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Clayton, Tracy

The Role of the Clinical Technician within a Simulated Practice

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University of
HUDDERSFIELD

**The Role of the Clinical Skills
Technician**

By Tracy Clayton



University = June 2007

- Clinical Technician
- Part Time



- Technicians
- 1 Full Time = Senior Clinical Technician
- 1 Part Time = Clinical Technician

Skills Laboratory's

Nursing Ward



Simulation Suite





Operating Theatre



Occupational Therapy



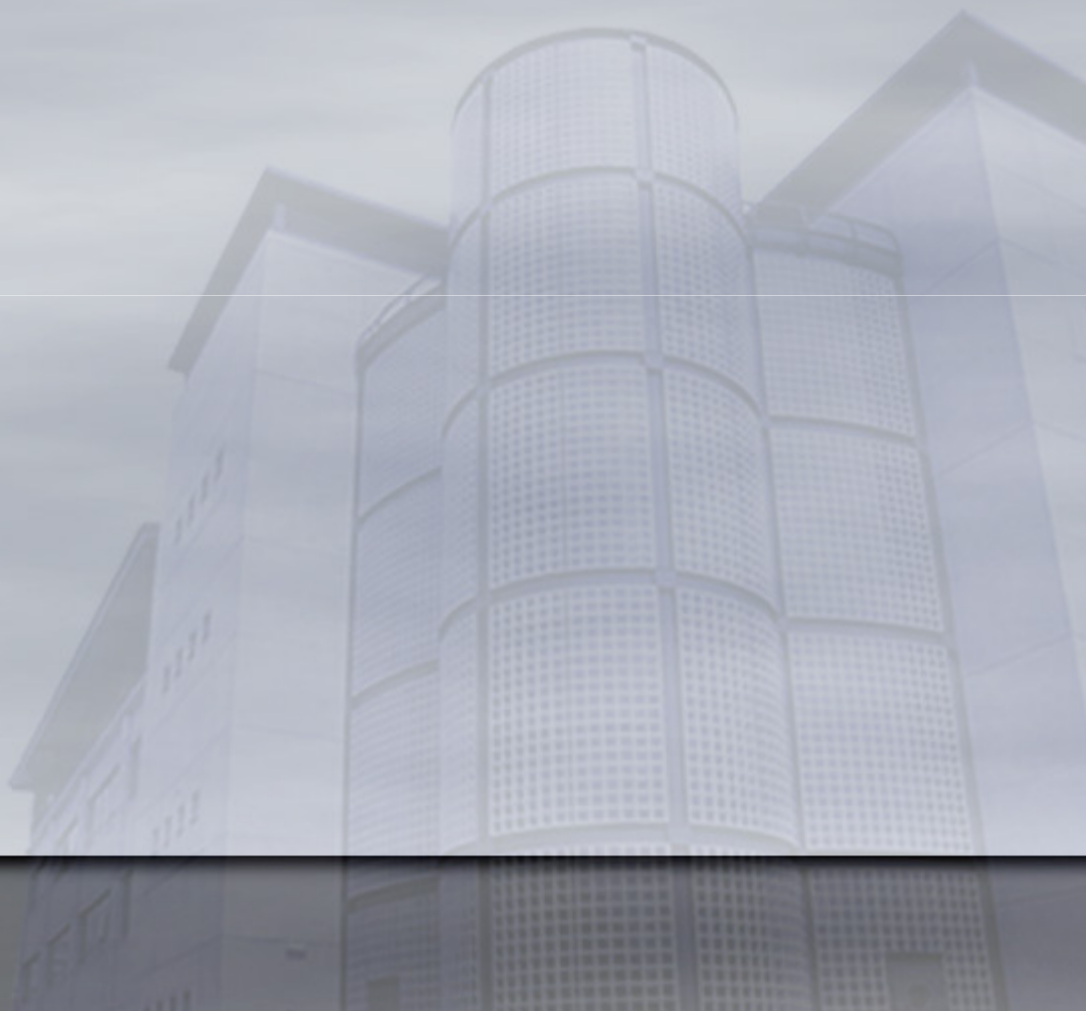


Neptune Ward (Child Nursing)





- iStan = September 2008



iStan = September 2008

- Need for Technical Support
 - New Job Role Generated
 - Demonstrator for iStan
-
- 2 Full Time = Senior Clinical Technician
 - 1 Full Time = Clinical Technician

Overview of Job Role

- Maintain
- Preparation
- Correct Running
- Voice (Unless Male)
- Designing New Scenarios
- Collaboration With Staff
 - » Correct Curriculum



- Nursing and Midwifery Council (NMC)
- Allow 300 Hours for Simulation Practices

- Road Traffic Accident
- Airway (A)
- Breathing (B)
- Circulation (C)
- Disability (D)
- Exposure (E)



