Can the Needs for Medical Services, Caring, Living Support for Elderly and Child-raising be Utilized for Business?

April 5, 2010, METI

Solving social issues and creating growing industries by establishing supply system to meet various consumer needs and by utilizing strong technical capabilities

○ Needs for medical services, caring and living support for the elderly are increasing in terms of both quantity and quality, due to progress in aging and the diversification of lifestyles.

○ On the other hand, the needs are not fulfilled because of such reasons as fiscal restrictions and the supply structure's reliance on public benefits.

→ Various needs can be met efficiently by promoting the industrialization of areas related to medical services, caring and living support for the elderly, without relying on public burden.

○ Needs for medical services are increasing beyond national borders.

→ Medical services should be provided internationally.

○ Strong technical capabilities in terms of pharmaceuticals, medical instruments and care robots can be utilized.

→ Global market for pharmaceuticals, medical instruments and care robots should be secured.

○ Needs for childcare are increasing in terms of both quantity and quality, based on women's advance into society and diversification of their style of working.

→ Childcare services meeting the diversifying needs should be ensured.

1. Creation of the Industry of Services Related to Medical Services, Caring and Living Support for Elderly that Results in Better Quality of Life

Consumer Needs that are Increasing in Terms of Both Quantity and Quality and the Existence of a Potential Market with Spending Power

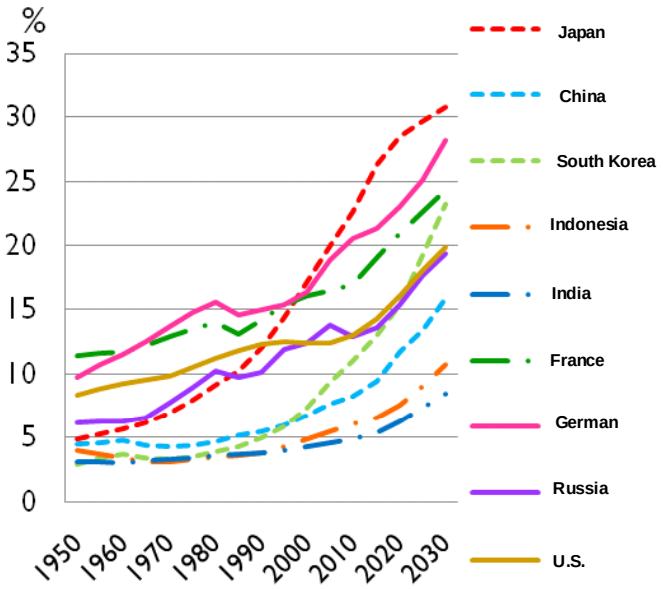
✓ Needs for services are rapidly increasing/diversifying in the areas of medical services, caring and living support

● Japan's population aging rate is the highest in the world.
● Aging is also rapidly progressing in other countries.

● The public has strong expectations toward medical reform and countermeasures for aging society.

● Major illnesses are shifting from infectious diseases such as tuberculosis to "lifestyle-related diseases" such as strokes or cardiac disease.

Population aging rate of different countries (Changes in the percentage of those aged 65 and above in the total population)



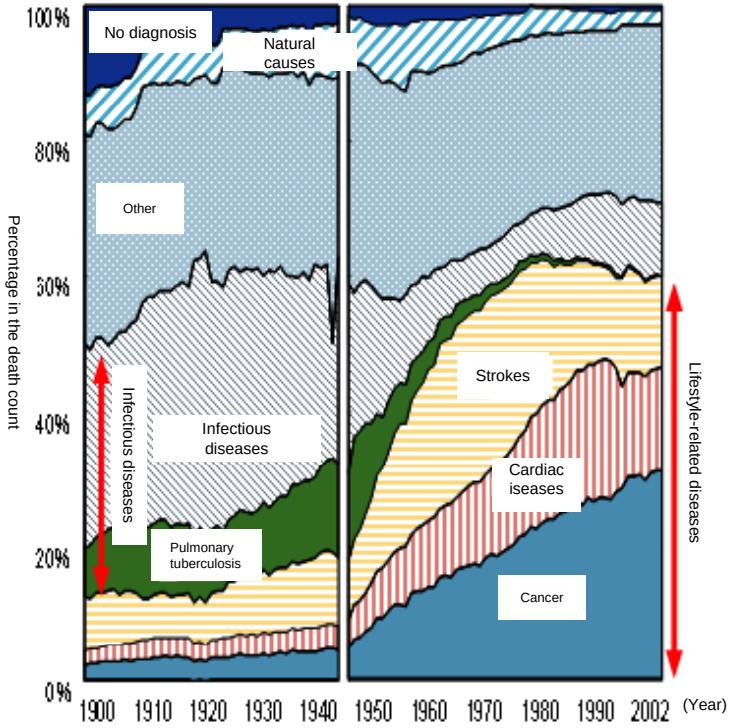
(Source) Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, World Population Prospects: The 2008 Revision

Matters that one believes the government should focus on from now on (multiple answers) (Top five for 2009)

Matter	2009	2006	2003
Structural reform of social security (medical services, pension, etc.)	No. 1	No. 1	No. 2
Economic measures	No. 2	No. 3	No. 1
Aging society measures	No. 3	No. 2	No. 3
Employment/ labor measures	No. 4	No. 4	No. 4
Price measures	No. 5	No. 8	No. 5

(Source) Cabinet Office "Opinion Poll on People's Lifestyles" (2009, 2006, 2003)

Annual changes in the percentage of major illness in the death count



(Source) Vital Statistics

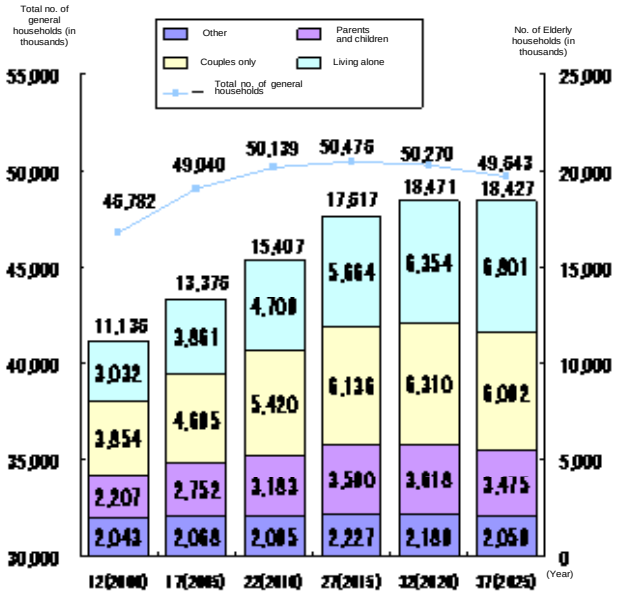
✓There are compelling needs for services to support daily lives due to such reasons as changes in household composition

● The number of elderly people living alone or with their spouse only is further increasing.

