Chapter **10**

Future Prospects of IPE in Japan

1. Current Status of IPE in Universities

In this chapter diverse examples of the IPE methods, currently being implemented, in Japan are to be explained. Broadly speaking, these methods can be divided into the type implemented face-to-face, and the type that use information and communication technology (ICT).

1) IPE implementation formats

(1) Chiba University

At Chiba University the three faculties related to health care located on the Inohana Campus, the Faculty of Medicine, the Faculty of Nursing, and the Faculty of Pharmaceutical Sciences, are collaborating to implement IPE and work on the development of "self-disciplined medical professionals." This IPE has been made a compulsory subject for the approximately 1,000 students in these three faculties, and it is divided by academic year into four steps from STEP 1 to STEP 4. The themes of the steps are sharing, creativity, solving problems, and integration, in that order, and the students learn the methods of providing medical care centered on patients and service users. The three faculties are located adjacent to each other, and are on the same campus as the Chiba University Hospital, and they are implementing IPE practices that are entirely in the face-to-face type and on the campus. (Ref 1, 2)

(2) Saitama Prefectural University

Saitama Prefectural University is consistently implementing IPE from enrollment to graduation in order to realize "collaboration and integration," the educational philosophy of the university since it was founded. The distinctive feature of these IP practices is that of the face-to-face method, held in more than 80 sites in Saitama Prefecture, and the outcome presentations are held in 12 locations in the prefecture (academic year 2010). One outcome of the team practices by the students is that they are having the positive effect with IPE among professionals on-the-site. (Ref 3, 4)

(3) Niigata University of Health and Welfare

In accordance with its mission since it was founded, the "development of outstanding QOL supporters," the Niigata University of Health and Welfare has established a core curriculum for IPE which continues from the first year to the fourth year in line with the general goals that evolve by academic year from sharing mission, knowing problems, developing interprofessional approaches,

and practicing collaborative works. It collaborates with other universities in the prefecture, and implements a blended type of IPE using modules and also partly incorporating the face-to-face method. (Ref 5, 6)

2) The methods for implementation of IPE in Japan

Three examples of IPE, implemented in Japan are shown above. Each of them is implementing distinctive IPE that uses their human and social resources as much as possible in the environment they have been given. In addition to the many other outstanding programs are being implemented, but the majority of them are IPE among medical and health care faculties. However, IPE between faculties of medicine and health care and social care is still limited. With the face-to-face type an improvement in the ability to communicate can be expected. In the case that there are large-scale hospitals in adjacent locations, IPE among faculties of medicine and health care may be possible. It is forecast that the number of education institutions incorporating IPE will increase gradually in the near future. In the present super-aging society, medical service and care at home are becoming more common and the importance of providing living support and long-term care together with medical service is growing, so IPE between faculties of the medical and health care and social care has become extremely important.

2. Composition and Types of Modules

When considering the development and dissemination of IPE in Japan, its standardization is important. The modules can be used for the preparation of practical training in regional hospitals and facilities; furthermore IPE practical training using the modules only is possible. Refer to Chapter 6 for the details about the modules under development in CIPES-21. (Ref 7)

1) Items comprising the modules and discussion of the items

(1) Scenario of virtual cases

The virtual cases will be more acceptable if they are based on real patient cases, being modified. The scenarios are better to include various aspects of medical service, health and social care in which all participating students can make a contribution using knowledge and skill of their own specialty. A correct answer may be expected in a scenario of a medical model, otherwise the patient may die. In the scenario for IPE a best answer or solution may be expected in the condition given from human and social resources currently available for the patient client or service-user and his/her family. In creating the scenario, it is important to make sure to incorporate the views from different specialties. Collaborative learning starts from the stage in developing the scenario.

(2) Basic literatures (reference library) (Ref 8)

In a reference library basic literatures have to be prepared for understanding of various fields of health and social care and solving an issue. Students of health care should know more about social care, and this is vise versa for students of social care. Although updating the literatures of the items handled by

the scenarios the latest evidence should be prepared every year. Subsequently, the newest information from various specialized fields can be obtained from these basic literatures of the reference library. For example, there is updating of the treatment guidelines, insurance coverage for new drugs, the expansion of the authority of child counseling centers, etc. Updating the reference library is the best way to disseminate the new knowledge to professionals of other field of health and social care. Setting of a reference library in a module is an issue to be considered in the next step.

(3) Glossary

In the medical, health and social care fields, there are cases in which the same terminology is used with different meanings, and conversely the people who receive services are referred to as "patients" in the first two fields and as "clients" in the third field, but in the provision of IPE the term "service user" has become general. "Jargon" that is only used in special cases should be avoided, but on the other hand learning technical terms used in other fields from students in other academic disciplines helps to improve the learning effectiveness of IPE. Furthermore, together with the addition and revision of modules, yearly enhancement and revision are necessary.