Road Traffic Accident

iStan (1) @ localhost

00:03:49 Patient Time

Save Stop Logs Detach Tab Recorder Disconnect Connections

HR 94	MAP 99	C.O. 6.6
SpO2 97	Hct 42.30	Isch. Idx. 5.55
ABP 129/74	PAP 21/9	CVP 7
CS-X 12.85	ICP 8	CS-Y 55.57
Left Vol. 1234	Right Vol. 1234	Spont.VT 748
PACO2 30.6	PAO2 139.7	Spont.RR 18
Av. N2O 0.0	Av. Iso. 0.0	Av. Sevo. 0.0
Av. Halo. 0.0		Av. Ent. 0.0
PaCO2 33.7	pH 7.49	PaO2 79.3
PvCO2 42.1		PvO2 37.5
TBody 36.0	Weight 100.0	TBlood 36.5

Simulation Scenario Condition Drugs Fluids Cardiovascular Respiratory

Show: Player

Scenario RTC RTA Abdominal Injury.hs6

- ▶ Initial Assessment
 - ▶ Hypovolaemic Shock
 - ▶ ICU Postoperative 4 Hours Later
 - ▶ Surgical Ward 72 Hours Later
 - ▶ -----
 - ▶ Voice Command-Pain Scale-"7"
 - ▶ Voice Command-Pain Scale-"4"
 - ▶ Voice Command-Pain Scale-"2"

Current State: Initial Assessment State time: 00:03:11

Go to Next

Stop Breathing

iStan (1) @ localhost

00:07:48

Save Stop Logs Detach Tab Recorder Patient Time Disconnect Connections

Simulation Scenario Condition Drugs Fluids **Cardiovascular** Respiratory

Show: Heart

Parameters

HR	MAP	C.O.
162	20	2.0
SpO2	Hct	Isch. Idx.
97	42.30	3.16
ABP	PAP	CVP
19/19	19/19	19
CS-X	ICP	CS-Y
12.85	8	55.57
Left Vol.	Right Vol.	Spont.VT
1150	1150	0
PACO2	PAO2	Spont.RR
38.9	116.2	18
Alv. N2O	Alv. Iso.	Alv. Sevo.
0.0	0.0	0.0
Alv. Halo.		Alv. Ent.
0.0		0.0
PaCO2	pH	PaO2
33.2	7.49	76.4
PvCO2		PvO2
39.4		36.1
TBody	Weight	TBlood
36.0	100.0	36.5

Cardiac Rhythm Override

PEA

PEA
Normal Junctional
Normal Junctional (50)
Paroxysmal Junctional Tachycardia
Paroxysmal Junctional Tachycardia (130)
Left Bundle Branch Block