● Elderly people living in remote areas are feeling difficulties in shopping and other services vital to daily life.

● It is expected that where people die will become a social issue.

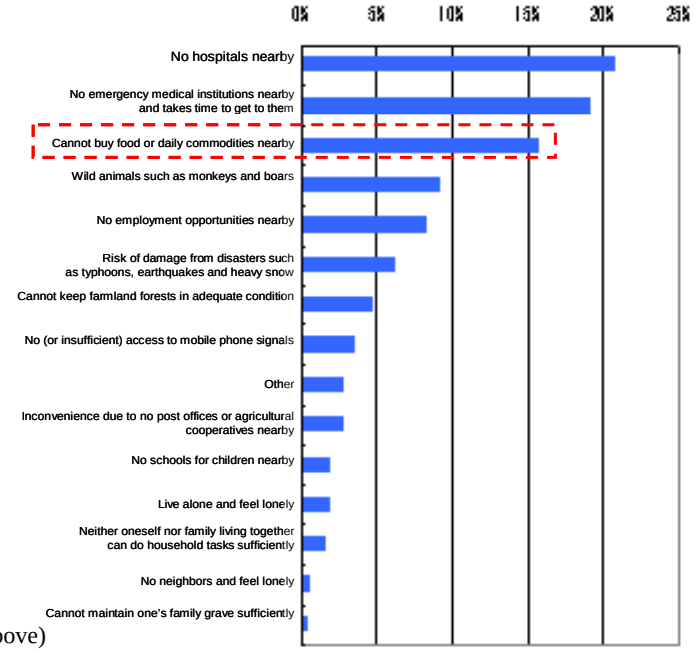
Changes in the formats of elderly households



(*Elderly households: Households with the head aged 65 or above)

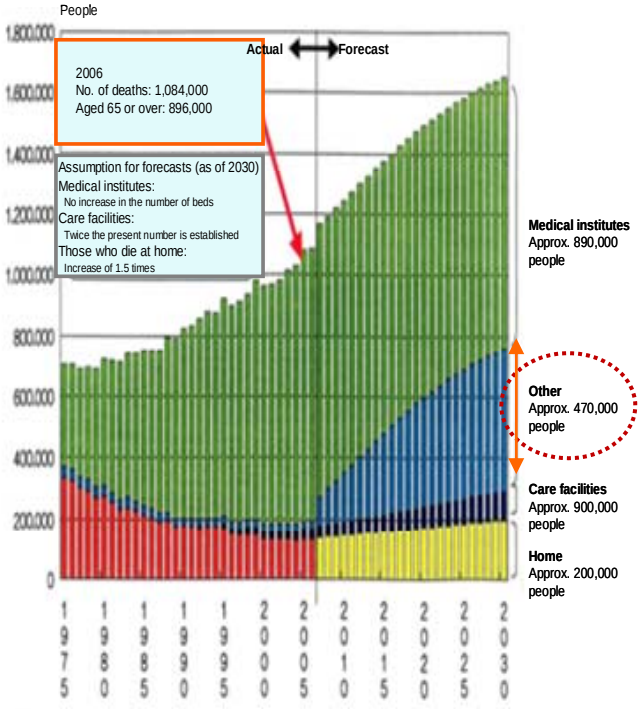
(Source) Report on the "Research and Studies Regarding the Vision of the Promotion of Elderly Service under the Long-term Care Insurance System" (2006)

What people feel is most inconvenient in daily life in peripheral areas and hilly and mountainous regions



(Source) MLIT "Questionnaire on Daily Life Targeted to Settlements with Falling Population and Progressing Aging " (2008)

Where people die in the future



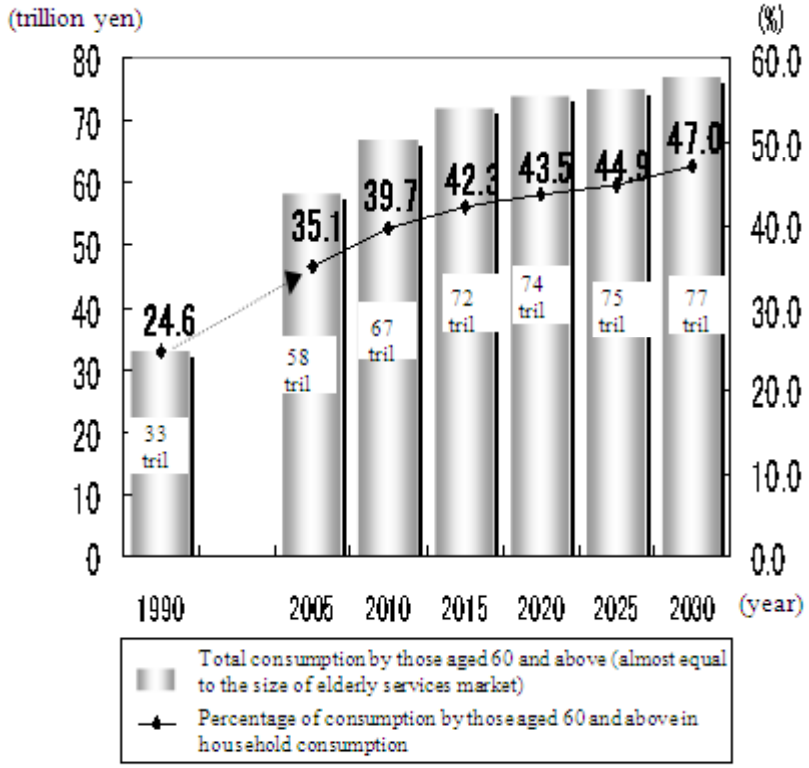
(Source) Actual figures up to 2006 are from "Vital Statistics" by MHLW, and forecast from 2007 are from "Demographics Statistics Materials (2006)" by the National Institute of Population and Social Security Research (JPSS)

✓ Elderly may become the major player in consumption

● It is expected that the percentage of consumption by elderly in household consumption will grow steadily.