(4) Guidelines for the facilitator

These describe the facilitation skills needed during group practice, and are required to have content that can be used in common in all of the modules. Unlike (5) Tutor's notebook, it would be ideal to incorporate the CAIPE definition of IPE, the learning goals and schedule in IPE practice, the role of the facilitator, the theory based on group dynamism, and ways of coping with so-called "conflict" in the guidelines. Of course, it is necessary to simultaneously incorporate the content of (6) Student's guide which is distributed to the students.

(5) Tutor's notebook

This records the particular items for each scenario. For example, in the scenario of refracture prevention and home living support for patients with bone fractures resulting from osteoporosis, the affected part of the body is often the spine, the proximal femur, the distal radius, etc. but based on the condition that the patient's age is 65 to 75 years old, 75 to 85 years old, or 85 or over, as the patient gets older the priority of the issue shifts from medical care to long-term care for life maintenance. In that case, it is ideal to clearly state the items that should be reviewed by the team, based on the understanding of the elderly people, including oral care, food intake and swallowing disorders, bowel movement and urination management and walking.

(6) Student's guide

This contains the content needed for smooth implementation of the IPE practice. It includes the CAIPE definition of IPE and the learning goals and schedule in IPE practice that are also in (4) Guidelines for the facilitator, and in addition the sheet for reflection, the methods of using (2) Basic literature (reference library) and (3) Specialized glossary, and in the case of modules the module access methods, etc. are necessary. Furthermore, contact information for cases of

emergencies is essential.

(7) Learning matrix

Record not only major (i.e., prevention) and medium (i.e., symptoms, diagnosis, and drugs) items but also the detailed items, (Table 10-1), to ensure that facilitation is possible for the professionals with regards to items in fields that are not their specialty. When forming a team, it is ideal to check whether the members' level of understanding of each minor(detailed) item is at the citizen level, the level common to all professionals, or the specialized professional level necessary for obtaining state qualifications. In the case that there are areas lacking professionals in the team, it should be possible for the members to cover each other's roles to ensure there are no omissions or mistakes, by checking the necessary items. (Ref 8)

Table 10-1. Learning Matrix for Prevention of Fragility Fracture and Support of Independent Living of the Elderly

Major Items：Fracture prevention

Understanding level of students
A：Understanding of a citizen
B：Common understanding of professionals in health and social care
C：Understanding above the national board exam. for a professional

Medium Items	Minor Items	
Understanding of the condition of the patient	Definition of osteoporosis	
	Composition of a bone	
	Growth of the bone and change of bone volume	
	Calcium regulation and bone remodeling	
	Fragile fracture	
	Cause of osteoporosis	
Understanding of the symptoms	Femoral neck fracture	Incidence and mechanism of the injury
		Treatment and prognosis
	Fracture of the distal radius	Incidence and mechanism of the injury
		Treatment and prognosis
	Vertebral fracture	Incidence and mechanism of the injury
		Treatment and prognosis
	Spinal deformity and back pain, low back pain	
Diagnosis	Diagnostic criteria	
	Medical interview	
	Measurement of bone minedal density	
	Image diagnosis	
	Bone metabolic markers （BAP, TRACP-5b, etc)	
QOL evaluation of osteoporosis・ICF （JOQOL, SF-36, EQ-5D)		
Prevention of fracture	Nutrition	Calcium supply, supplement
		Good nutrient for bone metabolism
		Poor factors for bone metabolism
		Diet advice

	Exercise	Type and frequency of an exercise
Prevention of fracture		Recreation sports
		Senior citizen sports classroom
	Physical therapy	
	Anti-pain measure	
	Factors for easy fall	Physical factors
		Environmental factors
Fall Prevention	Fall risk assessment (FRAX)	
	Fall prevention class	
	Hip protector	
Drug therapy	Classification of drugs	
	Mechanism of pharmaceutical action	
	Usage and compliance	
	Management of taking drugs at home	
Plaster cast treatment	Plaster cast treatment	
	Nursing of plaster cast patients	
Corset treatment	Purpose／characteristic of corset treatment	
	Nursing of the patient with the corset	
Operative treatment	Operation adaptation	
	Technique	
	Aftercare	
	Nursing while hospitalization	
	Discharge guidance	
Prevention of osteoporosis	Young adult period	
	Middle and old aged period	
	Medical examination	
Rehabilitation	Clinical pathway	
	Hospital rehabilitation	
	Home rehabilitation	
Understanding for elderly people	Developmental tasks	
	Changes of mind and body	
	Healthy elder people	
	Frail elder people	
Community caring system and being at home support・A health medical care welfare system	Health promotion	
	Medical and health care Welfare system	Making an abstract
		Nursing care insurance system
		Care authorization standard
		Care payment contents
		Handicapped person support system
		Social security system
		The caring management
		Technical aid

