National University Hospital Council of Japan’s Realization of the Future Vision


National University Hospital Council of Japan
Message from the Top Management

**Aiming to Achieve the Missions of the National University Hospitals**

It has been over two years since the National University Hospital Council of Japan finalized a future vision for the national university hospitals in March 2012, put forth in the proposal, “Searching for the Future Vision of National University Hospitals – Challenges and Prospects” (hereinafter “the Challenges and Prospects”), to foresee how they ought to be in ten years’ time. It has also been a year since the “Realization of the Future Vision: Action Plan 2013” (hereinafter “the Action Plan 2013”) was formulated in June 2013, to organize and implement the specific programs that can be implemented in a short period for the realization of the goal of the Issues and Prospects.

Over the period, we have seen drastic changes in the environments surrounding national university hospitals, during which the National University Hospital Council of Japan and national university hospitals nationwide have proactively striven to address the challenges that required urgent countermeasures. Accordingly, the initiatives we have taken in the fiscal year 2013 included our proposal of cooperation for setting up a “Japanese version of the National Institutes of Health (NIH)”—a strategy included in the government’s plan for industrial growth arising out of a society characterized by health and longevity; examination of new medical specialist systems by issuing the “Report of the Investigative Commission Regarding the Way the Medical Specialists Ought to Be”; measures for the revision of the requirements for approval of advanced treatment hospitals, from the viewpoint of reinforcement of their systems and functions, due to the changes in the environments surrounding medical care; implementation of immediate inspections and urgent countermeasures toward prevention of fraudulence in clinical studies and restoration of credibility; formulation of guidelines for disclosure purposes to ensure transparency of funding from corporations and other sources; and measures for the revision of the national fee schedule in the fiscal year 2014, focusing on differentiation and reinforcement of the functions of medical institutions and their mutual cooperation, enhancement of home care, and so forth.

While working on these undertakings, we steadily continued to take actions towards our initial goals of achieving the proposals presented in the Issues and Prospects, and in the Action Plan 2013, during which all the personnel working at the national university hospitals put in their best efforts with high motivation, and produced many successful results in each hospital.

These successful instances have been compiled in the present document, the “Realization of the Future Vision: Annual Report for the Fiscal Year 2013” (hereinafter “the Annual Report 2013”). I hope that the successful instances included in the Annual Report 2013 will work as reference for each hospital, help enhance cooperation with pioneering hospitals, and strengthen respective hospitals’ functions, thereby facilitating the overall development of national university hospitals.

Additionally, the “Realization of the Future Vision: Action Plan for the Fiscal Year 2014”
(hereinafter “the Action Plan 2014”) has also been presented here.

The Action Plan 2014 does not merely advance the Action Plan 2013 by one year. It was drawn up by seven project teams that worked on each mission, based on the assessment of the activities addressed in the Action Plan 2013, and by taking account of the measures to be taken to address the aforementioned new challenges.

We, at the National University Hospital Council of Japan and the national university hospitals nationwide, are dedicated to expediting the actions towards the implementation of the proposals presented in the Issues and Prospects, and the Action Plan 2014, and are committed to steadily enhancing our own reformation. Your continued support would be greatly appreciated.

Shuichi Yamamoto
Chairperson of Standing Committee, National University Hospital Council of Japan
Hospital Director, Chiba University Hospital
Results of the endeavors of FY2013 and prospects for FY2014

**Strengthening of Networking by Sharing Excellent Initiatives and Further Improvement of the Quality of Medical Care**

The “Action Plan 2013” formulated in June last year, was the first step of the national university hospitals towards implementation of the proposed actions. Aiming to achieve the missions and for ensuring balanced and comprehensive growth, the national university hospitals around Japan have been working in unison to solve the issues in seven areas, namely, education, medical care, research, contribution to local communities/society, globalization, management, and dentistry. In addition, each hospital has individually been making diverse efforts to play a proactive and leading role in community medicine.

Compilation of this annual report involved collection of information about superb endeavors that have been under way at each university for realization of the future vision. It was found that plenty of successful instances have been produced by excellent use of ingenuity and constant efforts; however, only a small part of these actions have been presented here as examples.

We believe that sharing these good practices observed at the respective universities will lead us towards strengthening the entire network of the national university hospitals and will facilitate further quality improvement and invigoration of medical care.

Takashi Kadowaki
Realization of the Future Vision Section
Standing Committee, National University Hospital Council of Japan
Director, the University of Tokyo Hospital
Establishment of a PDCA Cycle and its Application in the Action Plan 2014

In the “Realization of the Future Vision: Annual Report 2013/Action Plan 2014,” the activities undertaken in the fiscal year 2013, after formulation of the Action Plan 2013, were reviewed, and the Action Plan 2014 was developed based on the assessment. It has been committed that the future vision should be realized smoothly and effectively through a Plan-Do-Check-Act (PDCA) cycle.

The revision of the national fee schedule in fiscal year 2014 focuses on the differentiation and reinforcement of the functions of medical institutions and their mutual cooperation, enhancement of home care, and so forth, in an effort to ensure that the medical care delivery system will be restructured, and a comprehensive community care system will be established. Additionally, as exemplified by the idea of a Japanese version of the NIH, the revision of the requirements for the approval of advanced treatment hospitals, the revision of the clinical training system for foreign physicians, and other such steps have caused a whirlwind of changes in the environments surrounding the national university hospitals. Embracing the trend and the shift swiftly and flexibly, all the personnel working at the national university hospitals continue to be making concerted efforts to realize an ideal picture of the national university hospitals in the fiscal year 2014. We would highly appreciate your further support.

Naoki Ishiguro
Director, Realization of Future Vision Working Group
National University Hospital Council of Japan
Director, Nagoya University Hospital

Major Activities and Future Directions
Outline of the endeavors of FY2013 and action plan for FY2014

Education

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<tr>
<td>Establishment of the Advanced OSCE</td>
<td>· Establishment of a network among the universities where the Advanced OSCE is conducted. · Coordination with the Association of Japanese Medical Colleges (AJMC), Council of Head of National Medical Schools of Japan, etc.</td>
<td>· Confirmed the definition of the Advanced OSCE and proposed a framework to discuss pre-graduation education. · Examined cooperation with the Council of Head of National Medical Schools of Japan.</td>
<td>· Cooperation with the Council of Head of National Medical Schools of Japan. · Propose a standard at-graduation OSCE in Japan. · Examine the possibility of cooperation with the Common Achievement Tests Organization.</td>
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<td>Improvement of learning environments for students and residents—creating a post in charge of education (an organization and its personnel to manage education full-time)</td>
<td>· Development of a scheme for a clinical assistant professor in charge of education.</td>
<td>· Enhanced proactive assignment of clinical assistant professors in charge of education at respective universities.</td>
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<td>Consolidation of an educational system utilizing simulations</td>
<td>· Grasping community needs and the status of operation/utilization. · Organization of basic simulators.</td>
<td>· Organized the system for intensive simulation education at each university, thereby contributed to local communities.</td>
<td>· Investigation of the status of the simulation centers located at each university, proposing models that match the needs of the respective</td>
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### Establishment of a Career Building Support Center (tentative name)

- Grasping the community needs and the status of operation/utilization.
- Clarification of the significance, missions, and tasks.
- Examined the establishment and organization of a center for career building at each university.
- Investigation of the actual status of the career building support centers at medical universities and schools of medicine.
- Proposing a training program adapted to the new medical specialist system, effective from 2015 onward.

### Medical Care

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<td>Establishment, disclosure and sharing of the indicators of the quality of medical care (Quality Indicator, QI)</td>
<td>· Disclosure of Hospital Function Indices, the QI for the national university hospitals. · Utilization, assessment and feedback of the QI, examination of new indices.</td>
<td>· Investigated the situation of the QI disclosure at each university hospital. · Examined new indices by the “Hospital Function Indices Project Team.”</td>
<td>· Enhancement of disclosure and utilization of the QI at each university hospital. · Examination of new indices by the Standing Committee, based on the results of studies by the “Hospital Function Indices Project Team” and on the indicators independently created at respective universities.</td>
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<td>Consolidation/enhancement of the organizational frameworks</td>
<td>· Implementation of mutual checks among university hospitals in order to strengthen the administration system,</td>
<td>· Under the leadership of the “Medical Safety Management Conference” and “Infection Prevention”</td>
<td>· Further strengthening of the systems for the safety of medical care, infection control, and disaster</td>
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including medical care safety and infection control.
- Implementation of mutual visits among university hospitals for disaster management.
- Consolidation and enhancement of the organizational frameworks covering education, research, medical ethics, regulatory science, and clerical organization.

