Virtual Simulations
– Training for Routine and Dangerous Work

Parvati Dev, PhD
www.clinispace.com
What is Virtual Simulation
Learning by Experiencing

Not through lectures, books, or multimedia
You are the Actor

Not the consumer
Three example areas

- Experiencing dangerous situations
- Practicing routine processes
- Learning to communicate accurately

– then –

- The underlying technology
TRAINING FOR RARE BUT DANGEROUS CRISES
After an Earthquake
Mass Casualty - Airport

Incident Command

Media reporting

Transportation

Medical triage
Infection – surge of patients

Needs isolation? Management of contamination

Logistics of arrival surge

October 28, 2014

Why We Need Virtual Simulations

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Decontamination - terrorism

Decontamination after biological, radiologic, or chemical hazard
ROUTINE TRAINING FOR LARGE NUMBERS –

10,000 NURSES NEED NEW DIALYSIS PROCESS TRAINING
October 28, 2014

Why We Need Virtual Simulations
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TRAINING FOR ACCURATE COMMUNICATION

COMMUNICATION ERRORS CAN KILL
Teacher mentors learner in patient communication
Teacher mentors learner in parent communication

October 28, 2014

Why We Need Virtual Simulations

http://youtu.be/hjRQwXjgYy8
Teacher mentors learner in patient communication
Learning through Experiencing

• Virtual Simulation is about experiences

• These virtual experiences allow practice in a safe environment

• Almost any experience can be learned in a virtual simulation
Technology of Virtual Environments

- World data
- Game server
- Content
- Voice server
- Services

Why We Need Virtual Simulations
Technology of Virtual Environments

TestFlight
Smart Fox server
TeamSpeak Voice server

mySQL
Mongo DB
Mono eCRUD

Apache
JIRA Wiki stash

FIREWALL

Why We Need Virtual Simulations
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Thank You!

parvati@parvatidev.org
Technology of Virtual Environments

- **Game server**
  - Synch user data
  - Track and store
  - Link all services

- **World data**
  - spaces, objects
  - levels

- **Content**
  - Virtual patient dynamic model

- **Services**
  - Web
  - Database
  - Authentication
  - Certification
  - eCommerce

- **Voice server**
  - VoIP