Community caring system and being at home support・ A health medical care welfare system	Medical and health care Welfare system	House remodeling
		Payment procedure
		A burden for the cost
	Community resources or social capital	
	Caring at home plan	
	Being at home care	
	Home health care	
	Support to a family	
	Support to a connection with community	

A goal of understanding level of each item may be determined by a speciality of a profession in health and social care

(Fracture Prevention Group, NUHW, 2009)

(8) Evaluation sheet

Making use of modules in interprofessional learning has to be evaluated at least before and after the practice for all students. Actual methods are discussed in the previous chapter. It is expected that the outcome is to be evaluated at the later day, and furthermore, it may be evaluated its cost vs. effectiveness in future.
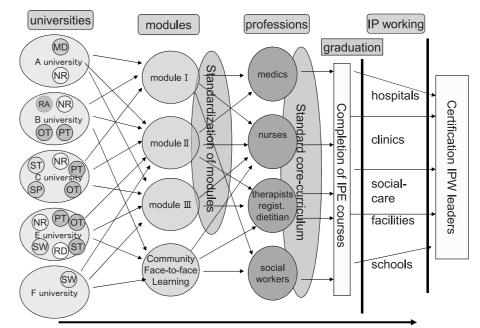
2) Types of modules and discussion of the types

(1) Community care modules: This means modules in the case that a complex health history, family history, social environment, etc. is established for individual cases. There are cases with these kinds of conditions in community care. In the case that these modules will be used in all of the academic disciplines, overall maintenance is thought to be easier if a facilitator guide and a tutor's notebook are developed. This is because it is thought that the development of the students' learning is influenced by the experience of the individual facilitator.

(2) Discrete group modules: With these modules the attainment targets of the individual modules are clear, and the modules are classified into the disease prevention and health promotion type, the home and community support type, the medical type, the development support type, the child welfare type, etc. In this case, a tutor's notebook for each group or case is necessary. A revision of the reference library every year is necessary. If there is a learning matrix, facilitation is possible for the facilitators in areas that are not their specialty.

3. Future Prospects of IPE in Japan

In Japan IPE has been incorporated in some universities, and approximately ten years has passed since it was first implemented in universities. However, there are still very few universities with IPE included in their curriculum, and there are even fewer universities which have developed their IPE content from the first year to the fourth year in parallel with higher levels of specialist skills in

the specialized subjects, as the three universities discussed above have done. In order to implement IPE with medical disciplines and welfare disciplines, rather than only within the medical disciplines, collaboration among universities is necessary because there are few universities where such IPE is possible within that university's campus only. It is expected that the human and social resources in communities will be fully utilized to execute diverse IPE programs. In Japan IPE needs to be developed in accordance with perspectives like the following. (Figure 10-1)

Figure 10-1.　A schematic route from development of a standard core-curriculum of IPE by a team-based modules or face-to-face learning to a certification system of IPW (A proposal)

1) Sharing the terminology, evaluation indicators, and outcomes indicators in the health and social field

In order to understand each other between health and social care professions, it is ideal to use a common terminology that shows the current condition of the patients, clients, and users, and at the same time to use common evaluation and outcomes indicators, such as Comprehensive Geriatric Assessment (CGA), Functional Independence Measure (FIM), Quality of Life (QOL) evaluation. JAIPE has established an ICF Committee, which is currently reviewing an attempt to identify the items necessary for the evaluation of certain diseases from ICF, reduce the number of items, and shorten the evaluation time.

2) Establishment of the standard core curriculum and method

Regarding the curriculum, a core curriculum should be established based on the assumption of IPE between the medical and welfare disciplines, rather than

only within the medical disciplines. Regarding this point, it is expected that each university or university group will develop its own distinctive content for its programs. However, it is expected that in this process the number of common subjects will be kept to within the minimal scope, and a standard core curriculum for healthcare and welfare will be established. In the United States "Core Competencies for Interprofessional Collaborative Practice" sponsored by the Interprofessional Education Collaborative is now available. We need such a collaboration for curriculum planning among universities and professions in Japan.