● The amount of savings of those aged 65 or above is larger than the average of total households by more than 5 million yen.

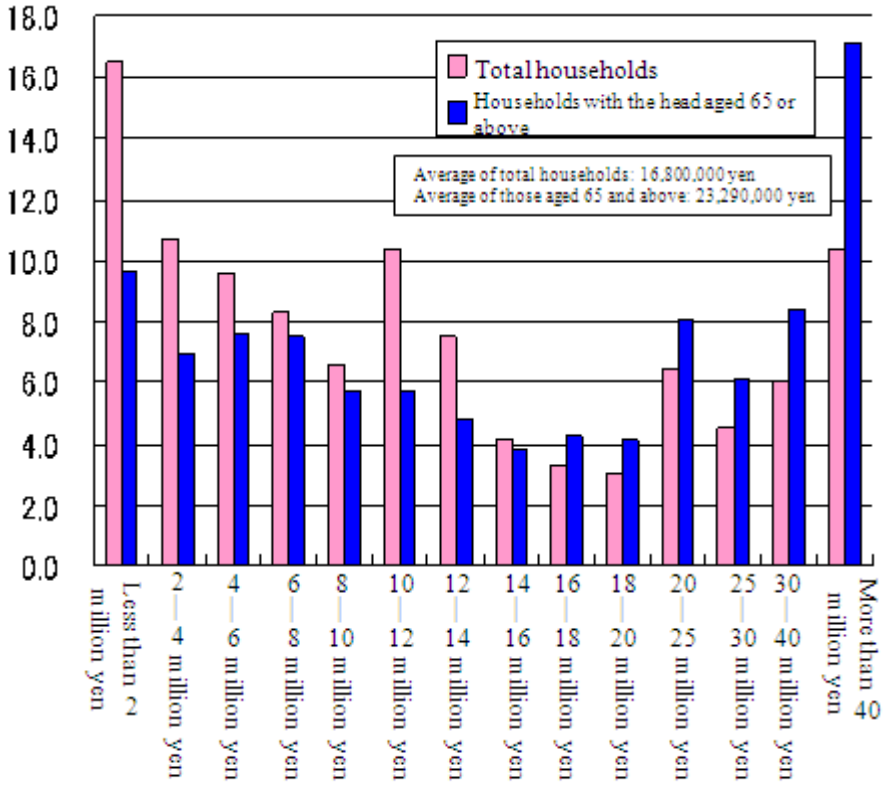
Changes in the percentage and amount of consumption by those aged 60 or above in household consumption



(Source) Elderly Service Providers Association "Vision of the Promotion of Elderly Service" (2008)

Distribution of household savings

* Those who live alone are excluded



(Source) Prepared by The Japan Research Institute based on MIC "Household Expenditure Survey" (2008)

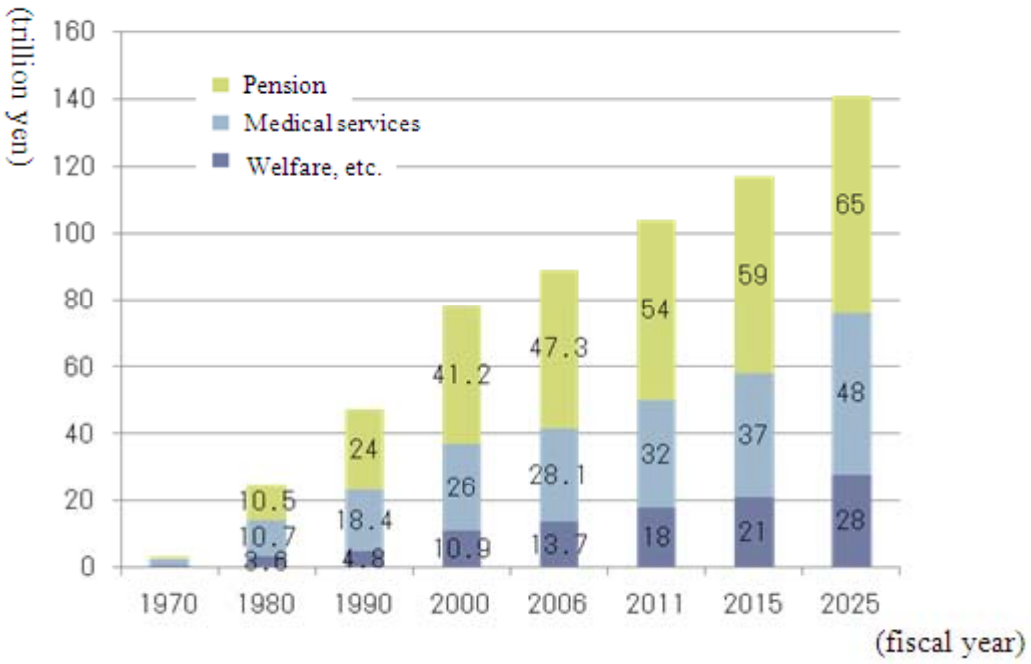
Issues Regarding the Current Supply System in the Areas Related to Medical Services, Care and Living Support

✓ Increase in public burden

● The costs of the social security benefit that supports the medical services and healthcare of the people are increasing.

