



Virtual Patients: Video Game Technology for Clinical Training

Luke Bracegirdle

*IT Development Director
School of Pharmacy
Keele University*



KEELE
UNIVERSITY





What is a Virtual Patient?

- A computer generated character (e.g. patient, doctor, pharmacist) that responds to questions...
 - from keyboard input (free-text, assisted text or MCQs)
 - from verbal command (voice recognition software)
- A 3D environment that can be explored for information within a given context.
- A system that can provide automated instant feedback to the learner.



Games acquire the art of conversation

You can shoot, snowboard, and conquer worlds, but talking in games has never convinced anyone.





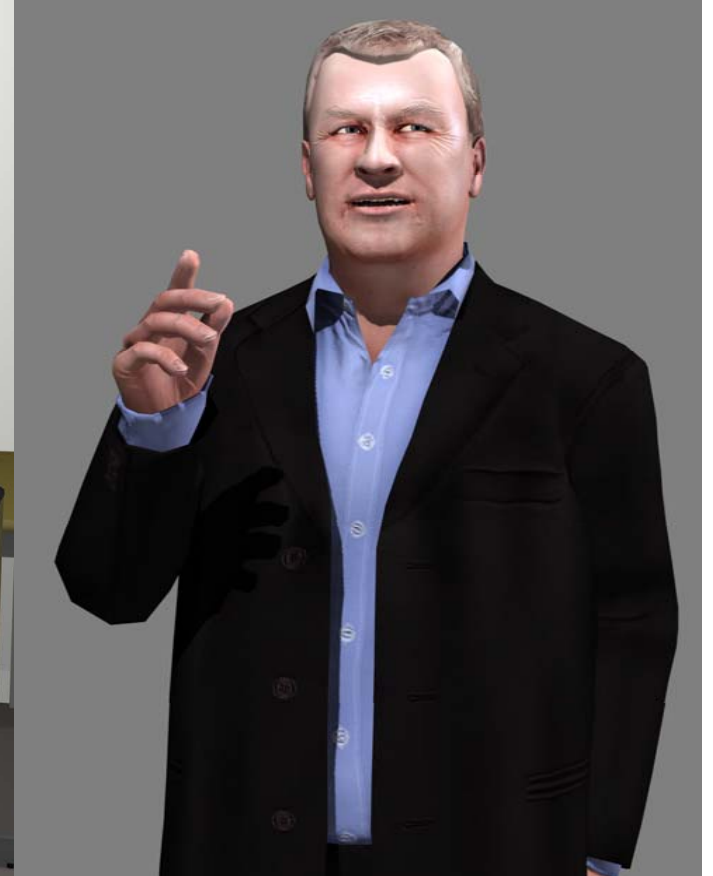
Why use a Virtual Patient?

- Access to human actors/real life patients cannot be accessed at will
- A Virtual Patient can be used to examine short and long term consequences of decision making
- You learn from your mistakes, but you can't make a mistake in real-life!
- Difficult to simulate a consistent experience for large cohorts of students with human actors.



How does it differ to Second Life?