- Control Conference of the National University Hospital Council of Japan, continued the execution of mutual inspections in FY2013.
- Implemented mutual visits by the district related to the disaster management, and shared the information by reporting at hospital directors’ meetings at each district, and a Standing Committee meeting.
- Established the backup system for the data of medical care information system, according to the revised budget for FY2012.

- Deregulation to designate hubs of medical treatment of incurable diseases as special institutional precincts (special university precincts).

- Exchanged opinions with related government bodies and Diet members about measures for deregulation.

- Deregulation regarding special institutional precincts (special university precincts)

- Prevention to designate hubs of medical treatment of incurable diseases as special institutional precincts (special university precincts).

- Exchanged opinions with related government bodies and Diet members about measures for deregulation.

- Examination of necessary measures while watching government movements.

| Deregulation regarding special institutional precincts (special university precincts) | · Deregulation to designate hubs of medical treatment of incurable diseases as special institutional precincts (special university precincts). | · Exchanged opinions with related government bodies and Diet members about measures for deregulation. | · Examination of necessary measures while watching government movements. | 26 |

**Research**

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<td>Nationwide expansion of clinical research enhancement</td>
<td>· Commencement of creation of environments where the quality of clinical research is ensured.</td>
<td>· Formally positioned the Clinical Research Promotion Initiative as one of the committees under the National University Hospital Council of Japan, thereby implementing mutual entry of coordinators/conference members.</td>
<td>· Intensify cooperation between research project teams and the Clinical Research Promotion Initiative by joint meetings and substantiate the establishment of</td>
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<td>Foundation of a supporting/coordinating division which controls affairs related to community support</td>
<td>• Examination of the establishment of a supporting/coordinating division which controls diverse affairs related to community medicine, to enhance community medicine in cooperation with the administrative bodies, related hospitals and medical associations. • To establish the division, conduct an investigation</td>
<td>• Established a deputy university in charge of community medicine and a Community Medicine Working Group as organizations to carry out the action plan. Additionally, examined the establishment of a national-scale consultative body. • Held meetings of the Community Medicine</td>
<td>• Conduct an investigation to examine the status of community medicine. • Introduction of preceding instances of support/coordination divisions that control tasks related to community medicine. • Hold a symposium for the establishment of a national-scale</td>
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**Contribution to Local Communities/Society**

- Implemented the “Urgent countermeasure questionnaire related to securing credibility in clinical research and management of conflict of interests.”
- Based on the “Questionnaire related to securing trust in clinical research and management of conflict of interests,” develop guidelines and a road map (jointly with the Strategic Activities Working Group).
- Development of human resources that enable high-quality clinical research.
- Commenced discussion at a topic group in the Clinical Research Promotion Initiative regarding training/education systems for the development of human resources that can support clinical research.
- Share information retained by academic research organizations (AROs)/data centers of the role-model hub university hospitals and commence model projects for the development of human resources through personnel interaction.

- Examination of the establishment of a supporting/coordinating division which controls diverse affairs related to community medicine, to enhance community medicine in cooperation with the administrative bodies, related hospitals and medical associations.
- To establish the division, conduct an investigation.
- Established a deputy university in charge of community medicine and a Community Medicine Working Group as organizations to carry out the action plan. Additionally, examined the establishment of a national-scale consultative body.
- Held meetings of the Community Medicine.
| Establishment of a network for disaster medicine | · Formation of a functional disaster management team that works as a coordinator of community medicine, and establishment of systems to manage the medical assistance activities. · To realize the above, examine the medical assistance systems and the actual situation of disaster management at university hospitals. Additionally, implement mutual visits related to disaster management. | · Implementation of the “Mutual Visit Program for Disaster Countermeasures” between national university hospitals, led by the Disaster Countermeasures Working Group. · Organized the “Workshop on Disaster Medicine of University Hospitals” under the auspices of the National University Hospital Council of Japan. | · Hold a symposium to ensure cooperation between national university hospitals and related central government bodies at the time of disasters. · Collection/analysis of disaster management manuals to identify the contents of scientifically effective activities that national university hospitals can contribute to. |

### Globalization

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<td>Nationwide expansion of the telemedical education network</td>
<td>· Nationwide expansion of the telemedical education network. · Formulation of telemedical education programs, establishment of a scheme for education, development of engineers, etc.</td>
<td>· For establishment of an “international telemedical education network,” elected physicians in charge of the telemedical education program, and engineers in charge of network connection/operation from the national university hospitals nationwide, and held a national convention. · Network connection has been implemented starting from the</td>
<td>· Expansion of the network to possibly all the 45 national university hospitals. · Elect physicians and engineers in charge of overseas medical care hubs to expand overseas network connection. · Provide support for formulation of telemedical education programs that can be deployed overseas.</td>
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university hospitals that were ready to cooperate (36 of 45 hospitals have been connected).

| Continual personnel exchange through international mutual visits, organization of interdisciplinary seminars, etc. | • Implementation of personnel exchange, including international mutual visits, by regularly hosting medicine-engineering interdisciplinary seminars, subcommittee meetings, etc. | • Physicians and engineers from Japan and overseas attended an interdisciplinary seminar, “Asia Telemedicine Symposium (in Bangkok)” (co-hosted by Kyushu University, Mahidol University, Thailand, etc.), which led to substantive mutual personnel exchange. | • Host an interdisciplinary seminar, “Asia Telemedicine Symposium” in Japan, requesting attendance of many physicians and engineers in charge from national university hospitals nationwide, to achieve substantive exchange with their counterparts from overseas. | 33 |

### Management

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<td>Sharing of information related to hospital management</td>
<td>• Share information about specific instances, challenges, etc., and solve issues.</td>
<td>• Collected information about instances of endeavors in addressing the challenges in human resource development and consolidation of the operational base.</td>
<td>• Sharing information about the effects of pioneering endeavors. • Establishment of a scheme to nurture next-generation leaders.</td>
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<td>Establishment of a new model of personnel/labor affairs</td>
<td>• Securing competitive human resources, establishment of an employment system that includes a unified treatment among similar occupations.</td>
<td>• Collected information about instances where hired-by-hospital employees are working in the same manner as taken-over employees.</td>
<td>• Sharing information about the effects of the endeavors and putting together the proposals to solve the issues.</td>
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|             | · Intensify the cooperation with medical treatment departments.  
|             | · Enhance the realization of the future vision by strengthening medicine-dentistry cooperation in various areas. | · Retaining its identity as dentistry, implemented interdisciplinary team care by collaborating with medical treatment departments.  
|             | | · Cooperated with medical departments in each area of education, dental care, contribution to communities, research, and globalization: | | 39 |
| While maintaining the identity of the dentistry profession, we will strengthen medicine–dentistry cooperation in team care as well as in education, dental care, contribution to communities, research, and globalization | Education:  
|             | Medicine-dentistry integrated education, development of general dentists. | Education:  
|             | | · Participation in education for inter-professional collaboration in community medicine.  
|             | | · Development of dental care professionals who can meet the needs of the advanced dental care and those of society. | | 39 |
|             | Dental Care:  
|             | Supportive oral care in perioperative management and promotion of medicine-dentistry collaborative approach. | Dental Care:  
|             | | · To perform dental care with close collaboration between medicine and dentistry. | | 39 |
|             | Research:  
|             | Organization of clinical research implementation systems. | Research:  
|             | | · Enhancement of clinical research utilizing inter-university cooperation and cooperation with local communities. | | 39 |
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Education

Education is one of the most important missions of universities; therefore, we have been working on implementing the action plan to nurture healthcare personnel.

Establishment of the Advanced Objective Structured Clinical Examination (OSCE)

Cooperation with the Council of Heads of National Medical Schools of Japan

The Advanced OSCE is a final examination to assess whether an individual has acquired clinical competence required to work as a physician after clinical field training. Even though introduction of the Advanced OSCE in the state examination has been proposed repeatedly on many occasions, the proposal has not yet materialized. As we consider this issue, although the venue of the examination is a hospital, it is carried out by the school of medicine, as it is a part of the pre-graduation education. Thus, the issue cannot be addressed by the National University Hospital Council alone. Therefore, we considered cooperating with the Council of Head of National Medical Schools of Japan, where they were examining issues regarding pre-graduation education, and coordinated an arena for the two organizations to discuss the subject jointly.

Aiming to introduce the Advanced OSCE nationwide on a unified basis in the future, we will also work on introducing it in the state examination.

Kagawa University provides an example of implementation of the Advanced OSCE, which they conduct for 6th-year students. Their approach is characterized by setting a series of processes as a task, i.e., a medical interview, physical examination, diagnosis, and decision of therapeutic strategy, thereby ensuring proper assessment of “clinical competence.” The outcome of the clinical procedures the students acquired in the clinical field training during the 5th and 6th years is assessed by this examination. Kagawa University moved to a full-scale launch of the Advanced OSCE in the fiscal year 2014 when the implementation system became sufficiently organized, and has positioned it as a part of requirements for graduation.