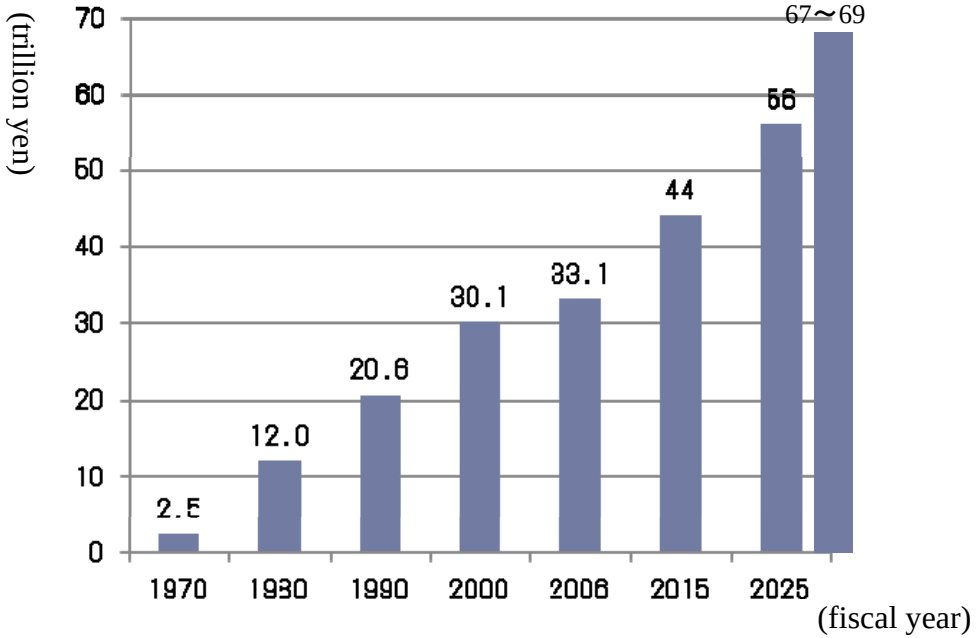
● National medical care expenditure is also increasing.

Changes and forecasts of social security benefit costs



(Source) Figures up to 2006 are from "Social Security Benefit Cost 2006" by JPSS, and figures after 2011 are from "Forecast of Social Security Benefit and Burden" (MHLW, estimation as of May 2006)"

Changes and forecasts of national medical expenditure

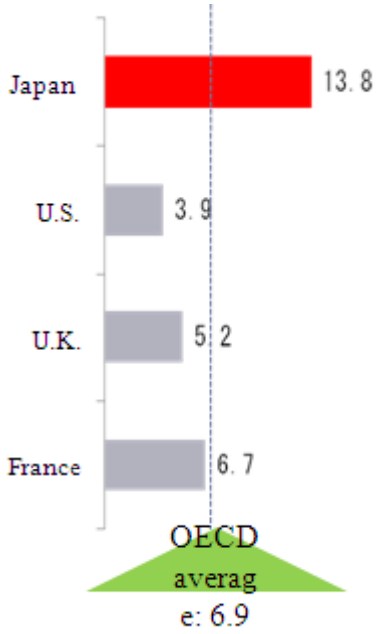


(Source) Figures up to 2006 are from "Outline of National Medical Expenditure, FY2006" by MHLW, figures after 2015 are from "Forecast of Future National Medical Expenditure, Medical Benefits and Medical Cost for the Aged (based on medical service reform, January 2006)," and the second figure for 2025 is from "Medical and Care Simulation Implemented for Contribution in the Discussion at National Assembly on Social Security (*Economic Premise II-1, B2 Scenario)"

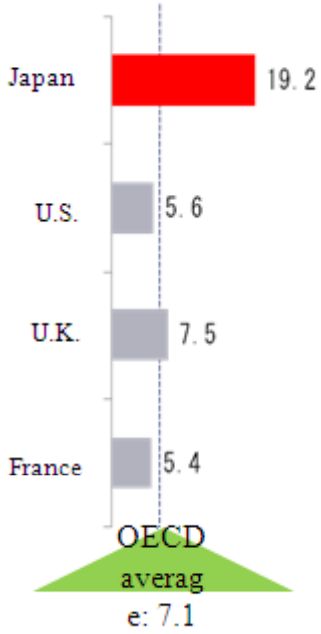
✓ Most of the needs are related to medical institutes

● Medical institutes bear large burdens, such as frequent visits by patients.

No. of visits per patient*1 (visits/year, 2003)



Length of hospitalization in acute beds*2 (days, days in hospital for each hospitalization, 2006)



(Source) McKinsey & Company "Perspective for Health Care Reform, Edition 1"
*1: Including hospitals and clinics
*2: According to OECD Health Data, "general beds" and "infectious diseases beds" in Japan are equivalent to "acute beds."

● There are relatively few healthcare personnel compared to the number of hospitals.

Comparison of medical supply system in different countries (1)

	Per 1,000 people		Per 100 beds	
	No. of doctors	No. of nursing personnel	No. of doctors	No. of nursing personnel
Japan	**2.1**	**9.3**	**14.9**	**66.8**
U.S.	2.4	10.5	76.3	331.2
U.K.	2.5	11.9	69.0	335.9
France	3.4	7.6	46.7	105.8
Germany	3.5	9.8	41.6	117.8

Comparison of medical supply system in different countries (2)