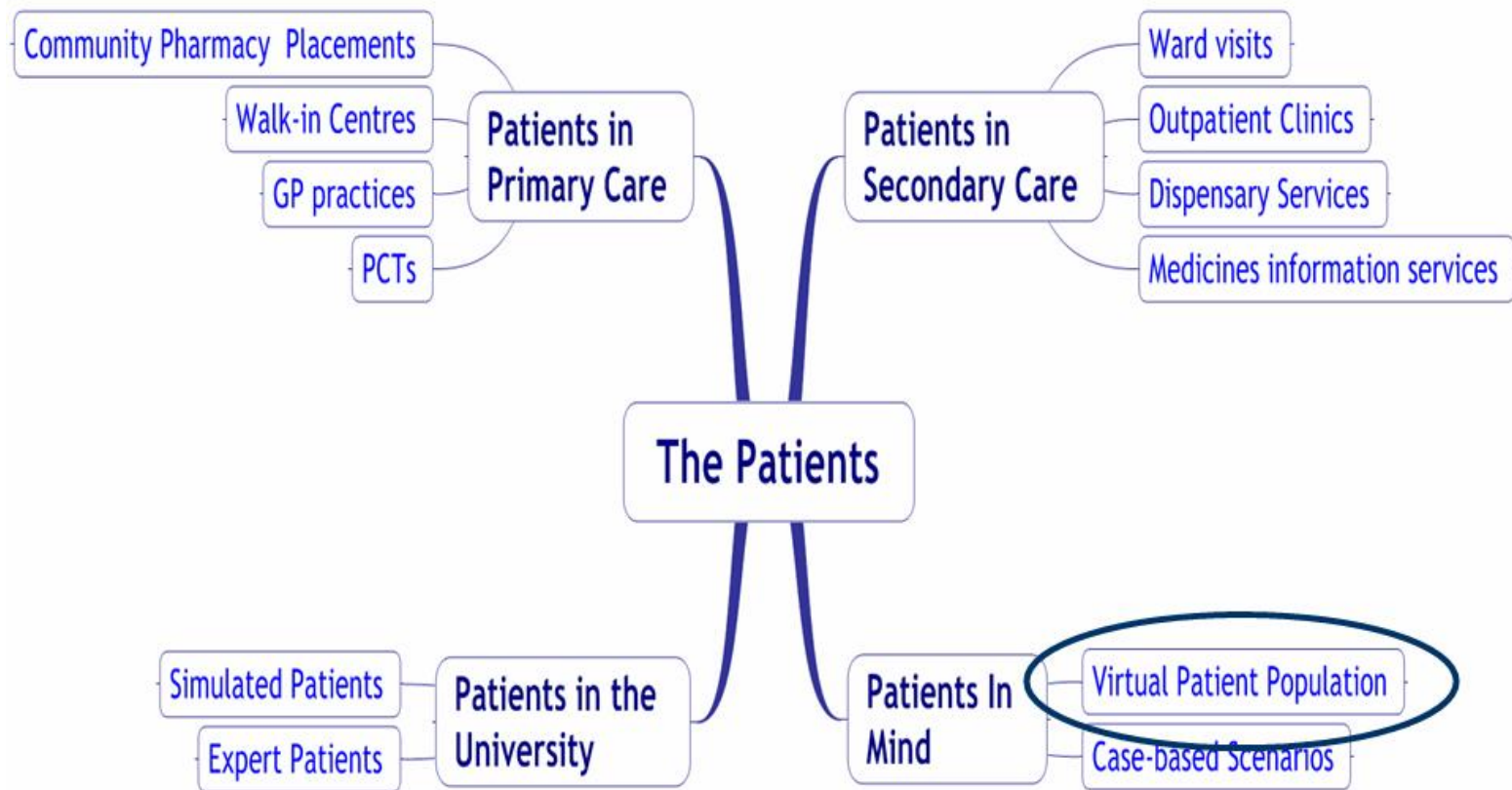
- Face-to-face communication can be simulated without the need for two people
- An internet connection is not required
- “Patients” can be programmed without the knowledge of a programming language
- Training to use the software is minimal



