Challenge of Okinawa: Okinawa Clinical Simulation Center

JMAJ 55(5): 419–421, 2012

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On March 25, 2012, the Okinawa Clinical Simulation Center was opened on the Uehara Campus of University of the Ryukyus. Supported by the Community Medical Care Revitalization Fund, University of the Ryukyus School of Medicine, Okinawa Medical Association, Okinawa Prefectural Government, and local hospitals carried out a cooperative project over two years under the slogan, "Setting up a medical care training center of the highest standard in Okinawa Prefecture." This paper describes the background and purpose of this project.

It has been pointed out in recent years that community health care services in Japan are in danger of deterioration. The restructuring of the clinical training program introduced in 2004 resulted in confusion within the community health care system, which may have arisen due to various distortions erupting after having lain deep within society for a long time. Actually, staff working in regional medical schools and university hospitals at the forefront of community health care spend a large proportion of their time resolving this confusion. It is easy to imagine that the time and energy used throughout the nation for this purpose are enormous. Regretfully, if these efforts had been applied to future investment, they would have contributed greatly to the promotion of health and development of medical science and technology.

Of the various regions of Japan, Okinawa has a unique history of health care services. Due to ground battles that involved ordinary citizens, only 64 physicians in Okinawa survived World War II. In an effort to re-establish the health care system after the war, a contract overseas study program to nurture physicians was set up by the US forces, and a government-sponsored overseas study program was formulated by the Japanese Government after the Japan-US Peace Treaty was concluded in 1952. This was followed by the establishment of a clinical training program at the Okinawa Prefectural Chubu Hospital in 1967 in cooperation with the University of Hawaii. Through these measures, physician competence was improved and the necessary number of physicians was secured. In addition, emergency medical care was provided mainly by prefectural hospitals including Okinawa Chubu Hospital. A system for continuous health care services on remote islands was also established and developed through these training programs. The Medical School of University of the Ryukyus, which was the last medical school to become affiliated with a national university, was established in 1979 and has since been playing a role in nurturing physicians, providing specialized medicine, and conducting medical research. After the launch of the new clinical training system in 2004, various training hospitals, including public hospitals, have been contributing to the provision of emergency and community health care.

Against this historical background, Okinawa has seen the establishment of a style of clinical practice which focuses on primary care and emergency care, and a tradition by which physicians are trained through on-the-job training. Since the introduction of the new clinical training system, the number of junior residents who begin their training in Okinawa has been increasing, and more than 140 junior residents per academic year are currently undergoing training here. However,

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This University Medical Associations in Japan Series, started from Vol. 53, No. 3 (2010), concludes with this article.

the increase in junior residents has not always resulted in the reinforcement or maintenance of community health care or medical care on remote islands. Factors such as young people's free and diverse sense of worth, extended population mobility, confusing information, and the competitive nature of the training system have definitely raised problems for the health care system Okinawa has created. As with universities in other regions, the number of physicians who remain at their university hospital after training to practice medicine is decreasing. This may lead to a reduction in the number of physicians who are sent by their university to regional hospitals and a decline in the number of medical students and physicians who are oriented to research. There is also a shortage of physicians according to disparity amongst specialties.

Opening ceremony of the Clinical Simulation Center (March 25, 2012)

Under these circumstances, action was taken to revitalize community health care in Okinawa. The government, medical associations, universities, prefectural hospitals, and training hospitals jointly incorporated an especially attractive feature into the training course for physicians in Okinawa: Okinawa Clinical Simulation Center, a shared-use facility to be established to provide clinical education and training with simulation approaches as well as the cultivate human resources to provide education at the center. The author is in charge of this project and is responsible for the divisions of community health care and human resource cultivation at University of the Ryukyus. With the exception of those involved in three clinical training groups (university, prefectural hospitals, and the Muribushi Project), many physicians have extended their generous cooperation with us, truly making this an all-Okinawa project.

