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Simulated interPRofessional Team Training

Excellence in patient care through safety

Safe and challenging environment

Introduction to moulage

Creating safe environment

- What is it?
- Why is it important?
- How can we achieve it?

Moulage

Course Structure, SAFE ENVIRONMENT

1. Course Overview
2. Introductions/Icebreaker
3. Crisis Resource Management
4. Mannequin/Equipment
5. Intro to simulation
6. Live Simulation
7. Debrief
8. Summary

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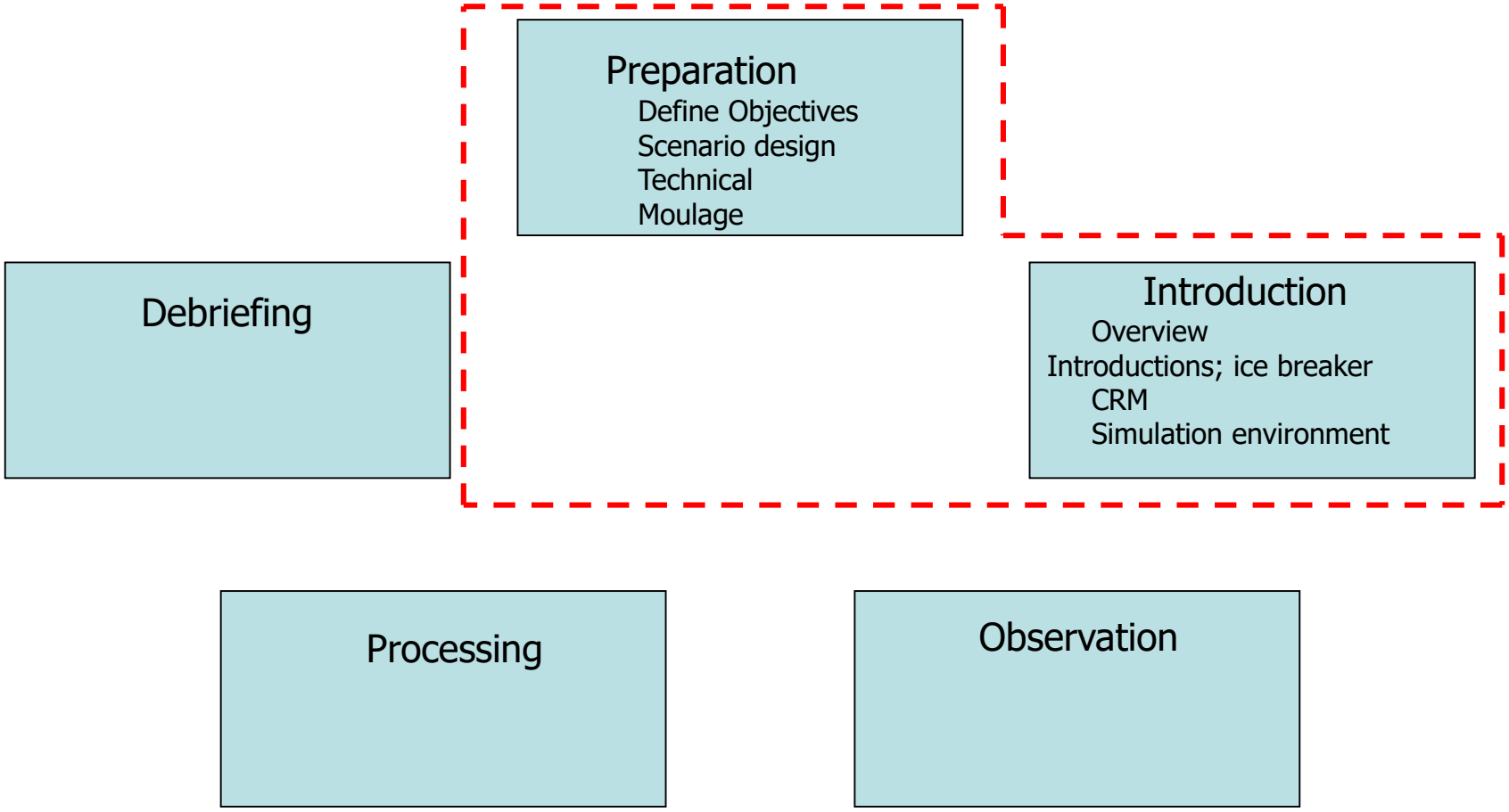
Creating Safe Environment