Demonstration:
Interact with a Patient



The Full Patient Experience

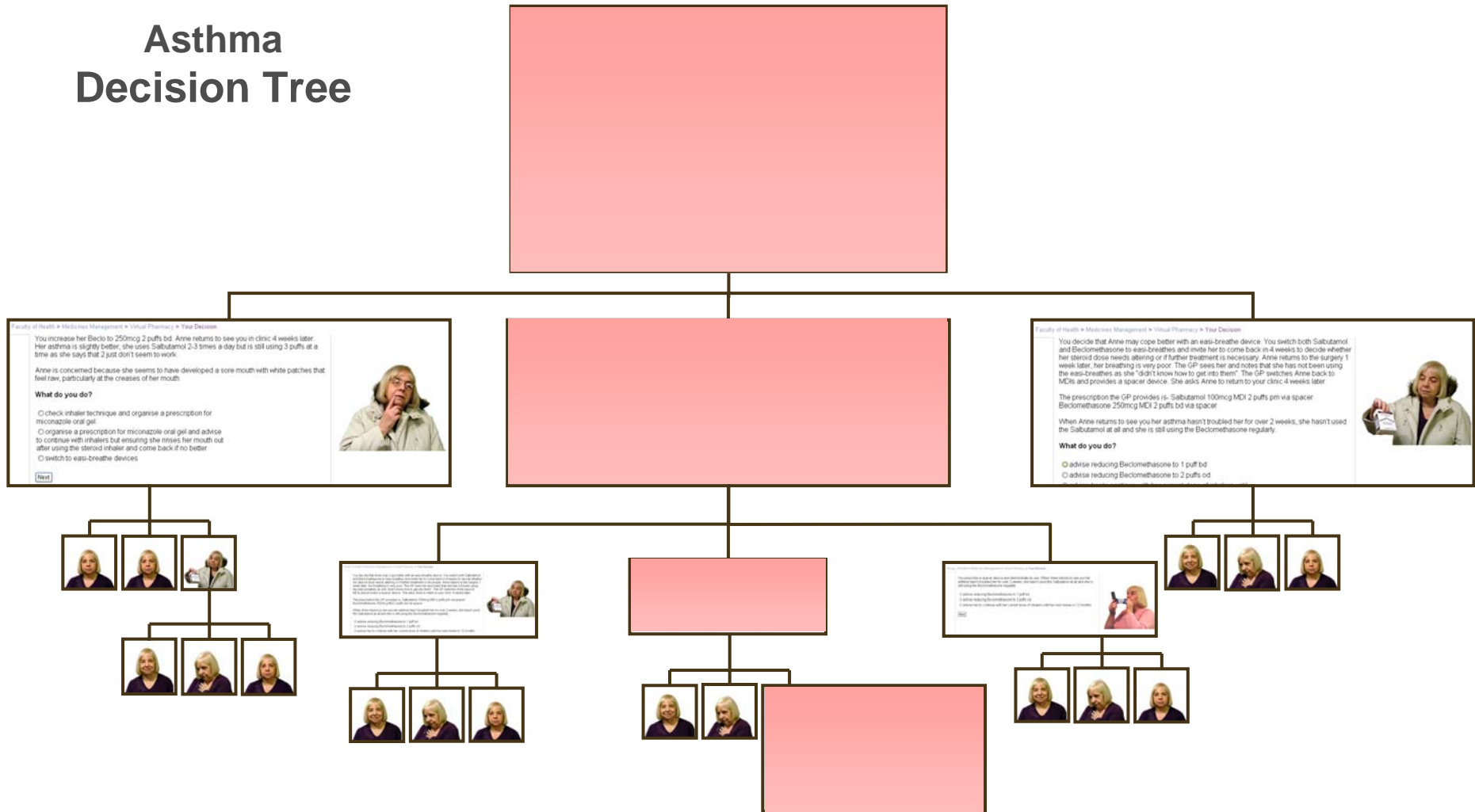




Development Drivers

- Quality Assurance
 - Royal Pharmaceutical Society of Great Britain (RPSGB)
- National Guidance
 - National Institute of Clinical Excellence (NICE)
 - National Health Service (NHS) guidance
- Learning objectives of School programme

Asthma Decision Tree



Class-room Based Activity

- Students given a patient history and asked to prepare some questions
- Student allocated a set time to interview the 'patient'
- Feedback from the 'patient' & human facilitator to prepare the student for their interview with a real patient





Demonstration:
Program a Virtual Patient



Ongoing Virtual Patient Projects

- Use of tracking tools for student formative assessment and portfolio development
- Development of new cases to explore more issues around ethnicity, age and gender
- Virtual cases that involve examining decision making across a population of virtual patients (e.g. Risk of Treatment)



Further Information

Additional Session “hands-on” Demonstration

Clinical Lead

Professor Stephen Chapman (Head of School)

BSc (Hons); PhD; Cert.Health Econ.

Email: s.r.chapman@mema.keele.ac.uk

Technical Development & Lead

Luke Bracegirdle (IT Development Director)

BSc (Hons), MCTS

Email: l.bracegirdle@mema.keele.ac.uk