PERSPECTIVE

A Proposal for Virtual Cases in Interprofessional Education Held in a Reference-Library with a Learning matrix

Hideaki E. Takahashi

Interprofessional education in the UK, developed with strong support from the National Health Service, is gradually introducing online learning with virtual cases as an alternative to learning face-to-face with real life cases.

A virtual patient is an interactive computer simulation of a real-life clinical scenario for the purpose of medical and healthcare training, education or assessment (MedBioquitous White Paper, 2007) that may be included in an interprofessional module.

The author proposes the creation of a reference-library of such cases and a learning matrix to promote further understanding among not only medical and healthcare, but also social care students and professionals. Virtual cases may be classified as the assessment and decision-making type according to purpose, and as the linear type and branched type by its route to an outcome.

In 2009, the Consortium for Interprofessional Education Strategy 21 (CIPES 21) was adopted by MEXT as a cooperative support program between universities in Japan. This consortium comprises the following five universities: Niigata University of Health and Welfare (represented), Sapporo Medical University, Saitama Prefectural University, Tokyo Metropolitan University and the Japan College of Social Work. The following proposal is being made to CIPES-21.

According to the location where interprofessional work (IPW) is needed, the following models are being considered: that is, IPW within a hospital (e.g., hospital safety management, infection control and nutritional support team); acute hospital-to- rehabilitation hospital (clinical pathway for hip fracture and stroke); hospital, clinic and community health and social care (prevention of life-style related diseases, senile dementia, child abuse, suicide, management of natural disasters such as earthquake or tsunami, and others)

According to the purpose for which IPW is needed, the following models may be considered: prevention or early detection model; medical model; life-support or social care model; health-promotion model; and others.

IPW is implemented in all these circumstances. Virtual patients or cases are needed for curricula in higher education and on the job training in hospitals, clinics and social care facilities. These cases are particularly useful as training during the first year of employment.

Planning to develop a virtual patient consists of the following four components. Components 1 and 2 are essential for the creation of virtual cases; components 3 and 4 provide significant additional learning from VPs. Component 3 will provide common basic knowledge to solve a problem and component 4 will show the extent and limits of the need for each professional in both IPE and IPW.

Component 1: A case scenario

Medical and life histories from the onset to the present time are briefly described using illustrated pictures as still images, and/or an animation. The course of progress is divided and shown in

Niigata University of Health and Welfare
1398 Shimami Kitaku Niigata 950-3198, Japan

chronological order, depending on the time point within the curriculum.

A "location" and "you", acting as a leader of the students' team in the scenario may be factors that determine which route may be chosen to a consequence, even though different teams are trying to solve the same scenario. This could form a linear or branched type of case with options and consequences. In a medical model, a correct answer may be prepared. Otherwise, the patient may die of an inappropriate treatment. In a health and social care model, the process of learning together may be more emphasized.

Component 2: Facilitator's guide

The role of the faculty is to facilitate the participation and development of multiprofessional students. Many facilitators' guides are available for educational guidance.

Component 3: Reference-library

The virtual patient reference-library is useful not only in medical education, but also in IPE and will include standard references of diagnostic criteria, guidelines for the prevention and treatment of disease, laws and ordinances to support life and participation in a community. This has to be revised yearly as needed. For example, the diagnostic criteria for the metabolic syndrome, i.e., internal obesity, may change. The authority of the consultation office for children covering situations involving child abuse has increased in the child welfare law nearly every year in Japan. When new information is added to the reference-library, it may be quickly spread to other professionals. The reference library could then be the quickest way to transmit the new information.

Component 4: Tutor's note

A faculty may have to facilitate a multiprofessional team consisting of students from many fields of health and social care. A matrix in the tutor's notes will be helpful for identifying the relationship of various items to the capabilities of various professions. The matrix includes various items such as diagnostic criteria, guideline for prevention and treatment, various rehabilitations, various aspects of social care in participation and life support. Then, a tutor could easily determine which items and what extent are needed for each student to learn.

Since IPW is definitely needed in Japan for patients and clients, especially the elderly and the handicapped, IPE is the most useful and effective method to promote this work. In many health-related professions, the length of education varies from three, four or six years. No university or college could have all professional departments. Interactive online learning with virtual patients is the best way for these various professions to learn together between universities and colleges.

A database of virtual cases will be made in the future. It is strongly expected that online learning will develop into a standard core curriculum before and after graduation in professional education, and a certification system will be developed in the future.