An Example of the Advanced OSCE (Kagawa University)
Action Plan 2014
Cooperation with Related Organizations and Proposal of Standard at Graduation OSCE

- For cooperating with the Council of Head of the National Medical Schools of Japan, we will examine approaches to solve relevant issues jointly with the council’s Subcommittee on the Education System/Curriculum and Subcommittee on Community Medicine/Development of Healthcare Personnel. We will also propose a standard at-graduation OSCE in Japan in collaboration with the Common Achievement Tests Organization (CATO).

In some Western countries, the Advanced OSCE has already been incorporated as part of the state examinations and its effects have been accepted positively. We will study the same and make appropriate proposals to implement it in Japan.

Improvement of Learning Environments for Students and Residents

Placement of a post in charge of education (an organization and its personnel to manage education full-time)

Instituting the Post of Assistant Professor in Charge of Education

After enhancing clinical field training, we need to establish a program for nurturing physicians, which is consistent with post-graduation education (assistant professors in charge of education).

To meet this need, we are actively organizing a system of appointing a person in charge of education (such as clinical assistant professor) in each university hospital, and drawing up high-quality education enhancement programs.

For instance, at Nagasaki University, as a career support for physicians implemented by the entire Nagasaki Prefecture led by university hospitals, a total of 15 hospitals for clinical training in the prefecture have united and organized the Shin Narutakijyuku (Nagasaki Prefecture Committee for the Clinical Training of Physicians), to invite and nurture junior residents in the prefecture. This has been done under the leadership of the Medical Education Development Center of Nagasaki University Hospital, where one full-time professor and seven full-time clinical assistant professors are stationed.
Shin Narutakijyuku (Nagasaki Prefecture Committee for the Clinical Training of Physicians)

Action Plan 2014
Proposal of a Model System for Appointing a Person in Charge of Education
Investigation of Career Paths Overseas and Examination of Their Application in Japan

- We will conduct an investigation on a system for appointing a clinical assistant professor in charge of education and present the current situation and challenges at the respective universities where the post has already been created. We will then propose a model for the universities that are currently examining the creation of such a post in the future, with reference to the kind of functions to be assigned to this post.

Additionally, we are going to study career paths overseas (Clinical Educator Track [e.g., education provided by spending 30-40% of the time, with promotions awarded based on the recognition of excellence]) and examine their application in Japan, including assessment methods of education/guidance.
**Consolidation of an Educational System Utilizing Simulations**

Although not particularly addressed on a nationwide scale, a simulation education system has intensively been enhanced at each university to address the need for the same. Each university hospital has identified different missions for its simulation center (including skills lab, based on the needs of the community or associated hospitals), and is working on social collaboration and contribution to the local community. Simulation education is also related to pre-graduation education. Therefore, we will consider potential collaboration, as in the Advanced OSCE, and work jointly towards solving issues that may arise.

An example of collaboration with local communities is the “Okinawa Clinical Simulation Center” of University of the Ryukyus, which was launched on March 25, 2012, by the Clinical Simulation Enhancement Program. It was introduced as part of a community medicine revitalization scheme for Okinawa Prefecture. The center represents an all-Okinawa endeavor, in which an operation strategy is formulated by the Project Concept Committee that comprised representatives of major medical institutions in the prefecture, while the development of a simulation education program for all medical occupations and operation of the center are performed by an endowed course established at the University of Ryukyus Hospital.

**Okinawa Clinical Simulation Center (University of the Ryukyus)**
Action Plan 2014
Preparation of a List of Targets To Be Reached by Simulation Education, Formulation of a Faculty Development (FD) Plan to Share Expertise on Management/Operation

From the viewpoint of the characteristics of the area where each hospital is located, the missions of each university hospital are different, depending on the needs of the local community and related hospitals. We will conduct an investigation of physical and human resources required to achieve the enhancement of education for healthcare occupations that contribute to the local communities, together with the degree of sufficiency, current issues, etc. With reference to the competence in medical care that medical students should acquire at the time of participating in the medical care field training and by the time of graduation, a list of targets to be reached by simulation education (clinical competence) will be drawn up. Additionally, since each university hospital is required to find its own contrivance in the management/operation of the simulation center, we will formulate and propose a FD plan to share relevant expertise.

Establishment of a Career Building Support Center (tentative name)

Organization of a System To Support Career Building

The “Career Building Support Center (tentative name)” is a division to control career support provided for individual medical students and physicians in the area of medical education. The center should be established at each university as an organization that undertakes concrete implementation of pre-graduation education, early-stage training, late-stage and specialized training, education for healthcare occupations other than physicians, support for community medicine education, support for female healthcare professionals, and so forth. Utilizing a network established at each national university hospital, we are working on organizing a system to provide support for career building in cooperation with medical institutions and medical associations in the communities, and other such institutions.

One of the initiatives for supporting career building of physicians through collaboration among universities is the FUJIYAMA-NET, in which five universities, i.e., University of Yamanashi, Hamamatsu University School of Medicine, Kitasato University, St. Marianna University School of Medicine, and Showa University, are collaborating to develop the project. This primarily entails lectures, training and exchanges for the purpose of nurturing specialists and advanced medical personnel. Going beyond regional borders, this collaborative program is planning and implementing activities for physicians’ career building by combining efforts of national and private universities.
An Initiative for Career Building of Physicians by Collaboration among Universities (FUJIYAMA-NET)

**Action Plan 2014**

**Proposal for the Establishment/Enhancement of a Career Building Support Center**

- We will conduct an investigation of career building support centers at medical universities and schools of medicine nationwide to examine their actual status.

- We will also make a proposal of a training program to adapt to the new medical specialist system, which will become effective from 2015.

- We are going to make proposals for the establishment/enhancement of a career building support center at each university hospital so that its functions, such as career support, information collection, development/implementation of programs, and organization of the development system, will be fulfilled.
The “Ajisai Project” (Nagasaki University) targets physicians working at medical institutions in Nagasaki Prefecture.

**We support doctors who are working vigorously by balancing their professional and personal lives!**

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**Career Support**
- Career consulting
- Return to the former work & refresher training
- Lectures/courses on work-life balance, diversity, and career

**Approaches by Hospitals Aiming to Achieve Work-Life Balance**
- Introduction of approaches taken by hospitals aiming to achieve work-life balance
- Approaches by Nagasaki University Hospital, Approaches by medical treatment departments: In-hospital nursery school, Hospirate (hospital rating) certification
- Report/current situation of support for community employment

**Medical Institutions**
- Introduction of the support system of the government

**Information about support for community employment**
- Useful information for families with children
- Information about support from community medical institutions
- Introduction of the support system of the government

**http://nagasaki-ajisai.jp**
Medical care

In order to provide safe and high-quality medical care, we will strengthen framework divisions and expedite advanced medical care.

Establishment, Disclosure and Sharing of the Indicator of Quality of Medical Care (Quality Indicator, QI)

Disclosure and Sharing of the QI Among National University Hospitals

The QI has been developed as “hospital function indices” to assess national university hospitals. It includes 54 items and it has been published by the National University Hospital Council of Japan. The Database Center (DBC) of the National University Hospitals accumulates and analyzes the data of the function indices presented by respective university hospitals and returns the results to the hospitals as feedback. Each university hospital assesses, examines and shares its own quality of medical care by referring to such data, thereby improving the quality of their medical treatment. In addition, university hospitals are beginning to disclose temporal changes in the assessment results on their websites or by other means. Some universities are further disclosing and utilizing such data by adding their own indices to the existing 54 items.

Examination of New Indices

In the fiscal year 2013, the “Hospital Function Assessment Project Team,” formed under the DBC management committee of the National University Hospital Council of Japan, examined the QI and put together candidates for new indices that reflected the missions of the national university hospitals.

Action Plan 2014

Optimization of the QI and Establishment of New Indices

- We will continue to examine the 54 “hospital function indices”, and further enhance disclosure of temporal data.
- Meetings and organizations to manage the quality of medical care will be established at each university hospital to ensure further optimization of the QI.
- Based on the proposal of new indices drawn up by the “Hospital Function Assessment Project Team” and indices created independently by certain national university hospitals, the Standing Committee of the National University Hospital Council of Japan will commence the examination of such indices.
The “Hospital Function Indices (full version)” can be viewed on the website of the National University Hospital Council of Japan (http://www.univ-hosp.net/).

Consolidation/Enhancement of Framework Divisions

Delivery of Safe and High-Quality Medical Care

Established in the fiscal year 2002, aiming to enhance and strengthen the safety of medical care at national university hospitals, the “Medical Safety Management Conference” has been working on sharing of risk information and measures for medical care safety, formulating educational programs and manuals on medical care safety, and measures and proposals regarding new legal and social systems related to the safety of medical care.