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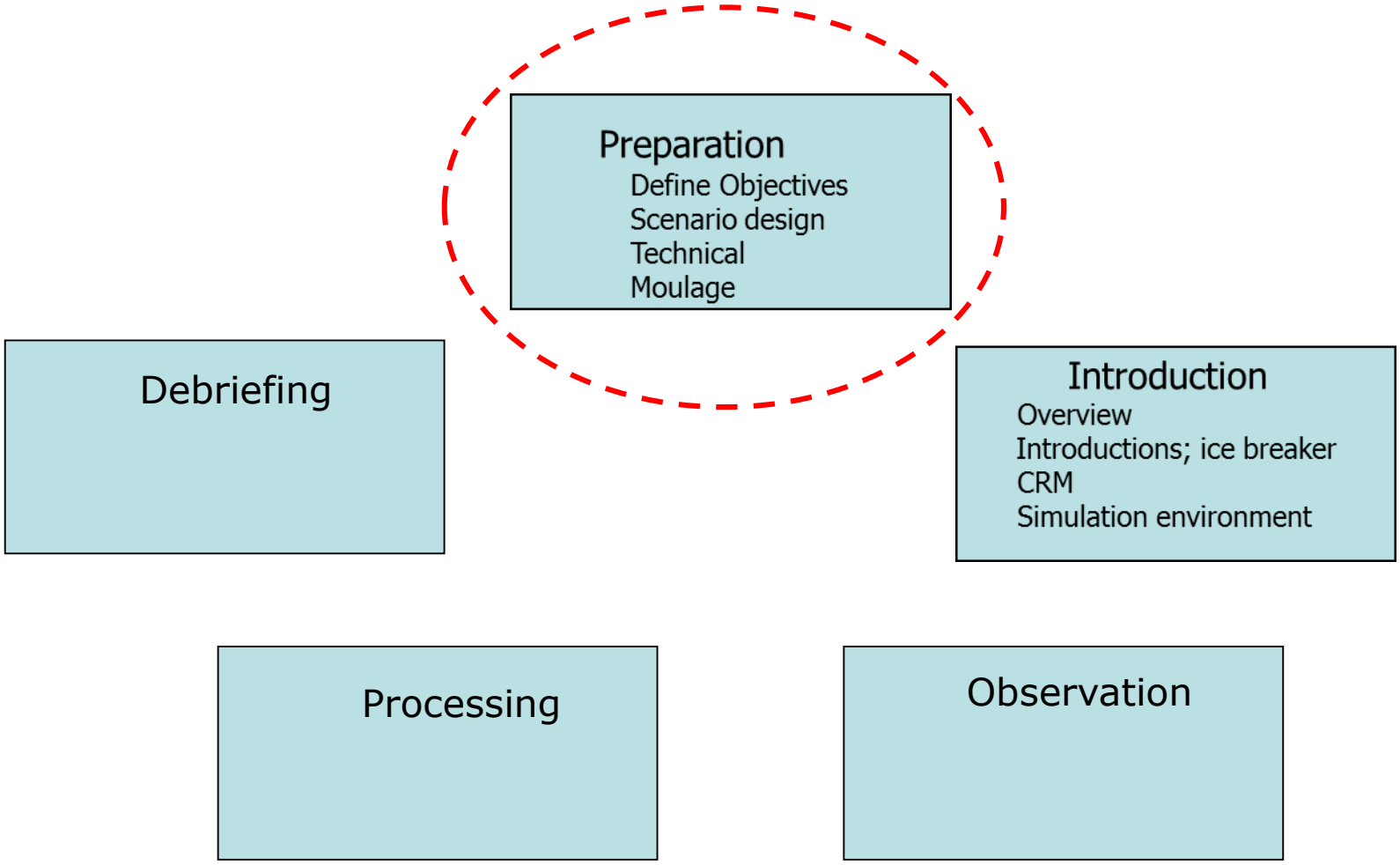
Preparation



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Preparation-define objectives

- What am I targeting today?

  e.g. team training

- Who is participating – match needs

RBHT SPRinT Scenario 1 – BT Shunt Balance

Patient History:
Baby Smith 5/7 2.5kg
Pulmonary Atresia ASD large PDA
Self Vent on Prostin Pre OP
4 hours post Left BT Shunt (4mm) (PDA Patent)

Mannequin set-up:
SIM BABY
Ventilated
Thorocotomy dressing and left pleural drain
Central and arterial lines

Scenario tests:
- management of critically ill cardiac infant
- rapid but precise assessment
- call for help
- communication (team, consultants, family)

Medications:
Morphine 20mcg/kg/hr
Milrinone 0.5mcg/kg/min
Adrenaline 0.05mcg/kg/min
Fluids Maintenance

Ventilation: BIPAP ASB
RR 24
Pressures 18/5
Fio2 0.3
Tidal volume 30ml

Investigations:

