
  - Commentary
  - Trainee gives feedback to trainer
- Senior trainees
  - Whole PBA
  - Difficult procedures



NB A PBA is conducted in the real world, in real time
The trainer directs the PBA and must never compromise the quality of patient care for the sake of the assessment

How to write a PBA

Procedure-Based Assessment Validation

Specialty:	Procedure:

Competencies and Definitions		Positive Behaviours (doing what should be done)	Negative Behaviours (doing what shouldn't be done)	Negative – Passiv Behaviours (not doing what should be
I.	**Consent**			
C1	Demonstrates sound knowledge of indications and contraindications including alternatives to surgery	Explains using examples relevant to the patient: ▪ Principle benefit of operation ▪ Subsequent improvement of function ▪ Limitations of surgery ▪ Consequences of not having surgery	Expresses unrealistic views of the improvement in function expected following the procedure	Fails to point out the limitatio operation
C2	Demonstrates awareness of sequelae of operative or non operative management	Describes consequences, agrees expectations and checks patient understanding	Is over confident in describing consequences, reinforces patient's unrealistic expectations	Fails to mention key inevitabl consequences
C3	Demonstrates sound knowledge of complications of surgery	Explains in priority order the complications likely to occur in terms of commonality and in terms of seriousness	Spends time explaining rare complications and fails to mention commoner ones	Misses out one or more majo complication(s) when explain trainer or patient
C4	Explains the perioperative process to the patient and/or relatives or carers and checks understanding	Describes what will happen throughout the management of the condition, indicating clear post operative milestones, giving a rough idea of time involved and specifying who will do what. Questions the patient to check that their expectations are realistic and they have understood fully	Uses technical terms, explains too quickly and does not check understanding	Misses out common events, particularly those likely to hap the early post operative perio
C5	Explains likely outcome and time to recovery and checks understanding	Expresses sensible prognosis and clearly has knowledge of the current outcome data	Expresses over optimistic outcomes and glosses over realistic difficulties	Fails to check that the patient understood by actively listeni patient's reiteration of what is said to them

Total Shoulder Replacement – work in progress

IT9	Uses assistant(s) to the best advantage at all times	Briefs assistants and places them and the instruments where they are needed	Accepts whatever assistant does irrespective of whether or not appropriate	Fails to brief assistant and expresses irritation when positions are not what are required
IT10	Communicates clearly and consistently with the scrub team	Sets positive tone with appropriate greeting. Asks for instruments clearly. Informs as to next steps. Asks for instruments by correct name	Uses rough or inappropriate tone of voice or words. Uses slang or 'local' descriptions of instruments	Gives no greeting, does not ask for anything (but expects to be given it)
IT11	Communicates clearly and consistently with the anaesthetist	Sets positive tone with appropriate greeting. Sets clear goals and expectations	Proceeds with next step of procedure without anaesthetic advice (where required)	Fails to inform anaesthetist of key phase requiring anaesthetic cooperation
IT12	**Dislocates shoulder**	**Performs a good release and dislocates without excess force**	**Attempts to force the dislocation by tearing tissues**	**Fails to perform an adequate dislocation and gives a poor exposure of the head**
IT13	**Prepares humerus appropriately to match design of implant**	**Places jigs correctly and prepares the proximal humerus safely**	**Prepares bone without adequately protecting the soft tissues. Places jigs in the wrong position**	**Fails to excise osteophytes before preparing bone**
IT14	**Demonstrates familiarity and understanding of glenoid preparation**	**Obtains good exposure of the glenoid and uses guides appropriately to adequately prepare the glenoid**	**Prepares the glenoid inadequately**	**Fails to expose the glenoid appropriately before starting preparation**
IT15	**Uses trials and checks component orientation properly**	**Inserts the appropriate trials and assesses adequacy appropriately**	**implants trials in an incorrect postion and does not correct error**	**Is unable to assess adequacy of trials or fails to trial implants**
IT16	**Fixes components appropriately**	**Inserts the components using a good technique. Achieves primary stability**	**Moves the implant during cement curing. Over or underreduces relative to the trial**	**Does not insert cement correctly or fails to achieve primary stability in uncemented prostheses**
IT17	**Performs final reduction and checks for stability**	**Reduces the shoulder safely and assesses stability and range of motion properly**	**Fails to reduce shoulder or forces reduction**	**Does not assess stability and range of motion after reduction**

Writing a PBA exercise

- Form groups 3 or 4
- Pick a specialist interest other than your own (no experts)
- Pick a procedure that meets the criteria
  - Accessible
  - Assessable
  - Indicative
- Agree on worksheet examples and content for intraoperative technique section
- Review examples
  - Behaviour?
  - See / hear?
- Establish Consensus
  - Not democracy!