In the fiscal year 2013, through two general meetings, task force meetings, etc., the committee has established a system to share patient safety information, developed a method to nurture medical care safety management personnel including physicians, designed educational materials for the personnel in charge of enhancement of medical care safety in medical settings, worked out an effective method and educational materials for employee/personnel education, investigated the actual situation of medical care safety education in pre-graduation medical education, and prepared a collection of statutes related to medical care.

Additionally, each year since the fiscal year 2000 (except 2006 and 2011), the committee has implemented self-checks by each university hospital and site-visit inspections of priority items by other university hospitals. In the fiscal year 2013, they investigated the status of improvement regarding “procedures to ensure safety of surgery,” a priority item of the preceding year, and prepared a report.

Infection Prevention and Control

The “Infection Prevention and Control Conference” was established in the fiscal year 2000 aiming to improve the outcomes of patients suffering from nosocomial infection at national university
hospitals. The committee has been undertaking the formulation of guidelines for hospital infection control, implementation of various surveillance measures for understanding the trend of nosocomial infection occurrence, establishment of education systems for physicians/nurses who are involved in infection prevention and control, establishment of a system to manage accidental exposure to blood among medical professionals, organization of a support system for factor analysis/improvement at the time of occurrence of nosocomial infection, etc. The committee has been working on these undertakings, joined by nine other public universities and the National Defense Medical College in the fiscal year 2011.

In the fiscal year 2013, through general meetings, various task forces, specialist subcommittees, working groups and so forth, the committee revised the guidelines for hospital infection control; carried out various surveillance measures, including one related to the dosage of antimicrobial agents; implemented various questionnaire surveys; and formulated a dentistry version of Exposure Prevention Information Network system (EPINet, a format for reporting exposures to blood/body fluids), and worked in other such areas.

The committee also carries out yearly mutual checks on the status of infection control among universities. The member facilities were divided into three groups in which the checks were implemented once every three years at each university hospital, on a 2-day 1-night schedule. In the fiscal year 2013, the members conducted the mutual checks for the third year (final year of a cycle).

“The Guidelines for Hospital Infection Prevention and Control” (left) and the Infection Control Committee website (right)  (http://kansen.med.nagoya-u.ac.jp/)

**Mutual Visits Related to Disaster Management**

This fiscal year we launched a mutual visit program focusing on disaster management. Universities in a same area block visited each other’s facilities to confirm the situation of disaster management at each facility and made efforts to improve the quality of disaster management of the university hospitals as a whole, through exchange of opinions, etc. To share the information, the results were reported at hospital directors’ meetings in the blocks and at the Standing Committee of the National
University Hospital Council of Japan.

Problem-Solving Oriented Training Program for Advanced Medical Personnel

The Ministry of Education, Culture, Sports, Science and Technology has budgeted grants-in-aid in the fiscal year 2014 for a program to nurture professionals in the areas of medical safety, infection prevention and control, and disaster medicine, as described above.

Action Plan 2014
Continuation and Enhancement of Mutual Checks and Mutual Visits

- Medical Safety Management Conference

While continuing the activities it has undertaken up to that point, the conference plans to establish “The 1st Patient Safety & Quality Award,” by electing best practices implemented/accumulated at respective university hospitals and sharing them among university hospitals to further enhance safety measures.

The mutual checks will be carried out with an emphasis on “safety measures related to endoscopic screenings/treatments and examinations using contrast media/endovascular repairs—risk assessment, information sharing, patient observation, and measures to acute change of condition—.”

- Infection Prevention and Control Conference

While continuing the activities it has undertaken up to that point, including mutual checks of infection prevention and control and surveillance, we will further enhance these efforts by, among others, reviewing the items in the mutual checks of infection prevention and control.

- Mutual Visits for Disaster Management

As in the fiscal year 2013, the mutual visit program for disaster management will be continued. Based on certain unique endeavors implemented in area blocks (participation of medical school students in the drill, implementation of blindfolded drills, etc.) and issues to be improved, the national university hospitals will collaborate in expediting endeavors for disaster management. Additionally, towards the establishment of a disaster network, we will ensure organization/enhancement of its system at each area block.

Scenes from a mutual visit for disaster management
(observation of an emergency drill held at a site visited)
Establishment of a Data Backup System for the Medical Information System for University Hospitals

The Great East Japan Earthquake on March 11, 2011 highlighted the critical decline of medical care functions due to loss of medical information. This issue was addressed by the fiscal year 2012 supplementary budget that featured a budget for “establishment of a data backup system for the medical information system for university hospitals.”

As a result, the major medical information which is retained by the national university hospitals nationwide and may be required at the time of disasters was stored at two hubs in east and west regions of Japan, so that the hospitals can refer to their medical care data from this backup system even if the data at their facilities is lost.

Action Plan 2014
Ensure Operation of the Data Backup System for the Medical Information System

- We will develop operational rules in case of disasters and ensure that these rules will be fully known. They will be incorporated into a disaster management manual of each university hospital and tested during disaster drills. In addition, patients will be informed in advance, using a bulletin board or other such media, that this data backup system will be utilized at the time of disasters.
Action Plan 2014
Establishment of a System To Safely Provide Novel Medical Care

As a core hospital in community medicine, each national university hospital is constantly striving to improve the level of medical care, adapting itself to the social situation and the changes that influence medical services. Introducing new advanced medical care technologies in a safe manner is also an important mission of the national university hospitals. In order to fulfill these duties, each national university hospital will enhance interdisciplinary endeavors, free of the conventional barriers of medical care departments, while making optimum use of its own characteristics.

Deregulation for Special Institutional Precincts (Special University Precincts)

Measures for Deregulation

Collaborating with the Japan Association of National Universities, we have been exchanging opinions with related government bodies and Diet members about measures to reduce restrictions imposed by various laws or regulations in medical care and research activities. Particularly, with respect to a Japanese version of the National Institutes of Health (NIH), we have requested the establishment of a scheme in which the advanced functions of the national university hospitals can be fully utilized.

While watching the moves of the government, we are also going to take necessary measures in the future so that regulatory restrictions will not impede our medical care and research activities.
Research

Research is one of the most important missions of universities. We have been striving to develop environments that foster proper clinical research.

Nationwide Expansion of Clinical Research Enhancement

Clinical Research Promotion Initiative and Clinical Research Network

We aim to develop environments that expedite high-quality clinical research that is suitable for global expansion.

The Clinical Research Promotion Initiative was positioned as an official conference under the National University Hospital Council of Japan, equipped with systems that enable it to undertake continual activities. The Clinical Research Promotion Initiative has launched discussions on topics regarding challenges and future conception, such as website management, network, academic research organization (ARO) including data centers, education and training, and human resources employment, and sustainability.

Recently, as a serious incident has shattered the credibility of clinical research conducted in Japan, we have strongly been requested to establish social norms for ensuring the quality of clinical research.

Accordingly, we proposed immediate countermeasures related to securing credibility for clinical research and management of conflict of interests, while carrying out an urgent questionnaire survey to examine the actual situation at each university.

In order to ensure the quality of clinical research and restore its credibility, it is mandatory to secure personnel who can handle clinical statistics properly, strict systems for research data management, proper systems to manage conflict of interests, etc. Thus, we aim to build a clinical research network based on close collaboration between the existing clinical research core hospitals and the national university hospitals around Japan.

Development of Human Resources and Organization of Environments To Support Clinical Research

Development of Human Resources and Organization of Environments To Support Clinical Research

The Clinical Research Promotion Initiative has commenced discussion regarding training and education systems to nurture human resources that enable high-quality clinical research.

Sharing scenarios and expertise on the development of human resources and administrative systems
accumulated at core hospitals, we will ensure objectivity and credibility by standardizing the assessment method and formulating common scenarios. For clinical research as well, procedures and systems that allow universities to check one another will be organized and implemented as a model project.

Sessions of a general meeting of the Clinical Research Promotion Initiative (February 2014)

**Action Plan 2014**

**Enhancement of the System To Ensure Clinical Research Quality and Secure Credibility and Development of Human Resources**

- We will clarify the establishment of a clinical research network among the national university hospitals and launch systems for implementation of mutual checks to ensure the credibility of clinical research.
- In order to nurture human resources that support clinical research of the national university hospitals, we will initiate a model project in which a circulatory exchange of personnel between the core hospitals and the national university hospitals will be performed so that the university hospitals can acquire the knowledge related to the development of human resources, accumulated at the core hospitals.
Contribution to Local Communities / Society

We aim to establish new systems to provide community medicine from a long-term viewpoint and pursue proactive involvement in medical challenges in the community.

