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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	Hot 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:

Scenario

- ▶ 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:  State time: 00:03:11

# 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	Hot	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. Hal.		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 Patient Time

Save Stop Logs Detach Tab Recorder Disconnect Connections

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

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)







# 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?



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# References

- Bradley, P. (2006). *The history of simulation in medical education and possible future directions*. Medical Education History, vol 40, pp. 254 – 262.
- Clayton, T. (2010). *The Role of the Clinical Skills Technician*. [online] Available at <http://eprints.hud.ac.uk/8097/> [Accessed 28<sup>th</sup> October 2010].
- Cooper, J, B. Taqueti, V, R. (2004). *A brief history of the development of mannequin simulators for clinical education and training*. Qual Saf Health Care, vol 13, pp. 11 – 18
- Harder, B, N. (2009). *Evolution of Simulation Use in Health Care Education*. Clinical Simulation in Nursing, vol 5, pp. 169 – 172.
- Herrmann, E. (2008). *Mrs. Chase: A noble and enduring figure*. American Journal of Nursing, Vol 81, pp. 52 – 55.
- Herrmann, E. (2008). *Remembering Mrs. Chase*. [online] Available at [http://www.nсна.org/portals/0/Skins/NSNA/pdf/Imprint\\_FebMar08\\_Feat\\_MrsChase.pdf](http://www.nсна.org/portals/0/Skins/NSNA/pdf/Imprint_FebMar08_Feat_MrsChase.pdf) [Accessed 28th November 2009].
- Hilton P, Pollard C. (2004) *Supporting clinical skills developments*. Nursing Standard. vol 18, pp. 31-36.
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