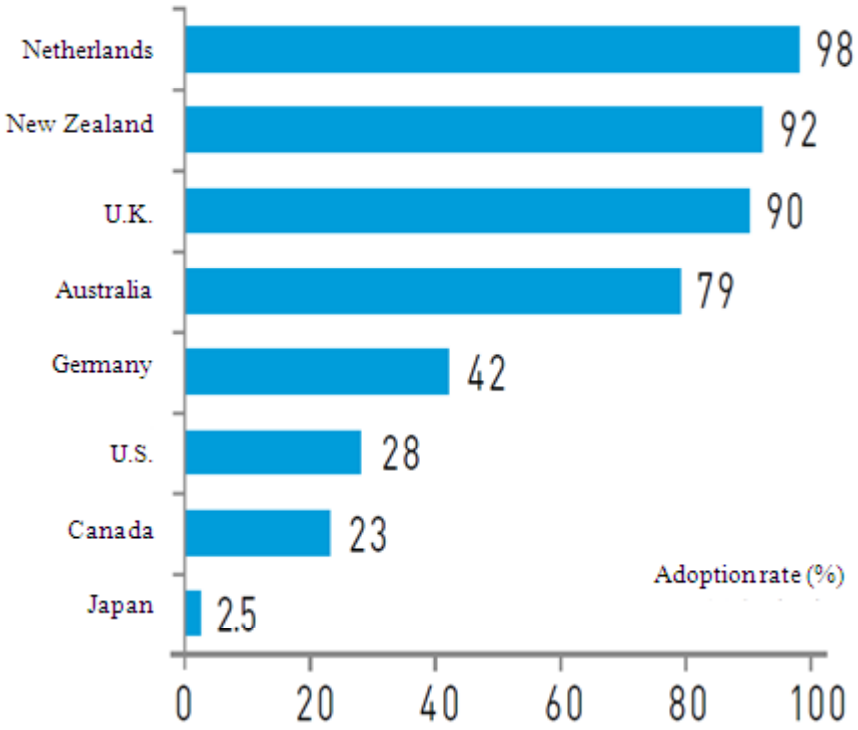
	No. of hospitals per 100,000 people	No. of personnel per hospital (converted to full-time workers)	No. of personnel per bed (converted to full-time workers)
Japan	**7.0**	**183.0**	**1.0**
U.S.	2.0	799.6	4.9
France	4.8	N.A.	N.A.
Germany	2.6	419.1	1.3

(Source) Top table: OECD Health Data 2008; bottom table: OECD Health Data 2007, Institute for Health Economics and Policy "Data on Medical Service in the U.S. [2006]," Institute for Health Economics and Policy "Data on Medical Service in France [2007]," Institute for Health Economics and Policy "Data on Medical Service in Germany [2007] ," Statistics and Information Dept., MHLW Minister's Secretariat "2006 Medical Facilities Survey" and "2006 Hospitals Report"

✓ There is much room for improving actual supply efficiency

● Introduction of IT in medical area remains as an issue to be addressed.

Comparison of the induction rate of ordering/electronic clinical records



Source: 2006 Commonwealth Fund, International Health Policy Survey of Primary Care Physicians.
Note: Japan is significantly lagging behind in terms of the introduction of IT at clinics that correspond to primary care. Although the adoption rate reached 70% among newly opened clinics in 2007, the rate still remains at around 10% in total.

● The improvement of work efficiency and of the current system should be coordinated.

Examples of systems that are less compatible with the improvement of work efficiency using IT

- There must be **one** "person responsible for service provision," who manages the work of helpers and provides technical instructions, **per 10 helpers or for every 450 hours of service provision**.

- Health care facilities for the elderly must **keep** the records related to care services and medical records **for two to five years** after the completion of service provision **on paper media.**

(Source) Prepared based on MHLW Ordinances/Notices

✓ “Potential nurses and care providers” who have licenses but are not engaged in care work

● It is estimated that there are about 550,000 people who are licensed but are not working as nurses.

● About 80% of those who are licensed as a home-visit care provider (approx. 640,000 people) do not work in the field of care.

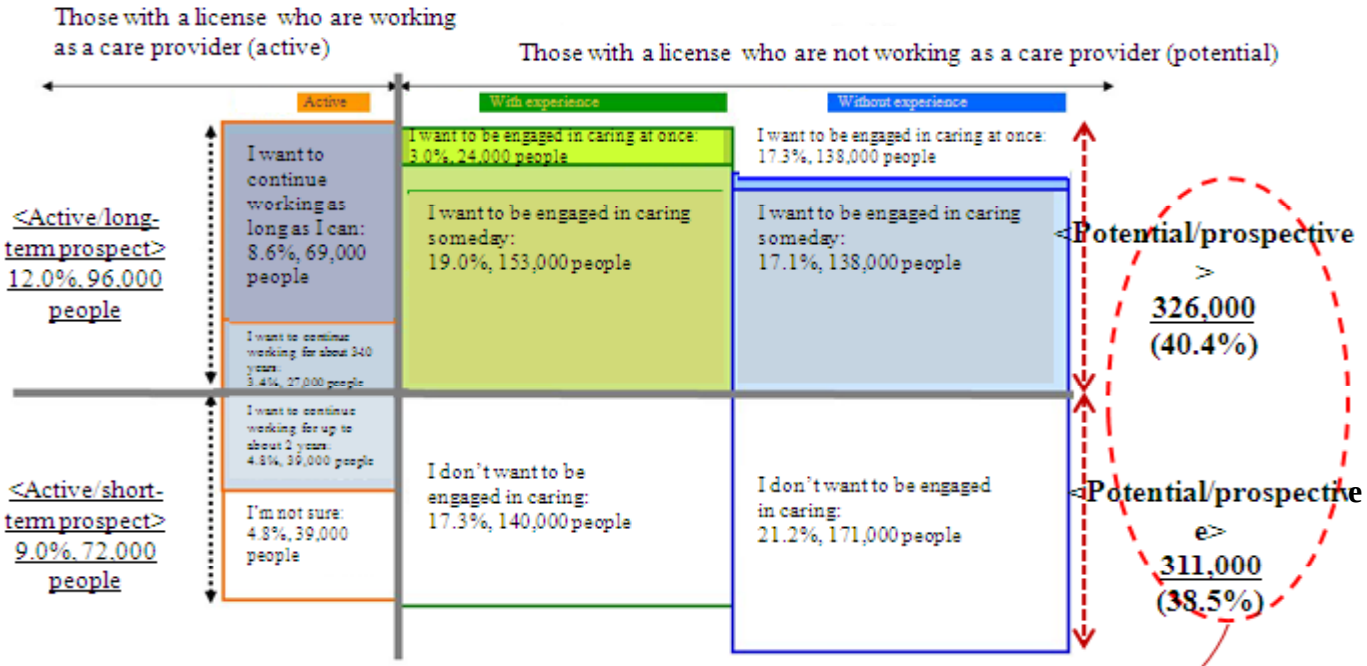
Estimation of the number of potential nurses (End of 2002)