As far as methods of IPE are concerned, there are the face-to-face type, the module type, and the blended type. Collaboration among universities using ICT is possible over long distances, but firstly the author would like to consider implementation of IPE within regions. That is because it is ideal to have as many face-to-face meetings as possible between the actual patients and virtual patients and the students, and among students from multiple professions and academic disciplines.

3) Establishment of the standard core curriculum course

Establish a course in which a standard core curriculum is studied in each university and university group. A variety of views have been offered regarding standardization of the curriculum for IPE, and a decisive view has not been presented yet. However, standardization is predicated on taking into account the achievements at each university and mutually presenting the content of a variety of subjects. The students are asked to select the preparatory and basic subjects from among the main and side dishes in accordance with the cafeteria method. Moreover, if the three types of IPE practice described above are undertaken, then this can probably be called a standard IPE course, and it is thought that if the method of combining the types were adjusted a little, then the transfer of credits among universities would become easy.

4) Development of computer-based testing (CBT) and objective structured clinical examination (OSCE)

OSCE is rapidly spreading in areas such as medical education, dentistry, pharmacology, and nursing studies in Japan. In medical education, in order to evaluate medical students before they participate in clinical practical training, OSCE is used together with CBT that is compliant with the national examinations. Unlike education for a single profession, IPE aims for diversity, but basic evaluation of IPE is important, and CBT and OSCE will be more necessary for standardizing and improving the quality of IPE in the future.

5) Post-graduate training and qualification

After graduation, and after obtaining state qualifications in a profession, naturally the professional is required to implement IPW on-the-site. Establishment of a qualification system which can be called "interprofessional practice coordinators (tentative)" for evaluating the achievement of implementation of IPW on-the-site and assuring the quality of the professionals' practical abilities is expected.

4. Role of JAIPE Going Forward

JAIPE has roles including the presentation of IPW outcomes by working professionals in the annual congress described earlier, presentation of the outcomes of IPE by teaching faculties, and providing a forum for exchanges between these two groups. Apart from these roles, as a part of committee activities or activities by different organizations, implementation of items like the following is expected in the future in IPE and collaboration on-the-site.

1) IPW
   (1) Further development of IPE in medical and health care professions and social care professions that transcends individual universities
   (2) Enhancement of IPE and adoption of a portfolio for each academic year from the first year to the graduation year
   (3) Standardization of IPE in the education of healthcare and welfare professionals
   (4) Making IPE compulsory in the education of healthcare and welfare professionals
   (5) Development of IPE among professional training schools with different training periods
   (6) Accumulation of virtual case modules for IPE, and compilation of a database
   (7) Establishment of the plan (P), do (D), check (C), act (A) cycle in the IPE curriculum

2) Relationship between IPW and IPE on-the-site
   (1) Reflect the necessity of collaboration on-the-site in the content of IPE
   (2) Share evaluation and outcomes indicators in the health and social care
   (3) Strengthen the relationship between IPE and collaborative practice on-the-site to improve the development and dissemination of collaboration on-the-site
   (4) Incorporate IPE and collaboration on-the-site into lifelong learning

3) Communicate the importance of IPE and collaboration on-the-site in Japan and overseas
   (1) Educate society about the necessity and importance of IPE
   (2) International exchanges and communication about the actual nature of collaboration on-the-site and IPE

5. Conclusions

Subsequently, the followings are expected in IPE in future in Japan.
1) The team approach is now extremely important for realizing "team medicine" and "collaborative practice between health and social care" for the diverse needs in each age group in a super-aging society.
2) It is most advisable for students aiming to be professionals in any of the health and social care to master the skill of "ability to work in a team" during

their university education.

3) It is very much expected for university faculties to participate in IPE, not only to deepen their own specialist skills but also as a contribution to society.

4) It is strongly advisable to make "interprofessional education" compulsory in the curricula for professionals in all of the health and social care fields.

5) It is necessary to reflect the needs on the ground in the education curriculum.

6) It is necessary for the health care professionals to have a better understanding of the social care field and the its professionals, and at the same time for the social care professionals to have a greater understanding of the health care field and the its professionals.

7) For that reason collaboration among universities is, most important, particularly between the health and the social care professionals. Now, we could do it with modules and information and communication technology.

8) IPE seems like a roundabout way to provide high-quality, seamless, and uninterrupted services and care in health and social care to patients, clients, the elderly, and users, but actually it is the shortest route to doing so.

When water gets clean in quality by planting trees at a mountain of upstream, the sea of downstream in which water pours becomes the productive fishing ground.

Just like a stream of a river, the author believes, since undergraduate education is the most upstream in a course of professional education of health and social care, implementation of IPE sharing an object together among multiprofessionals is the most effective way to improve quality of service and care for patients, clients, the elderly and service-users on-the-site.

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