Virtual patients: an effective educational intervention to improve paediatric basic specialist trainee education in the management of suspected child abuse?

M M. McEvoy
CUH, Temple Street, Dublin

B Butler
Royal College of Surgeons in Ireland

Geraldine MacCarrick
Royal College of Surgeons in Ireland

Alf J. Nicholson
Royal College of Surgeons in Ireland

Citation
Virtual Patients: An Effective Educational Intervention to Improve Paediatric Basic Specialist Trainee Education in the Management of Suspected Child Abuse?

MM McEvoy1, B Butler2, G MacCarrick2, AJ Nicholson1
1The Children’s University Hospital, Temple Street, Dublin 1
2The Royal College of Surgeons in Ireland, 123 St Stephens Green, Dublin 2

Abstract
Child abuse is a particularly difficult subject to teach at both undergraduate and postgraduate level. Most doctors are dissatisfied with their training in child abuse recognition and management. We developed an interactive video based Virtual Patient (VP) to help formal training for paediatric Basic Specialist Trainees in the recognition of suspected child abuse. The Virtual Patient case revolves around the management of suspected physical abuse in a seven month old child, who initially presents to the Emergency Department with viral upper respiratory tract symptoms. This Virtual Pathway was designed for discussion by Basic Specialist Trainees. A questionnaire was used to determine their perception of the value of the Virtual Patient as an educational tool. Twenty five Basic Specialist Trainees completed the questionnaire. Upon completion of the case, 23/25 (92%) participants reported greater self confidence in their ability to recognize cases of suspected child abuse and 24/25 (96%) of participants reported greater self confidence in their ability to report cases of suspected child abuse. Basic Specialist Trainees perceived the Virtual Patient to be a useful educational tool. Virtual Patients may have a role to play in enhancing postgraduate training in the recognition of suspected child abuse.

Introduction
Child protection is a critical component of training for all doctors who have contact with children and their families. The Child Abuse Recognition Experience Study highlights that one of the main factors which contribute to doctors' discomfort with the management of child abuse is their lack of education and training. In addition, it is perceived that doctors' discomfort with the management of child abuse is their lack of education and training. In this pilot study, we aimed to assess whether doctors felt that group discussion promoted more child protection training. The number of participants involved in the study was small, however the group was felt to be representative of Basic Specialist Trainees currently completing their paediatric training in Ireland. The VP helped raise awareness of the difficulties surrounding the diagnosis and management, we developed a Virtual Patient based on a case of suspected child abuse. The Virtual Patient consists of a series of connected videotaped encounters centred around an interactive clinical case. In order to increase the authenticity of the case, the videos were filmed in the Emergency Department of a tertiary paediatric referral hospital. Professional actors were hired to play the role of the mother, consultant and junior doctor.

Discussion
This pilot study was conducted to determine whether Basic Specialist Trainees view the Virtual Patient as an acceptable learning tool for their stage in training, a pilot study was conducted. The VP was used to facilitate a child abuse case discussion as part of the Basic Specialist Training study day at the Royal College of Physicians in Ireland. Basic Specialist Trainees are at an early stage in their paediatric training, with most trainees having less than two years clinical experience in paediatrics. It was therefore felt that the case would be appropriate for their level of training. A questionnaire was developed to determine their perception of the value of the VP as an educational tool to enhance their training in the recognition of suspected child abuse. Respondents were asked to rate their agreement with 18 statements on a 1 to 4 Likert scale.

Results
All participants (N=25) completed the questionnaire. 100% of participants agreed or strongly agreed that the case was enjoyable, interactive, appropriate for their level of training and a valuable use of their time. All participants agreed that they would like to see similar cases throughout their training. A high level of interactivity is maintained. For example, if participants think that the SHO should confront the mother regarding the fractures, the VP depicts the scene of the SHO approaching the mother and accusing her of child abuse. The mother subsequently storms out of the Emergency Department and the SHO is left to deal with the consequences. However, if participants think that the SHO should raise her concerns of suspected child abuse to the consultant, the scenario then depicts the conversation between the consultant and the mother and the appropriate management of cases of suspected child abuse.

Although the results of this pilot study are limited to participant satisfaction and self assessment reports, the results identify the potential role which Virtual Patients could have in improving the recognition of suspected child abuse. The results support the effectiveness of available educational interventions. To our knowledge, this is the first study to explore the role which VP can play in child protection training for Basic Specialist Trainees. The Royal College of Surgeons in Ireland, 123 St Stephens Green, Dublin 2

Correspondence: MM McEvoy
The Children’s University Hospital, Temple Street, Dublin 1

Methods
Virtual Patients (VP), interactive computer based programs which simulate real life clinical scenarios, are becoming an integral part of medical education. They are used across a variety of clinical disciplines for both teaching and assessment. In order to evaluate the potential role which Virtual Patients could have in teaching paediatric trainees about child abuse and raising awareness of the professional difficulties surrounding its’ diagnosis and management, we developed a Virtual Patient based on a case of suspected child abuse. The Virtual Patient consists of a series of connected videotaped encounters centred around an interactive clinical case. In order to increase the authenticity of the case, the videos were filmed in the Emergency Department of a tertiary paediatric referral hospital. Professional actors were hired to play the role of the mother, consultant and junior doctor.

The case revolves around the management of a seven month old child who presented to the Emergency Department with upper respiratory tract symptoms. The Senior House Officer fails to notice bruises on the infants cheek or diagnose posterior rib fractures on a chest x-ray. Participants are guided through the evolving case, with an increase in interactivity as the scenario progresses. The case is dependent on participants’ response to questions, a high level of interactivity is maintained. For example, if participants think that the SHO should confront the mother regarding the fractures, the VP depicts the scene of the SHO approaching the mother and accusing her of child abuse. The mother subsequently storms out of the Emergency Department and the SHO is left to deal with the consequences. However, if participants think that the SHO should raise her concerns of suspected child abuse to the consultant, the scenario then depicts the conversation between the consultant and the mother and the appropriate management of cases of suspected child abuse.

This VP is being developed for use as online self study module. However, in order to determine whether paediatric Basic Specialist Trainees view the Virtual Patient as an acceptable learning tool for their stage in training, a pilot study was conducted. The VP was used to facilitate a child abuse case discussion as part of the Basic Specialist Training study day at the Royal College of Physicians in Ireland. Basic Specialist Trainees are at an early stage in their paediatric training, with most trainees having less than two years clinical experience in paediatrics. It was therefore felt that the case would be appropriate for their level of training. A questionnaire was developed to determine their perception of the value of the VP as an educational tool to enhance their training in the recognition of suspected child abuse. Respondents were asked to rate their agreement with 18 statements on a 1 to 4 Likert scale.

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References