- Those who have nursing-related licenses: 1,766,981 (a)
- Number of workers aged 65 or below: 1,217,198 (b)
- Number of potential nursing-related workers: 549,783 (a-b)

Number of potential nursing-related workers: approx. 550,000

(Source) Materials from the First “Investigative Commission on Act on Public Health Nurses, Midwives and Nurses and other Laws to Ensure Medical Safety” (MHLW)

Estimation of the number of potential home-visit care providers



Number of potential home-visit care providers: approx. 640,000

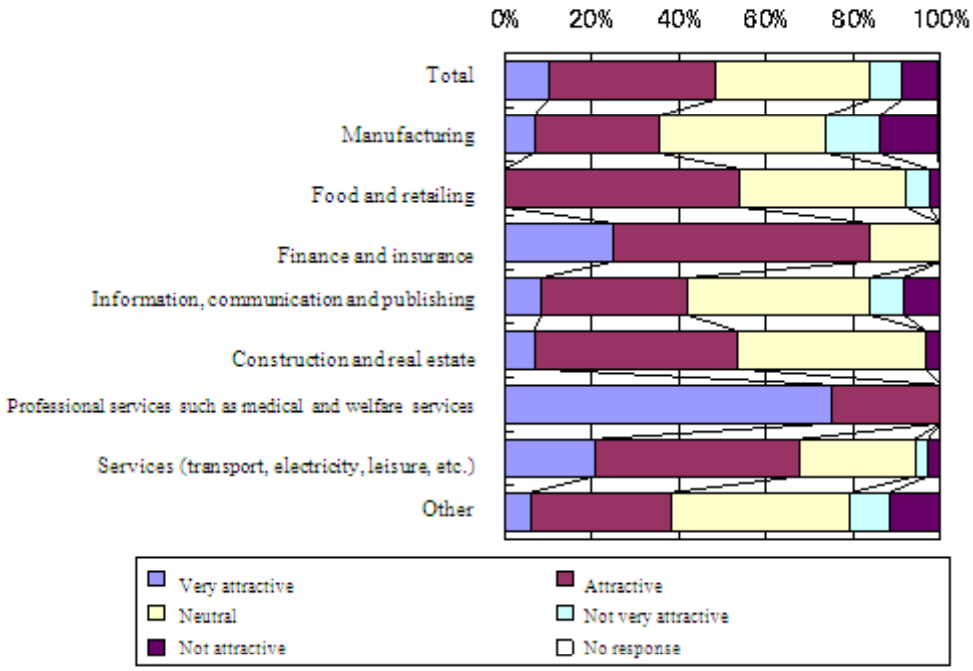
(Source) Prepared by Japan Research Institute based on the results of an online questionnaire targeted to those holding a care provider’s license and “Survey on Care Service Facilities/Businesses” 2007

✓ Cooperation between medical/care facilities and private business providers in order to meet expectations for advanced services

● Elderly market is also attractive for private business providers.

● There are high barriers, including institutional problems, to actually realizing the cooperation.

Evaluation of elderly market by listed companies



(Source) Prepared by Japan Research Institute based on the Report on the "Research and Studies Regarding the Vision of the Promotion of Elderly Service under the Long-term Care Insurance System" (FY2006)

Issues when cooperating with medical institutes (actual opinions)

- ✓ Because the responsibilities of medical/care facilities and service providers are not defined clearly, business risks cannot be assessed.
- ✓ The scope of business allowed for service providers is sometimes in the gray area, making us reluctant to enter the market.
- ✓ Some doctors are not interested in preventive medicine, and are reluctant to issue exercise/nutrition prescriptions.

(Survey implemented by METI in FY2009)

✓ Improvement of operation related to public facilities for promotion of the creation of new living support services

- It is possible to provide certain services even in regions where market entry is difficult, such as underpopulated areas, by utilizing existing facilities such as community centers and meeting places.
- There is much room for operational improvement in terms of cooperation with public facilities.

Case Example of Iinan Cho, Iishi Gun, Shimane Prefecture	
Area	242.84 km²
Total population	5,487
Population density	22.6 people/km²
Population aging rate	38.8%
No. of elderly living alone	Approx. 30%

Tani Area
- Population: 253
- Population aging rate: 47%

<Location of stores and other facilities in Iinan Cho > (in part)

It is possible to provide distribution functions at low cost, through distributors cooperating with local governments and public businesses in different categories to effectively utilize existing facilities, such as community centers and meeting places and transportation networks, as a satellite store for nearby supermarkets and as bases for home delivery and transportation measures.

Major social infrastructures in Iinan Cho

Supermarkets/convenience stores	(6 stores)
Farm stands, etc.	(5 bases)
Post offices	(6 bases)
Public office and branch offices	(4 bases)
Hospitals/ clinics	(5 facilities)
Community centers/meeting places	(6 facilities)

Newspaper delivery, co-op and home delivery are also available.

(Issues with applicable laws and regulations)
● **More flexible use of community centers**
Because the usage of community centers is limited, progress cannot be made in business associated with the collection of fees.

✓ Service quality that is unclear for users

● Many complaints concerning the content of care service are related to the quality of services and a lack of explanation/information.

● Some facilities are closed due to a lack of business foresight, so people can no longer receive care services and have trouble with the refund of payments made when moving in.

Breakdown of complaints concerning the content of service

	No. of case	Ratio
Specific damage	226	10%
Lack of explanations/information	694	30%
Reactions by administrators	198	9%
Employee attitudes	301	13%
Quality of services	880	38%

(Accumulated total from April to November 2009)

(Source) Prepared by Japan Research Institute based on All Japan Federation of National Health Insurance Organizations “Reality of Complaints and Consultation Acceptance” and MHLW “Monthly Report on the Survey of Care Benefits”

Case examples of fee-charging homes for the aged

・Since 2006, 65 fee-charging homes for the aged were closed for such reasons as financial problems. The number reaches 342 if changes in the operating body are included. (Yomiuri Shimbun dated December 18, 2009)

<Case example from Yamagata Prefecture>

・A construction company in Yamagata City started operating the facility in 2002. It was closed in August 2008. 13 former residents moved into a special nursing home for the elderly in Tsuruoka City, before people on the waiting list.