Foundation of Supporting/Coordinating Divisions That Control Affairs Related to Community Support

Organization of Systems To Enhance Community Medicine

(1) A university and a deputy university in charge of community medicine

Tohoku University was recently elected as “the university in charge of community medicine” by the Standing Committee of the National University Hospital Council of Japan.

In order to address various issues related to community medicine, including contribution to local communities and contribution to society, we designated the University of Tokyo—which is operating the committee we will collaborate with in the future—as the deputy university in charge so that we can enhance our activities.

(2) Community Medicine Working Group

The Community Medicine Working Group was formed as an organization to undertake concrete approaches to put proposals into practice and to coordinate collaborating committees.

In the future, the working group will introduce preceding cases of the division which supports/coordinates community medicine, carry out questionnaire surveys, and so forth, thereby disclosing, analyzing and distributing information about community medicine.

(3) National Committee

Discussion is being conducted on the establishment of a new organization as a national-scale committee, which brings each proposal into practice, and undertakes research/study and educational activities related to community medicine on a continual basis.

We anticipate that the establishment of the national committee will lead to enhancement of environments for physicians involved in community medicine and the development of medical staff.
Establishment of a Network of Disaster Medicine

Risk Management at the Time of Large-Scale Disasters

Mutual Visit for Disaster Management

The “mutual visit project for disaster management” was implemented among the national university hospitals in each region of Japan.

Through mutual visits, we verify university hospitals’ medical assistance systems in the event of disasters and confirm concrete measures, thereby sharing better practices and expediting improvement of insufficient areas.

We also ensure that things are moving towards the establishment of a network of disaster medicine as we have proposed.

Organization of an Enhancement System
Action Plan 2014

Implementation of a National Survey

- A survey will be carried out to examine the current situation related to community medicine.
  - This will aim to understand various issues associated with community medicine, including disease structures and medical needs.
  - Concerning physician deployment, it will assess organizations working in collaboration with administrative bodies, medical associations, etc., and examine the situation of their activities.

Establishment of a National-Scale Conference

- We will hold a symposium to facilitate the establishment of a national-scale conference organization.
Globalization

In the international trend of globalization, we have been working on enhancement of international interaction utilizing information technology.

Nationwide Expansion of the Telemedical Education Network

As the first step towards the goal of “nationwide expansion of the telemedical education network,” in April 2013 we held a joint meeting between the Globalization Project Team (PT) Conference (a conference comprising physicians in charge at nine PT member universities) and the engineers in charge, to launch preparations for network connection. As a result, we successfully connected all the nine PT universities in September in the same year.

Subsequently, as the second step, a national conference was held in October that year, gathering physicians in charge of the telemedical education programs and engineers in charge of network connection/operation at the national university hospitals around Japan. Since then, starting with the national university hospitals that were ready to collaborate, network connection has been expanding (36 out of 45 hospitals connected by the end of the fiscal year 2013). Simultaneously, we developed a telemedical education program comprising 42 items, which is also available for overseas use, and utilized it at the medical sessions of the Asia-Pacific Advanced Network (APAN).

*Status of network connection: 46 countries, 310 facilities (including 95 facilities in Japan)
Continual Personnel Exchange through International Mutual Visits, Organization of Interdisciplinary Seminars, etc.

In December 2013, we held an interdisciplinary seminar, “Asia Telemedicine Symposium (in Bangkok)” (co-hosted by Kyushu University and Mahidol University, and Chulalongkorn University in Thailand). A total of 75 physicians, engineers, and other delegates from 25 countries—comprising 55 attendees at the venue and 20 tele-attendees—participated in the symposium along with approximately 200 individuals at 24 facilities in 13 countries who joined via online distribution (reception only). From Japan, Asahikawa Medical University, Akita University, University of Tsukuba, Gifu University, Ehime University, and Kyushu University attended the symposium and discussed the current situation of network and related challenges at each medical institution, and other such issues from each country. They also shared information and expertise related to telemedical education programs and advanced medical technologies, thereby achieving productive interaction at academic and personnel levels.
**Action Plan 2014**

**Further Global Expansion of Networking and Personnel Exchange**

- Network connection among the national university hospitals will be expanded further. We will also elect physicians and engineers who will be in charge at overseas medical hubs to expedite preparation for network connection abroad.

- We are going to host the interdisciplinary seminar, “Asia Telemedicine Symposium” in Japan to enhance productive interaction between national university hospitals in Japan and personnel in charge at overseas medical hubs.

**Organization of a System for Global Distribution of Advanced Medical Care Information**

- As liaisons to globally provide advanced medical care, we will enhance organization of relevant systems at national university hospitals and expedite preliminary investigations for international collaboration among hospitals.
Management

We are working on strengthening the operational base and addressing common issues to ensure that the missions of the national university hospitals will be fulfilled.

Sharing of Information Related to Hospital Management

Although certain common fundamental problems have been observed, the operational issues of national university hospitals vary extensively, depending on the systems of the respective national universities.

Therefore, we have been collecting specific instances and issues related to governance of the hospital executive division, financial challenges, personnel/labor issues, and so forth, observed at each university hospital to share the information and help solve these issues.

Establishment of Governance

We have added Contribution to Local Communities/Society and Globalization, to the three existing missions of the national university hospitals, i.e. Education, Research, and Medical Care. Considering these five pillars as our new missions, we will respond to public demands for the delivery of safe, secure and advanced medical care.

Accordingly, the national university hospitals have been striving to enhance the administrative/operational system, including strengthening of the system to support the top-down management led by the hospital director and of the system of the clerical organization. More specifically, we are addressing issues including appointing organization and personnel to assist the hospital director, proposal and sharing of mid-/long-term management policies, and development of human resources that benefit hospital management in the clerical division.

Sharing of Information about Operational Status, etc.

As we have been required to control income and expenditures independently since the conversion to corporations, the operation of national university hospitals has been considerably susceptible to changes in the external circumstances, including those caused by the revision of the national fee schedule and the increase of consumption tax.

In order for the national university hospitals to perform self-reliant management, it has become increasingly important to perform accurate analysis of the operational status and share the information within each hospital.

Therefore, we are engaged in improvement of the hospital management through the assessment of its operational status using the medical care/management indices and utilizing various data available from the Database Center of the National University Hospitals.
In addition to the system enhancement as described above, in view of future growth and so forth, we need to expedite the formulation of a financial planning system that enables improvement of facilities and equipment.

*An Example of Sharing of Information about Medical Care/Management Indices

Regarding medical care/management indices that are the key in hospital operation, the status of improvement can clearly be revealed in a macroscopic manner by illustrating the results of the latest three fiscal years, including this year.

Subsequently, they can be broken down to microscopic materials (by medical care department) and we will take measures such as improvement as needed.
Action Plan 2014

Further Sharing of Information about Hospital Management

- We will assess effects of pioneering approaches to hospital operation, such as establishment of an organization and placement of personnel that assist the hospital director, proposal/sharing of mid-/long-term management policies, and development of human resources that benefit hospital management in the clerical division, and share the information to address these challenges.

In the meantime, towards reinforcement of the governance of the hospital executive division, we will work on establishing a scheme to nurture next-generation leaders (e.g., newly-appointed hospital directors and deputy hospital directors).

Establishment of a New Model of Personnel/Labor Relations

For maintaining and strengthening the national university hospitals’ functions, it is a crucial issue to secure competitive human resources on a stable basis.

Accordingly, we will work on building schemes such as unified employment of hired-by-hospital and taken-over employees and establishing a new personnel/labor system that takes into account career paths in which all medical professionals can fully demonstrate their expertise.

As there have been calls for reduction of the quota of taken-over employees and the delivery of advanced medical care since the conversion to corporations, the national university hospitals have been striving to secure human resources, within restricted financial conditions, as exemplified by each hospital’s independent employment of medical staff such as physicians and nurses, as well as professional medical clerical personnel.

Improvement of Working Conditions of Employees Hired by Hospitals

As measures to address differences in working conditions between employees hired by hospitals and taken-over employees, we are working on programs such as shifting from part-time to full-time, introduction of annual salary scheme, switching from fixed-term to indefinite-term employment, and so forth.

Endeavors Towards New Career Paths

An increasing number of hired-by-hospital clerical workers (medical care, medical affairs, hospital management, etc.) are employed regardless of personnel reshuffling mandated for university personnel management. Particularly, for highly professional occupations such as health care information manager, medical social worker, clinical psychologist, etc., we are working on securing competitive human resources by offering specialist/professional courses, and so forth, as part of
their new career paths to enhance their knowledge.

These endeavors have not reached all occupations of the hired-by-hospital employees yet. Therefore, more ingenious career paths and enhancement of training systems are required for solving the fundamental issue of human resource development.
We will make constant efforts to secure and develop human resources.