	Initial				
SITE	ART	ART	ART	ART	ART
pH	7.50	7.50	7.48	7.39	7.36
pCO_2	4.22	3.98	4.04	5.60	5.88
pO_2	6.21	6.07	5.49	5.45	5.95
HCO_3	26.4	25.3	24.3	24.4	23.3
BE	1.5	0.1	-0.8	0.6	-0.7
Hb	15.3	17	14.3	13.1	12.2
Na+	141	140	140	142	141
K+	3.5	3.4	3.8	3.4	3.2
iCa+	1.33	1.35	1.33	1.35	1.37
gluc	3.5	4.3	5.8	4.7	7.8
lactate	1.8	2.1	2.7	1.5	1.7
Spo2	93	91	85	79	81

Allergies: NIL

Console:

	Initial	No treatment	Fluid	Vent change
HR	110	118	115	117
Arterial	50/21 (33)	52/19 (31)	58/22 (34)	50/25 (36)
NBP				
CVP	6	6	8	7
ET C02	3.5	3.5	3.6	4.5
Sats	94	94	97	85
RR	24	24	24	24
Temp	35	35	35.5	35.5
Temp Per	28.5	27.9	28.2	29
Respiratory sounds	Wet	Wet	Wet	Wet
CRT	4	5	4	4
Other	Cool peripheries	Cool peripheries	Cool peripheries	Cool peripheries

CXR: **ECG:**

Patient Presentation:
Post op management :
Left Thoracotomy,
Chest x ray, ECHO, ECG - done
Left Plueral drain - Minimal chest drain losses.
No pacing wires
Arterial
Double lumen
UVC
One peripheral cannula
Urinary catheter

Scenario Progression:
No changes - Pt remains in Low cardiac output with Pulmonary overload. Rising lactate, alkalotic, CO2 falling. Diastolic low. ECG changes (ST)
Fluid – Increase Systolic- Diastolic 21mmhg- RAP 8mmhg – SATS 96% - co2 unchanged possible increase. ECG changes
Ventilation Reduction - Increase in CO2, Reduction in Sats, Increase in diastolic, reduction in lactate, Normalisation of PH.

Drugs given:
Fluids

Scenario Objectives:
- Recognition of low cardiac output
- Recognise the cause of Low cardiac output
- PVR and SVR balancing
- Ventilation Management
- Saturations
- ECHO – Chest x-ray

Learning Objectives:
- Pulmonary Overload
- Systemic perfusion - Coronaries
  - Gut
  - Kidneys
- Coagulation – Shunt size and subclavian size (turbulence)
- ECHO – Size of PDA
- Alarm limits and ventilation settings
- Mixer and bagging - end tidal co2
- Inotrope management

Debriefing:
- recognition of what was going on
- early call for help or support
- Stabilisation of high risk pt

Preparation-Technical

- Model capabilities/software limitations
- Defib machine link
- Haematology, biochemistry, gases
- Audio/video

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Psychological Fidelity (..moulage)

- Degree to which the team perceives the simulation to be a believable surrogate for the real patient encounter

- Without “suspending disbelief” participants are unlikely to behave in the simulation as they would in the real world, leading to little or no application in the debriefing phase

What is Moulage?

A French word for “casting or moulding”,
moulage is the art of creating lifelike substances
(injuries, wounds or fluids) to assist in
Providing realism in training or simulation

Create a learning environment that looks and feels like the real world!

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Preparation-Moulage

- Provides physical signs to support assessment cues
  - Trauma (makeup)
  - Medical (sweating)

- Provides sensory experience which supports psychological engagement

- Providing cues for learners to support realism improves chances of recall and application later in real life

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Preparation- Moulage "Stages" the Scene

Creates realistic surrounding environment

- Bedside equipment
- Clothes
- Dressings/IV cannulae
- Ability to give drugs/fluids
- Wounds
- Chest drains/pacing wires
- IV infusions
- *Empty area of needless equipment*