<Case example from Akita Prefecture>

・A facility went bankrupt in April 2007. 32 residents were forced to leave. The prefectural government made them move into special nursing homes for the elderly.

“Strategies for the Promotion of the Creation of Industry of Services Related to Medical Services, Caring and Living Support for Elderly” for the Efficient Provision of Various High-Quality Services

Strategic Concept

- Through the promotion of cooperation between medical/care facilities and healthcare related service providers, break away from dependence on public insurance to establish a system for providing various high-quality services oriented toward patients and consumers.
- It is also expected that the burden of hospitals is lessened and health care costs are made reasonable.

Users/patients

Health maintenance demand
- Disease prevention
- Care prevention

Demand at acute phase
- Accident
- Sudden illness/changes

Demand at chronic and terminal phases
- Care: Living support
- Disease management: Living support
- Rehabilitation: Living support
- Deathbed: Living support

Medical/care facilities, peripheral service industries

Adequately react to needs and lessen the burden of medical/care facilities

Clinics
- Acute hospitals
- Chronic hospitals
- Care facilities

(There is no cooperation with peripheral services at the current stage and the services are provided in a closed circle within medical/care facilities)

Lifestyle-related disease support

Chronic phase care support

Public insurance

Private insurance

Healthcare service providers

Restaurant and catering services
Fitness industry
Learning industry, etc.

Growing industry

Market size:
13.1 trillion yen → 24.0 trillion yen (by 2020)

Employment
1.5 million people → 2.3 million people (by 2020)

Adequately react to needs and lessen the burden of medical/care facilities

Providers of living support services such as home/palliative care

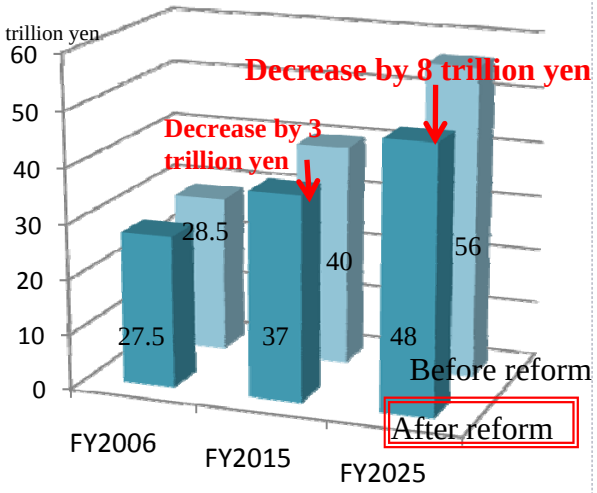
Restaurant and catering services
Housekeeping service
Moving and transport services
Physical healing services
Fitness industry
Housing industry, learning industry, etc.

(Demand for services)
Current → New providing system

Health care costs moderation effect

For instance, supporting countermeasures to lifestyle-related diseases to combat metabolic syndrome and decrease the average number of days in hospital is estimated to have the effect of reducing health care costs by 8 trillion yen (by 2025; estimation).

(Forecast of medical benefit costs)



Source: The basic idea of reform according to the Outline of Medical System Reform (January 31, 2006)

(Reference 1) Case Examples of Service Creation

(Creation of services to comprehensively support the prevention of diseases)

[Case example] Former Ueki Machi, Kumamoto Prefecture

✓ **Improvement of concierge scheme to introduce good service providers**
✓ **Establishment of rules for handling personal information**

✓ **Consideration of the ideal cooperation and contract incorporating the incentives to medical institutes**

Simplified database
・Height, weight
・Blood pressure, blood sugar
・Body fat percentage

Medical data (from Service providers)

Medical data (from Medical institutes)

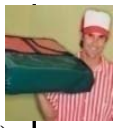
Service providers

● Exercise service provider

Exercise services effective for care and preventing diseases
(Ueki Machi Health and Welfare Center "Kagayaki-Kan")

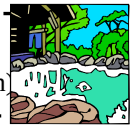
● Catering business

Providing health-conscious lunches and healthy menus (Member stores of Ueki Machi Commerce and Industry Association)
(Foodstuff/lunch businesses, restaurants, etc.)



● Hot spring inns

Therapy using hot springs
(Ueki Hot Spring Inns Association)



Utilize medical data to create/provide new healthcare services

Coordinators

Kumamoto Wellness Support Institute, Inc.

Promotion of cooperation between medical institutes and service providers

Provision of services utilizing medical information

Provision of service information

Diagnosis/ instructions

Residents at Ueki Machi

"Health mileage" is granted according to the use of fitness and other services, which can be used in local shopping areas

Medical institutes

Japanese Red Cross Society Kumamoto Healthcare Center
(Data management and operational support)

Ueki Machi Public Hospital

Medical Institutes (Ueki Machi)

Kumamoto University Faculty of Medical and Pharmaceutical Science Department of Metabolic Medicine

Kumamoto Health Science University
(hot spring therapist)

Efficient activities based on cooperation with service providers

Local governments

Ueki Machi, Kumamoto Prefecture
(Encouraging participation and providing information on service users' health)

Promotion of community-based approaches participated in by the residents

✓ **Formulating/certifying criteria for assuring the quality of exercise/catering services and sharing business know-how**
✓ **Clarification of the scope of rehabilitation for elderly so that it does not conflict with medical practices**

(Reference 2) Case Examples of Service Creation

(Creation of comprehensive service for elderly based on care services)

Establishment of a framework wherein care managers in charge of improving service quality can work more actively
✓ Establishment of remuneration system from providers of services other than insurance service
✓ Revise master care plans

✓ Mechanism to enable the entry of new private businesses and the effective operation of businesses (Review of personnel and facility criteria for care service categories)

Elderly

Request for preparing care plans

Introduction of services

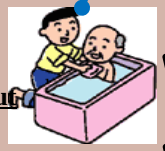
Care managers

Provide services

Covered by long-term care insurance system

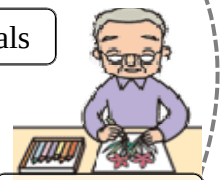
Not covered by long-term care insurance system

Currently, care managers can only introduce services that are covered by long-term care insurance (no incentive to provide other services).