**Endeavors of the Medical Affairs Section in Employment Screening**

- Initially employment screening was conducted only through public advertisement.
- From public advertisement to direct scouting
  The recruitment staff proactively attended academic conferences and other such events and, through personal connections (establishing a network) and by introduction, met and screened candidates working at general hospitals and other organizations, who were highly praised and industry-ready.
- Headhunting
  In the direct scouting, candidates who had experience in working in management positions were employed as personnel who were expected to become leaders of employees who were hired by employment screening.

*An Example of Screening of Hired-by-Hospital Employees*

**Action Plan 2014**

**Establishment of a New Model for Personnel/Labor Relations**

- Each university faces many unique and diverse issues before a new model of personnel/labor relations is established. In the fiscal year 2014, we will continue to collect information about pioneering approaches taken at each national university hospital. By evaluating effects of these approaches, we will make proposals about career paths that match respective occupations, improvement of working conditions, and so forth.
Dentistry

While retaining identity as dentistry, we are strengthening medicine-dentistry cooperation in interdisciplinary team care and in education, dental care, contribution to local communities, research, and globalization.

**While maintaining the identity of the dentistry profession, we will strengthen medicine–dentistry cooperation in team care as well as in education, dental care, contribution to communities, research, and globalization**

**Endeavors in Dentistry**

The organization of national university hospitals affiliated with faculties of dentistry comprises university hospitals that have a faculty of dentistry and departments of oral and maxillofacial surgery at university hospitals affiliated with faculties of medicine that do not have a faculty of dentistry. Some of the university hospitals that have faculties of dentistry have merged with hospitals affiliated with faculties of medicine.

There are differences between dentistry and medicine in health insurance, education, and training systems. Furthermore, departments of oral and maxillofacial surgery of hospitals that do not have faculties of dentistry and are affiliated with faculties of medicine undertake post-graduation training of dentists and certain practices in treatment, research, etc. that are different from those of the faculty of medicine.

In this chapter, we divided its content into education, dental care, contribution to local communities/society, research, and globalization in the departments of dentistry at hospitals affiliated with faculties of dentistry, and the same in departments of oral and maxillofacial surgery at hospitals affiliated with faculties of medicine. For each league, we provide a report of our activities in the fiscal year 2013 and describe the action plan for the fiscal year 2014 in which we implement while retaining our identity as dentistry, i.e., interdisciplinary team care and strengthening the medicine-dentistry cooperation in the areas mentioned above.
**University hospitals that have faculties of dentistry: 11 hospitals**

(1) Hospitals affiliated with faculties of dentistry: 2 hospitals
   - Tokyo Medical and Dental University
   - Osaka University

(2) Merged with hospitals affiliated with faculties of medicine: 9 hospitals
   - Hokkaido University
   - Tohoku University
   - Niigata University
   - Okayama University
   - Hiroshima University
   - The University of Tokushima
   - Kyushu University
   - Nagasaki University
   - Kagoshima University

**Hospitals that do not have faculties of dentistry and are affiliated with faculties of medical departments of oral and maxillofacial surgery: 31 hospitals**
Education

We provide more practical pre-graduation clinical training to undergraduates of faculties of dentistry/faculties of medicine.

Endeavors for Medicine-Dentistry Integrated Education, Development of General Dentists, etc.

As the aging of our population progresses and the number of medically compromised people increases, the significance of practical education aiming for comprehensive understanding of the oral cavity and the whole body and their harmonization is growing even further. University hospitals are unique in their ability to provide such education to both physicians and dentists, and this importance should draw more attention.

Based on this conception, each university has launched activities by referring to “Proposal 1: Implementation of more practical pre-graduation clinical training for undergraduates of faculties of dentistry/faculties of medicine.”

The first example of this is the activities of the Tokyo Medical and Dental University Hospital Faculty of Dentistry, where medicine-dentistry integrated education is carried out with students of the faculties of medicine and dentistry studying together in the same classrooms and training rooms. In the gerontology section in the third-year, students of the faculties of medicine, dentistry, and oral health care sciences are engaged in interdisciplinary training utilizing their own expertise.

In the meantime, in order to address appropriate primary dental care and dental care of the aged, dentists are required to have not only generalized superficial dental skills but multidisciplinary special skills. To achieve this, a system to provide interdisciplinary training as well as training subdivided by specialty needs to be established within university hospitals.

Consistent with this idea, we are working on “Proposal 2: Establishment of a system to nurture general dentists with high skills.”

Osaka University Dental Hospital and Niigata University Medical and Dental Hospital are striving to nurture general dentists through ingenious training programs. With comprehensive treatment of the oral cavity in mind, these programs focus on building a base to continually acquire more advanced knowledge and skills as dentists.

Problem-Solving Oriented Training Program for Advanced Medical Personnel

The budget bill of the Ministry of Education, Culture, Sports, Science and Technology for the fiscal year 2014 included grants-in-aid for programs to nurture dental care personnel who contribute to a healthy society with longevity.
<table>
<thead>
<tr>
<th>1st year</th>
<th>2nd year</th>
<th>3rd year</th>
<th>4th year</th>
<th>5th year</th>
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<tr>
<td>Introductory education</td>
<td>Cervical/facial basics</td>
<td>Clinical medicine</td>
<td>Cervical/facial region clinical</td>
<td>Gerontology</td>
<td>Project semester</td>
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<td>Medicine/dentistry basic education</td>
<td>Clinical medicine/dentistry</td>
<td>Clinical dentistry</td>
<td>Research workshop</td>
<td>Clinical training</td>
<td>Study</td>
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<tr>
<td>General education</td>
<td>Comprehensive healthcare</td>
<td>Clinical dentistry</td>
<td>Comprehensive healthcare</td>
<td>State examination</td>
<td>Graduation examination</td>
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**Faculty of Medicine**

- 1st year: Introductory education
- 2nd year: Cervical/face basics
- 3rd year: Clinical medicine
- 4th year: Cervical/face region clinical
- 5th year: Gerontology
- 6th year: Project semester

**Faculty of Dentistry**

- 1st year: Introductory education
- 2nd year: Clinical medicine/dentistry
- 3rd year: Clinical dentistry
- 4th year: Research workshop
- 5th year: Clinical training
- 6th year: Comprehensive healthcare

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**Examination room for clinical training**

- **Dental caries**
  - Instructor A
  - Coaching the day's procedures
  - Students in charge introduce themselves.

- **Periodontal events**
  - Instructor A

- **Dentures**
  - Instructor A

- **Dental crown/bridges**
  - Instructor A

- **Oral/maxillofacial surgery**
  - Instructor A

**On-site coaching in clinical training** is performed by teachers assigned to specific examination rooms as instructors.
Action Plan 2014
Participation in Education for Enhancement of Interprofessional Cooperation in Community Medicine, Development of Dental Care Professionals Who Can Meet Social Needs for Advanced Medical Care

- There has been an increasingly urgent need for speedy and effective countermeasures to super aging of the population.

In the fiscal year 2014, while further promoting our endeavors for the proposals 1 and 2, we will work on Proposal 3, “Participation in education for enhancement of interprofessional collaboration in community medicine,” and Proposal 4, “Development of dental care professionals who can meet social needs for advanced dental care.”

At Nagasaki University, a system for perioperative oral management in cancer patients has already been established with a local dental association, providing proactive support for training sessions.

In addition, at Hiroshima University, they have incorporated collaborative workshops in their clinical training in which the schools of oral health sciences and dentistry participate together. Their dental technicians produce models to support various surgical operations by using 3D printers, which imply that we will see steady progress in this direction of activities.
Dental Care

We will institute a new clinical system and dental treatments in Japan.

Establishment of Comprehensive Dental Care System for Cleft Lip/Oral-Maxillofacial Anomalies and Promotion of Technology Transfer

Cleft lip/palate is most common congenital anomalies that occur in the oral and maxillofacial region. In Japan, one in approximately every 500–600 infants is born with this anomaly. Patients with cleft lip/palate, always require the continual treatment commencing immediately after birth through adulthood. This continual treatment starts from pre-birth counseling for parents, and includes suckling guidance immediately after birth, repair operation of lip or plate by an oral surgeon or a plastic surgeon, and speech training by speech therapists with specialty. Addition to such a hearing disorder and articulation problems, as these patients often have developmental disturbances in jaw bones and teeth problems, like congenitally missing teeth, dental caries, and anomalies in teeth alignment and dental occlusion problems. Therefore the continual dental treatments by pediatric dentists, orthodontists, prosthodontist and oral surgeons with specialty, as well as otolaryngologist is also required (Figure 1).

Since the majority of the patients with cleft lip/palate do not often have anomalies in other organ except the jaw/oral cavity, the national university hospitals have organized a specialized team approach system, which is primarily provided by the departments of dentistry and plastic surgery, to perform appropriate treatment at appropriate times, cooperating with many medical departments.