Recently in Japan there has been a widely recognized need for simulation in clinical medical education. Universities buy the simulators and set up skill-laboratories, but there is not sufficient understanding about the effective use of these devices and facilities. Except for in a few cases, simulation-based clinical medical educa-

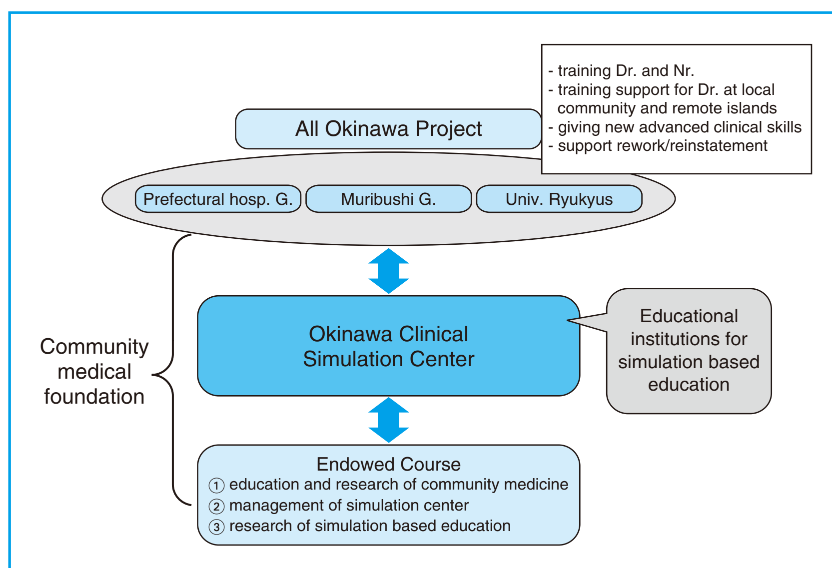

Fig. 1 Simulation Center Project of Okinawa

tion in Japan is still less developed than in not only the US and Europe, but also Asia, where rapid progress is being made in this field.

We visited various facilities in Japan and overseas to learn about their experiences of using the simulation devices to be installed at the Okinawa Clinical Simulation Center and had repeated discussions with the educators in charge. What we learned from such interactions is that a simulation center is a place to educate, not a place to keep a simulator. Those who should provide simulation education are not only staff of the simulation center, but physicians and nurses on the front lines of medical practice. A simulation center requires (1) a room that allows easy changing of the room environment such as layout (space to carry out the simulation), (2) the creation of a setting which is appropriate to the occasion and captures the attention of learners (simulation scenarios), (3) simulators, (4) educators who can carry out simulation education, and (5) supporting staff. Of these, we are focusing especially on items (2), (4), and (5), which are software aspects, so to speak, including human resources. In particular, the skills required to prepare simulation scenarios are our area of specialty because Okinawa has a history of abundant clinical experiences and provision of education based on these experiences. Supported by the efforts of Professor Berg at the Simulation Center (SIM-Tiki) of the University of Hawaii, the cultivation of human resources has been promoted over the past two years through educational workshops and seminars. Currently, more than 200 health professionals are taking these courses in Okinawa Prefecture. As a result, many training courses and study sessions have been held since the launch of the simulation center, attended by more than 1,000 participants—including physicians, nurses, and students—each month.

There is a well-known expression, *Kome Hyappyo* (100 sacks of rice), in Nagaoka City, Niigata Prefecture. This refers to an incident in the Nagaoka Domain at the end of the Edo Era. Due to the impoverished circumstances of Nagaoka Domain in the late 19th century, Torasaburo Kobayashi, the Grand Counselor of the Domain, converted the precious rice that was sent as relief supplies into funds for the promotion of education, such as the establishment of schools. Thus, he made an investment in education and laid the base for future development. I think that a similar spirit to that of *Kome Hyappyo* is alive in the Simulation Center Project of Okinawa. We must see whether our challenges will really contribute to the revitalization of regional health care and development of future medical sciences, and whether Okinawa will be able to provide a model for other local areas that are making efforts to attain similar goals. In this regard, we feel a deep and strong mission to perform these roles.

In closing, we would like to express our thanks to the faculty and staff of the domestic and overseas simulation centers who kindly spent time with us and graciously answered our many questions.

Okinawa Clinical Simulation Center
24,210 square feet (2,250 square meters)
22 rooms for simulation training and debriefing, and 1 auditorium
Solar photovoltaic generation system on the roof