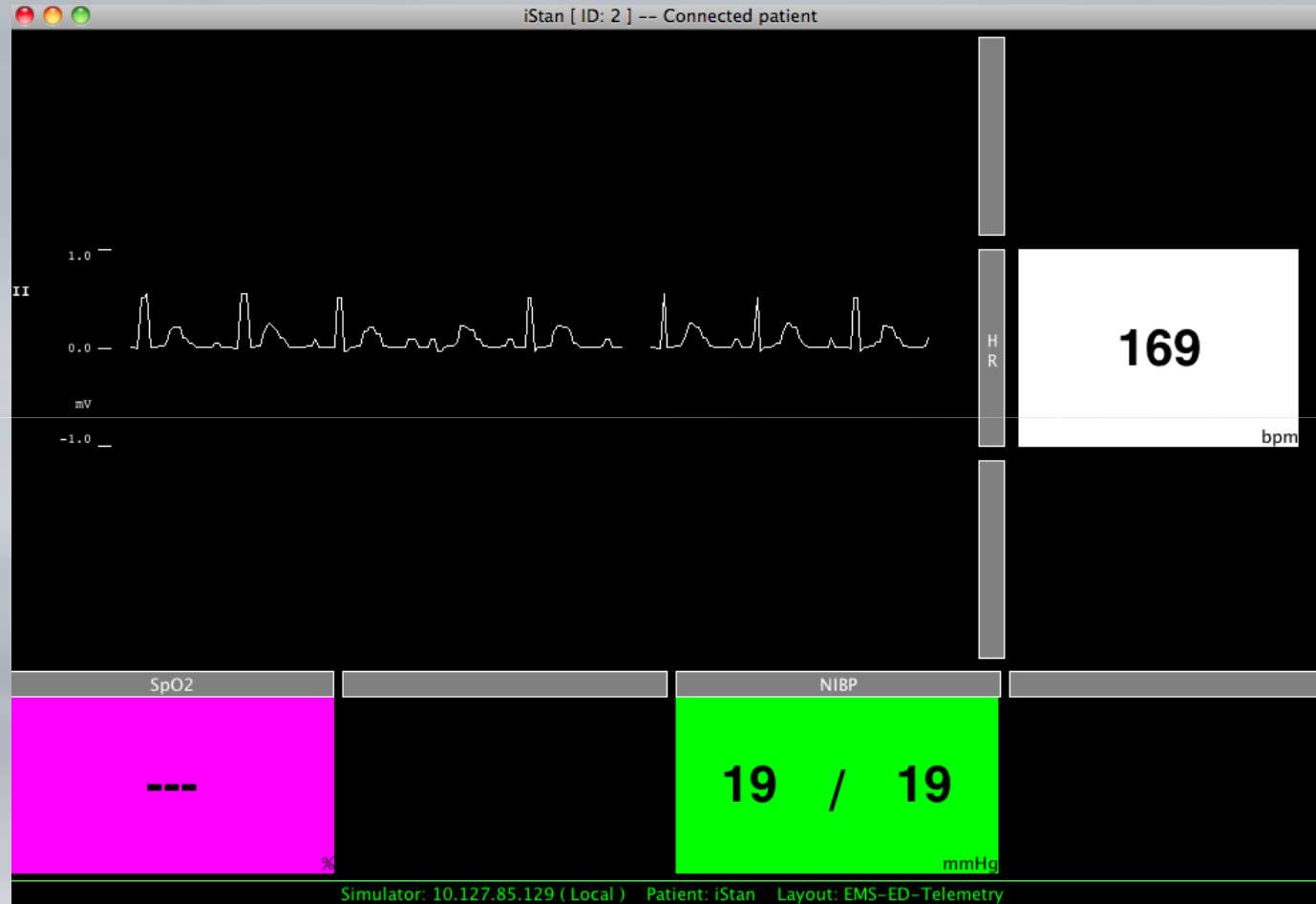
Select

Description

Cardiac Rhythm Override

Value: Default None (Model-Driven) (iStan)
Default None (Model-Driven) (iTruck Driver)
Default None (Model-Driven) (iStannette)
Default Right Bundle Branch Block (iGranny)
Default None (Model-Driven) (iSoldier)
Sine

Non Shockable Rhythm



Learning Outcomes

- Observation of A, B, C, D and E
- Understanding & Administration of
 - » Oxygen
 - » Medication
 - » Fluids
- Sense of Real CPR



- Develop the role of the simulation technician
- Open it up to students
- OCSE'S
- More Disciplines
- Practice Gap

Practice Gap

- Laura & Stan



Skills Learnt Through Simulation

- Communication
- Confidence
- Involvement
- Problem Solving
- Creative – Scenarios
- Curriculum
- Understanding





- Programmed 9 scenarios
- 7 Adult Nursing, various illnesses
- 2 Mental Health, schizophrenia patient presenting diabetes's
- 1 Self Harming Scenario (in progress)

- Simulating Self Harming Techniques



Practicing on iStan



Flat Lining iStan

- Can you flat line iStan?
- How do you flat line iStan?
- Physiological effects
 - » Eyes close
 - » Stops breathing
 - » No palatable pulses

Flat Lining iStan

iStan (2) @ localhost

00:13:14

Save Stop Logs Detach Tab Recorder Patient Time Disconnect Connections

Simulation Scenario Condition Drugs Fluids **Cardiovascular** Respiratory

Show: Heart

Parameters

Baroreceptor Gain (Cardiac) Factor
 Cardiac Rhythm Override
 Contractility Factor: Left Ventricle
 Contractility Factor: Right Ventricle
 Fixed Heart Rate
 Heart Rate Factor
 Ischemic Index Averaging
 Ischemic Index Sensitivity
 Pericardial Fluid (Acute)
 Resistance Factor: Aortic Valve
 Resistance Factor: Mitral Valve

Cardiac Rhythm Override

None (Model-Driven)

Mobitz Type II
 Myocardial Ischemia (mild)
 Myocardial Ischemia (moderate)
 Myocardial Ischemia (severe)
 Myocardial Ischemia (moderate) PVCs
Asystole
 ST Segment Elevation (With Chest Pain)


Select

Description

Cardiac Rhythm Override

Value: Default None (Model-Driven) (iStan)
 Default None (Model-Driven) (iTruck Driver)
 Default None (Model-Driven) (iStannette)
 Default Right Bundle Branch Block (iGranny)
 Default None (Model-Driven) (iSoldier)
 Sinus

HR 95	MAP 100	C.O. 6.7
SpO2 97	Hct 42.30	Isch. Idx. 5.60
ABP 130/76	PAP 23/13	CVP 3
CS-X 12.93	ICP 7	CS-Y 57.14
Left Vol. 1484	Right Vol. 1484	Spont.VT 707
PACO2 29.7	PAO2 136.3	Spont.RR 17
Alv. N2O 0.0	Alv. Iso. 0.0	Alv. Sevo. 0.0
Alv. Halo. 0.0		Alv. Enf. 0.0
PaCO2 32.0	pH 7.50	PaO2 77.2
PvCO2 39.1		PvO2 36.6
TBody 36.0	Weight 100.0	TBlood 36.5





Injuries



Deep Laceration



100 Years of Evolution

Mrs Chase 1911

- 1/ Adult Sized Soft Doll, designed on Mrs Chase body size and looks
- 2/ Sewn Elbow's & Knees
- 3/ No Breathing, Blinking, Pulse's etc
- 4/ No Software.

iStan 2011



Thank You For Listening

Any Questions?



t.clayton@hud.ac.uk

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- Special thank you to all those involved.