Figure 1. The treatment system of cleft lip/palate by a team approach in national university hospitals as a hub hospital: e.g. Hokkaido University
Supportive Oral Care in Perioperative Management and Promotion of Medicine-Dentistry Collaborative Approach

National university hospitals have their own perioperative oral management centers or sections with similar mission. They are established around 2010 for working to offer comfortable, safe, and secure perioperative oral environments for patients who undergo surgery at the university hospitals. Their workforces are comprised of dentistry professionals and they work with close cooperation with the specialized team for perioperative medical treatments, including anesthesiologists, physicians, nurses, pharmacists, radiological technologists, physical therapists, managerial dieticians, and clinical engineers (Figure 2).

Figure 2: Professionals of the Perioperative Management Center–in Okayama University Hospital

The missions of this division are summarized as follows:

1) Infection control in the oral cavity before surgery
2) Prevention of uncomfortable oral symptoms during perioperative period, such as tooth-related acute pain due to dental pulpitis
3) Restoration of mastication functions and securement of oral nutrition
4) Preventive treatment of accidental tooth fracture or missing at endotracheal intubation
5) Professional oral hygienic treatment prior to endotracheal intubation
6) Management of oral hygiene during postoperative immobile period
7) Treatment and preventive care for osteonecrosis of jaws: For patients who undergo cervicofacial radiation therapy or treatment with bisphosphonates (BPs)
8) Assessment and training of swallowing/eating-disfunctions
Our collaborating medical fields are increasing gradually and the effects of our collaborations on improvement of postoperative course are now remarkable in surgery fields, such as respiratory system surgery, esophageal carcinoma surgery, laryngectomy/cervical esophagus reconstructive surgery, uterine cancer/ovarian cancer surgery, and breast cancer/thyroid cancer surgery (Figure 3).

![Figure 3. Effects of oral care on postoperative complications during perioperative period of esophageal carcinoma surgery](image)

Figure 3. Effects of oral care on postoperative complications during perioperative period of esophageal carcinoma surgery
(The 17th Congress of Japanese Society of Gerodontology 2006, Materials by Hokkaido University)

In addition to management of oral diseases and oral hygiene of patients in the ICU, and of oral mucositis associated with chemotherapy with anti-cancer drugs or radiation therapy, these supportive oral care centers are contributing to alleviate uncomfortable events that occur in the oral cavity during general treatment or after surgery.

We will continue to increase medical treatment fields to collaborate with and plan to perform the necessary dental treatment-supports in the perioperative period for all patients, including patients undergoing surgeries under general anesthesia at the national university hospitals.

**Action Plan 2014**

**Implementation of Dental Care under Close Cooperation between Medicine and Dentistry**

- Accomplishments attained by new approaches as below are increasing.

- Enhancement of medicine-dentistry collaborative healthcare in treatment of periodontal disease:
Collaborative treatment with departments of cardiovascular medicine, internal medicine of endocrinology and metabolism, maternal fetal/women’s medicine, etc. Clinical application of treatment based on periodontal tissue regeneration using subcutaneous adipose-derived stem cells.

- **Eating/swallowing rehabilitation:**
  Functional assessment and treatment of eating impairment and dysphagia due to cerebrovascular disorder or mouth cancer on an outpatient, inpatient, and home care basis.

- **Sleep apnea syndrome and dentistry:**
  Treatment based on medicine-dentistry cooperation to improve snoring and apnea using an intraoral device.

- **Sports dentistry:**
  Prevention of sports-related oral maxillofacial injury using custom-made mouthpieces or face guards, and undertaking activities to popularize and raise awareness of sports dentistry.
Research

We will expedite installation of an intra-university network to consolidate our research implementation system.

Organization of Clinical Research Implementation System

It is a well-known fact that in spite of many significant accomplishments being made in basic medical science research in Japan, the delay in organizing the clinical research system has allowed clinical studies in the West to preempt ours and has resulted in a drug lag. Moreover, in dentistry, there has been import excess of many dental care instruments and materials including implants. To play a world-leading role in dental care, the national university hospitals need to create novel technologies or devices and clarify pathological conditions.

Thus, the department of dentistry at each national university hospital has taken advantage by strengthening medicine-dentistry cooperation and collaboration within each national university hospital in organizing the clinical research system.

For example, at Tohoku University, the Clinical Research, Innovation, and Education Center was founded in July 2013 to provide support for various potential research themes, ranging from translational research to physician-led clinical study/trial. So far 121 studies have been registered as potential themes, of which 10 are in the realm of dentistry and three have been designated as priority potential themes.
**Attempt for Clinical Research Enhancement by Departments of Dentistry at National University Hospitals Utilizing Various Collaboration**

**Clinical Research Enhancement Utilizing Medicine-Dentistry Cooperation**

At many national university hospitals, departments of medicine and dentistry have been merged, so that advanced research in the realm of dentistry is expedited by cooperation at facilities for common use such as cell processing centers (CPCs) and that among treatment departments. At the dental department at Hiroshima University Hospital, such a collaborative support system is ongoing for cytotherapy called natural/lymphokine-activated killer (N/LAK) therapy—a highly advanced medical care for cancer—and osteoporosis diagnoses through the jaw bone. The university has also been working on a cohort study concerning associations between periodontal diseases and underlying diseases.

**Scenes of isolation/cultivation of patient's peripheral cells and administration at the CPC (Hiroshima University)**

**Action Plan 2014**

**Enhancement of Clinical Research Optimizing Inter-University Cooperation and Collaboration with Local Communities**

- A regenerative approach to treatment of alveolar bones and jaw bones using stem cells and so forth has been enhanced under various forms of collaboration, i.e., medicine-dentistry cooperation and inter-university cooperation. In the future, the undertaking aims to establish a network of regenerative medicine among faculties of dentistry of national universities and national university hospitals nationwide. Furthermore, initiatives are ongoing for the development of regenerative medicine in cooperation with universities in Southeast Asia (China, Vietnam, etc.) and the West.

Additionally, the development of devices for regeneration of alveolar bones and periodontal tissues has been promoted by grants-in-aid and other funding programs by the Ministry of Economy, Trade and Industry and municipalities, while studies collaborating with university
ventures are also ongoing.

Faculties of dentistry of national universities and university hospitals have many other potential research themes and we will strive to encourage research by establishing networks.

**Future vision of an inter-university network for cytotherapy /clinical research**

**Niigata University Medical & Dental Hospital:**
Hub hospital for periosteal cell sheet culture

**Multicenter cytotherapy research network conceived by Niigata University Medical & Dental Hospital**

**Candidate cells for clinical/preclinical studies:** bone marrow cells, periosteal cells, periodontal membrane cells, lipocytes
Contribution to Local Communities/ Society

In addition to further strengthening of healthcare cooperation in community dental care, we will raise the awareness of importance of dental health activity in times of large-scale disaster, and proactively participate in the disaster medicine system in each community.

Further Enhancement of Healthcare Collaboration in Community Dental Care

Enhancement of Community Dental Care for Serious Oral Diseases Including Cleft Lip/Palate

For serious oral diseases such as cleft lip/palate, we have been expediting cooperation in team care with community medical institutions, including establishment of treatment centers specifically for these diseases, while maintaining close communication with the associated medical institutions.

Oral peripheral region and the inside of the oral cavity of a patient with cleft lip/palate

Changes in the number of patients referred to the department of dentistry (at Niigata University Medical and Dental Hospital)
Organization of Environments Aiming for Early Mouth Cancer Detection

We have been working on the institution of a system for early detection and treatment of mouth cancer. As part of a local community contribution program, mouth cancer screening has been implemented and will be continued in the future. We hold training at dental association member universities to nurture dentists who will cooperate with the screening, thereby contributing to improvement of those dentists’ mouth cancer diagnostic abilities.

Establishment of a Collaboration System in Community Dental Care Based on Fundamental In-hospital Cooperation between Medicine and Dentistry

In order to meet the needs of dental care in our super-aged society, by optimizing the advantage of university hospitals that have faculties of dentistry, we have not only established a collaboration base for in-hospital departments of medicine and dentistry, but also consolidated the base for cooperation with local communities by such approaches as covering local healthcare institutions in a database. We are working thereby on establishment of a seamless community healthcare collaboration system among departments of medicine and dentistry and community medical institutions. That is, while ensuring close cooperation between in-hospital physicians and dentist, we are cooperating with primary care physicians and dentists in the community in an organic manner, accepting high-risk patients with serious systemic diseases and patients who require highly specialized treatment, and working to reinforce the healthcare system so that we can provide safe, secure, and high-quality treatment. While undertaking formulation of a system for perioperative oral function management in cooperation with hub hospitals for cancer and dental associations, we also hold training sessions for dental association members.