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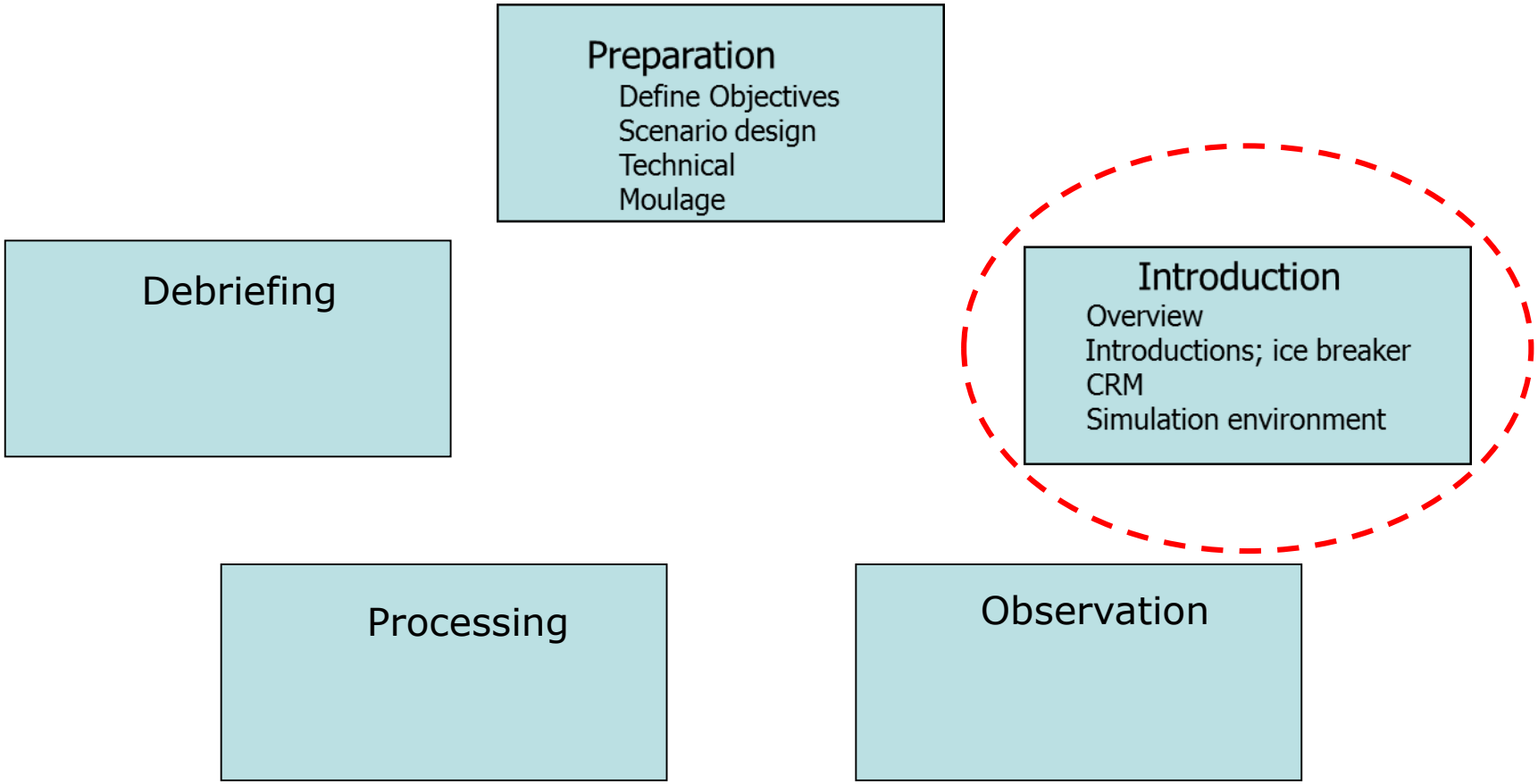
Introduction



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Introductions - overview

1. Welcome
   a. Course structure
   b. Consent
2. Team introductions/icebreaker
3. CRM
4. Mannequin
5. Scenario preparation

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Ice Breaker

Engage and connect participants

Non-threatening fun activity

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Intro- Crisis Resource Management Principles

- Role Clarity
- Communication
- Personnel Support
- Resources
- Global Assessment

How will you convey these to your team?

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Introduction- Mannequin/Equipment

- Refer to the mannequin as the “patient” (name…)
- Actively encourage examination of mannequin
- Allow participants to familiarize themselves with their environment
  - Drains, oxygen, suction, monitor
- How do they get visual clinical information?
- How do they get help?

Monitoring
Resus Trolley
Drugs
Gases/blood results
Lines

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Mannequin – Laerdal Sim Baby

- 2 mo; 3.8kg
- Eyes/ nose/ mouth
- Can cry
- Breathing (sats…)
- Airway
- Pulses
- Chest and heart sounds
- Defib
- Peripheral vein
- Intra-osseous access

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Introduction- Scenario preparation AWAY from mannequin

- Provide participants with necessary information about the “patient”, ask for repeat back
- Be familiar with all aspects of the scenario
- Tell the participants
  - Play your profession!
  - Do what you normally do, be who you normally are
- Once the scenario has begun, refrain from making comments that may challenge the “reality” of the scenario. Go with the flow and play along

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Conclusion

- Be prepared (takes longer than the course) week before!!
- Set out clear goals and expectations always explaining what will happen
- Create safe environment
  - Be prepared
  - This takes time, do not sacrifice this part

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Summary of Safe Environment

- Course Overview (Introduction)
- Introductions/Game Play (Icebreaker)
- Crisis Resource Management (Rationale for learning)
- Mannequin/Equipment (Engaging learner)
- Intro to simulation in safe place (psychological safety)
- Live Simulation (Teaching Tool)
- Debrief (Reflection)
- Summary (Reinforce CRM)

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