Writing a PBA exercise

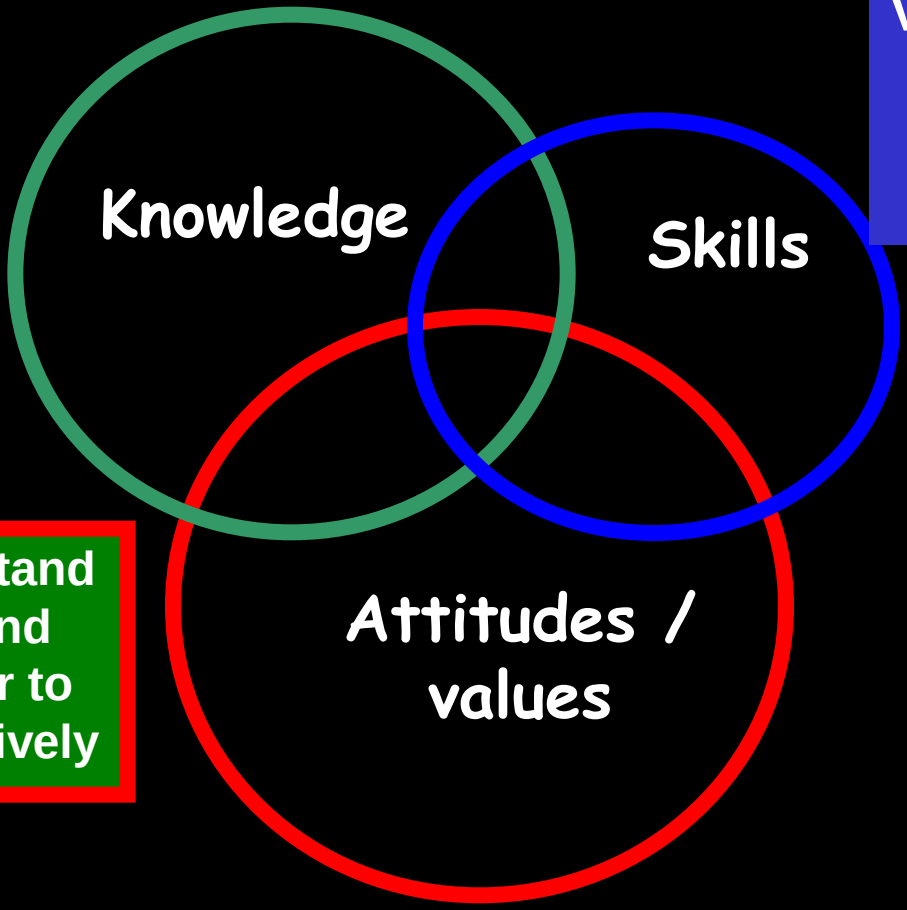
- Form groups 3 or 4
- Pick a specialist interest other than your own (no experts)
- Pick a procedure that meets the criteria
  - Accessible
  - Assessable
  - Indicative
- Agree on worksheet examples and content for intraoperative technique section
- Review examples
  - Behaviour?
  - See / hear?
- Establish Consensus
  - Not democracy!

etencies and Definitions	Positive Behaviours (doing what should be done)	Negative Behaviours (doing what shouldn't be done)	Negative – Passive Behaviours (not doing what should be don
ects the wound with dressings, nts and drains where appropriate	Personally supervises the application of the wound dressing	Walks away from the operating table without briefing the assistant or the nurse on what they require to cover the wound	Fails to specify required dressing
a operative Technique			
ows an agreed, logical sequence or ocol for the procedure	Justifies actions at any point in procedure	Spends a lot of time removing superfluous tissue	When a difficulty is encountered to complete manoeuvre
sistently handles tissue well with mal damage	Personally places self retaining retractors and checks whether the skin is under tension	Pulls and tears tissue. Allows the wound edges to become dry	Fails to recognise tissue damage
trols bleeding promptly by an ropriate method	Responds calmly by applying pressure initially. Briefs the team about what will need to be done – e.g. asks assistant to be ready for diathermy	Grabs in a non systematic manner at soft tissue and indiscriminately applies diathermy. Continues with a dissection despite welling up of blood in the field	Fails to act calmly. Fails to brief t Fails to control blood flow.
nonstrates a sound technique of s and sutures/staples	Draws soft tissue together without tension and forms proper reef knots	Pulls tissues tight so that the tissues blanche. Lets a wound edge gape or pulls one layer of tissue under another	Fails to use the correct method o technique
s instruments appropriately and ly	Asks for instruments in a timely manner anticipating what is needed	Uses an instrument for a purpose it is not intended. Takes whatever is given to them then complains	Fails to ask for correct instrumen the correct time
ceeds at appropriate pace with nomy of movement	Lets the nurse know what is to be done or needed next	Stops and starts, picking things up and then putting them down without using them task not a	
cipates and responds appropriately ariation e.g. anatomy	When encountering something unexpected stops and verbalises concerns with the team	Persists i difficult an	
ls calmly and effectively with xpected events/complications	Verbalises that there is a problem and briefs the team on what needs to happen next	Verbalise issues co to continu	

Beware "awareness"
Avoid checklisting

Training Needs Analysis: working out how to help

PBA: Training Needs Analysis



Very intuitive to actually use, minimal skill demands

Need to understand their nature and design in order to use them effectively

Training Needs Analysis

Tasks	Knowledge	Skills	Attitudes & Values
Organise & Prepare			*Commitment to audit/ learning*
Observe & remember			
Encourage in Silence		*Self-control*	
Give appropriate feedback			
Engage in validation			