A lecture on Problem Based Learning (PBL)
Advanced course training for dental association members
(At Nagasaki University Hospital)

Oral care field training at ICU
Awareness Raising of Importance of Dental Health Activity in Times of Large-scale Disaster, and Proactive Participation in the Community Disaster Medicine System

Proactive Participation in the Disaster Medicine System in Each Community

In the wake of the Great East Japan Earthquake, we deployed dentists to the disaster area to support dental rescue activities implemented by administrative bodies, dental associations and other organizations.

Additionally, the faculties of dentistry at respective national universities collaborated to send relief supplies, including oral sanitary goods and dental instruments, at the request of the faculty of dentistry at Tohoku University located in the devastated region.

Subsequently, we participated in a joint project involving industry, government, academia, and citizens, which aims to provide continual support to the disaster area and revitalize community medicine. The project forms teams of dentists and dental hygienists every year and visits temporary housing complexes in Iwate, Miyagi, and Fukushima prefectures to perform oral healthcare consultation and dental health lectures and so forth.

Lecture at an assembly room of a temporary housing complex
(By Niigata University Medical & Dental Hospital)

Awareness Raising of Importance of Dental Health Activity in Times of Large-scale Disaster

We have undertaken awareness-raising activities through symposiums and other methods regarding the importance of long-term dental/oral healthcare programs for disaster victims, focusing on oral care for the elderly. Also in the future, while continuing our support for victims of the Great East Japan Earthquake, we will address administrative bodies, people involved in medical welfare, and the general public to raise their awareness of the importance of dental healthcare activities in times of disaster. Additionally, a system to implement these activities is being instituted by formation of a “dental care support team” which is comprised of each municipality, dental associations in respective prefectures, universities, Japan Dental Hygienists’ Association, Japan Dental Technologists Association, and Japan Dental Dealer’s Federation.
Action Plan 2014

Further Strengthening of Cooperation in Community Medicine and Disaster Medicine System

- Establishment of a disaster countermeasure examination council by community dental care collaboration
  We aim to establish a system to ensure that the functions of hospitals affiliated with faculties of dentistry and other related institutions can be provided to all Japanese people and to further enhance the network of dental healthcare/medical care support systems in times of disaster. We are going to divide the country into several blocs to establish a disaster countermeasure examination council by community dental care collaboration consisting of universities representing respective blocs. By exchanging information with the Contribution to Local Communities/Contribution to Society Project Team, we will launch our activities.
Globalization

Reference hospitals will be established abroad and a network will be built to enhance our dental care collaboration system.
We will exchange dental care technologies and enhance education systems in overseas countries.

Organization of Dental Care Collaboration System by Building a Remote Network with Overseas Countries

Consistent with the consolidation of medicine-dentistry cooperation, we attended the 37th meeting of Asia-Pacific Advanced Network (APAN) for the first time. It was organized in line with one of the action plans for the globalization of medicine, i.e., “nationwide expansion of the telemedical education network.” The meeting was held on January 20-24, 2014 in Bandung, Indonesia and included a session of dentistry about, “Comprehensive Medical Care for Cleft Lip & Palate Patients (Team approach for managing and correcting cleft abnormalities).” In addition to Kyushu University, Tokyo Medical and Dental University, Kagoshima University and Kyushu Dental University, Kanagawa Children’s Medical Center participated in the meeting from Japan and, from overseas, the head office of the society in Bandung, Harapan Kita Hospital, and Airlangga University attended from Indonesia. A remote network was built by connecting all facilities with high-speed line to hold teleconferences.

Homepage of the 37th Meeting of APAN (Bandung, Indonesia)

The APAN meetings are organized for continual mutual interaction between medical staff and engineers in charge of computer systems and other technical fields. APAN is expected to enhance globalization through international interaction using the remote network. The network should support more than teleconferences and be available for clinical applications including consultation and surgery support connecting remote sites and even robotic surgery.
Participation in a teleconference at Telemedicine Development Center of Asia of Kyushu University Hospital

Mutual Exchange of Dental Care Technologies and Establishment of Education Systems Abroad

We implemented the mutual exchange of dental care technologies, support, and guidance in overseas countries through treatment of cleft lip/palate and general dental treatment. In case of treatment of cleft lip/palate, Osaka University, Kyushu University, Kagoshima University, and other organizations jointly or independently provided surgery and general anesthesia support and technical coaching in Vietnam, Indonesia, Myanmar, and Ethiopia. In case of general dental treatment, Hiroshima University provided guidance on oral hygiene in Cambodia in cooperation with local universities and other organizations.

Each university has exchange agreements with faculties of dentistry of many universities abroad. Niigata University, in particular, is implementing exchanges of teachers and undergraduates. Through the Japan Society for the Promotion of Science’s Program for Inviting Young Researchers Abroad and the Japan Student Services Organization’s Short Stay Short Visit (SSSV) Program, Niigata University invites graduate students and provides them with clinical education on general dental care and research guidance. In addition, the university offers study abroad students clinical education primarily by observation and is further working on switching the program to a participatory clinical education system. In addition, Kyushu University is carrying out an undergraduate exchange program with the faculty of dentistry of Pusan National University.

Furthermore, at Osaka University, they are planning to establish a Meister (advanced specialist) course to nurture specialists to address “incurable oral diseases” including mouth cancer, cleft lip/palate, and Sjogren's syndrome. A global station is expected to be created in partnership with more than ten universities abroad. Hiroshima University has proposed establishment of the third hub of education and research in Asia and has been holding international conferences on a continual basis.
Action Plan 2014
Further Global Expansion of Networking and Personnel Interaction

- While continuing to implement what we introduced in the Action Plan 2013, in accordance with Proposal 1 and Proposal 2, we will aim at utilization and development unique to dentistry with regard to APAN, and further enhancement and development with regard to international support and interaction.
Dentistry (Department of Oral and Maxillofacial Surgery at Hospitals Affiliated with Faculty of Medicine)

We will tackle the strengthening of medicine-dentistry collaboration utilizing the characteristics of the faculties of medicine.

Education

Practical Education for Undergraduates of the Faculty of Medicine
- Education focusing on basic oral functions such as mastication, swallowing, and articulation, and the relationship between oral diseases and systemic diseases (University of Miyazaki).
- Aiming at more practical education by introducing a participate-in-treatment approach in clinical field training utilizing education curricula of the faculty of medicine (Chiba University).

Enhancement of Post-graduation Education
- Learning dissection using cadavers at the Clinical Anatomy Lab (CAL), thereby enhancing the development of new surgical procedures and biomechanical study (Chiba University).
- As a part of the post-graduate training, “Clinical Oncology Training Program for Dentists” was initiated, thereby providing systematic training of a broad range of clinical oncology covering not only the cervicofacial region but also other regions (Chiba University).

Dental Care

Strengthening of Team Care and Medicine-Dentistry Cooperation in Local Communities
- Consolidation of medicine-dentistry collaboration based on human interaction with hospitals and clinics which are cooperating with university hospitals affiliated with faculties of medicine (each university).
- Establishment/enhancement of cooperation between local hospitals and clinics primarily by establishment of image diagnosis network.
- Hosting of lectures and study sessions regarding dental care for local medical institutions (University of Miyazaki).
- Delivery of safe dental care for medically compromised/elderly patients at the dental outpatient department of the hospital affiliated with the faculty of medicine (University of Fukui).
- Enhancement of awareness of oral care and perioperative oral management through the establishment of respiratory care teams in hospitals affiliated with faculties of medicine and perioperative support centers (all universities).
Research

Consolidation of Research System by Establishing Inter-University Network
- Research and development of novel medicine in cooperation with the translational research center, i.e., Advanced Medicine Department (Gunma University)

Contribution to Local Communities/Contribution to Society

Further Organization of Healthcare Collaboration in Community Dental Care
- Regular deployment of dental instructors to associated hospitals and clinics in each healthcare zone (each university)
- Lectures and training of mouth cancer screening for regional dental associations (Chiba University, Gunma University and many universities)

Globalization

International Mutual Exchange of Dental Care Technologies and Establishment of Education Systems
- Acceptance of long- and short-term study abroad students (University of Miyazaki)
- Proactive exchange of information regarding dentistry through international interaction (University of Miyazaki)
Action Plan 2014
Foundation of an Oral Center Division by Interprofessional Cooperation

In order to further continue the action plan for the realization of the future vision and to achieve the above objective, we need to establish an environment that is fully equipped and enables cooperation with many professionals including physicians of other departments. Accordingly, it is hoped that oral care centers, oral and maxillofacial function restoration centers, and oral and maxillofacial aesthetic plastic surgery centers will be established.

(Example: A concept by Gunma University)

An Idea on Establishment of an Oral Center Division by Interprofessional Cooperation