● Physical care (common throughout Japan)

Attend hospitals



Offer hobbies

Rehabilitation support

Housework assistance

Transport

Provide various kinds of care services by providing peripheral services outside the scope of long-term care insurance system.

● Original services by local governments
* Decreasing due to financial tightness

● Peripheral services (full expenses borne by users)

Shopping

Catering

(Reference 3) Case Examples of Service Creation

(Creation of services to watch over life in hilly and mountainous areas)

[Case example] Susami Cho, Wakayama Prefecture

✓ **Reconsidering the ideal responsibility sharing among doctors and the medical fees for remote medical care**

Collection of information such as vital data and watching over life through remote support

Patients with diabetes, etc.

- **Automatically transmit vital data to doctors anytime when necessary**
- **Doctors can detect abnormal values at an early stage**

Regional residents

- **Receive assistance from doctors via video phone during such emergencies as injury and illness**

Watching by using real-time remote monitoring system

Elderly living alone

- **Install infrared sensors at home and watch over life**
- **Any anomalies are automatically notified and a commissioned welfare volunteer arrives immediately**

Information

Information

Watching information sharing system at hospitals

People

Dispatch of doctors, nurses, helpers, commissioned welfare volunteers, etc.

People

Dispatch of nurses, helpers, commissioned welfare volunteers, etc.

Adequate catering services, etc.

Care service providers, etc.

Hospitals

Local governments

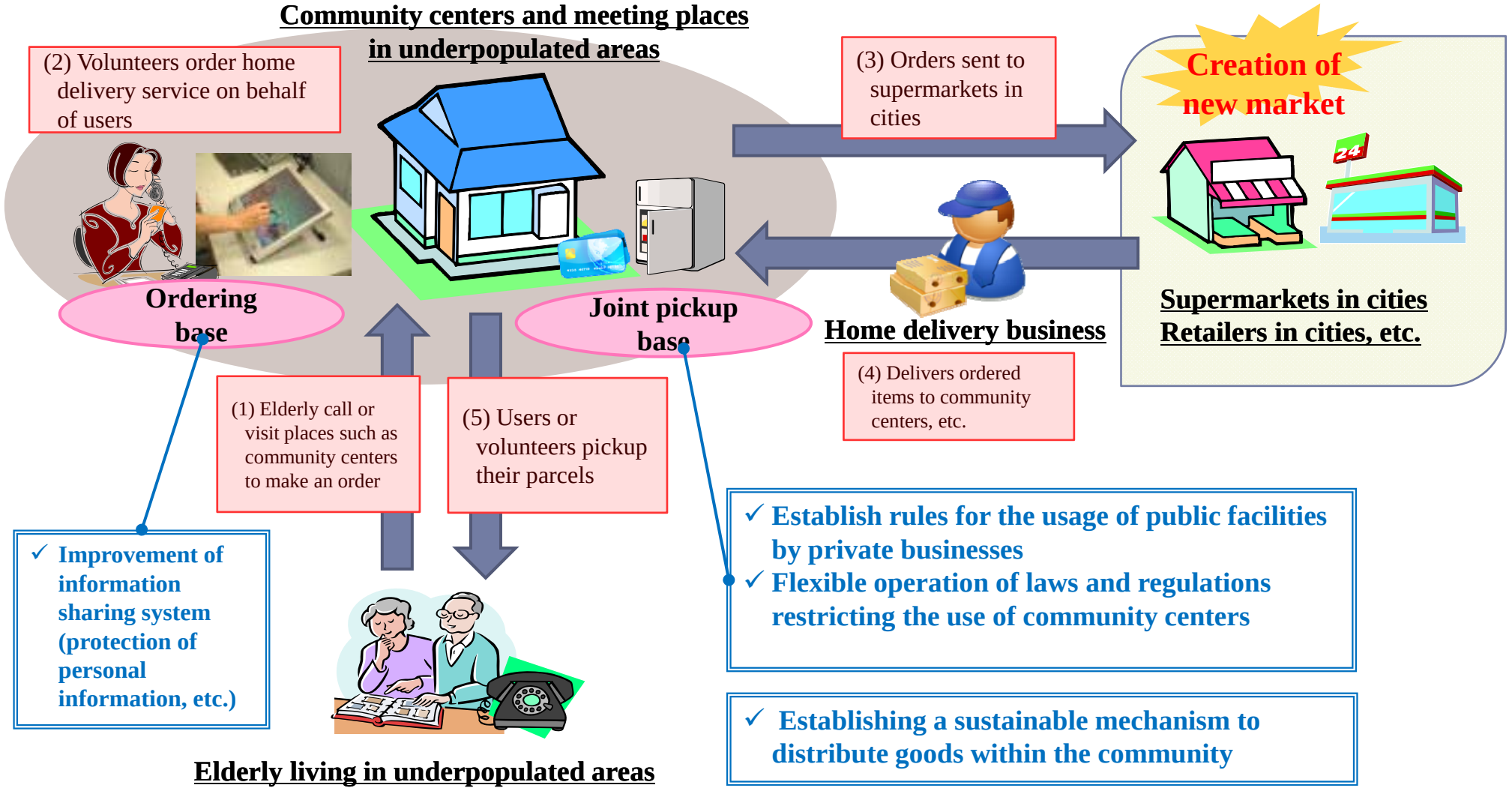
Service providers

✓ **Formulation of business models for bearing the cost, etc. in order to ensure the continuity of business**

✓ **Improvement of basis for information sharing among different jobs (formulation of authorities in terms of privacy, security and information browsing)**

(Reference 4) Case Examples of Service Creation

(Services to assist shopping in underpopulated areas)



Establishment of an Environment to Create New Service Industry in Cooperation with MHLW

[Direction of major measures]

✓**Reinforcement of coordinator functions (Institutionalization of the introduction business of service providers, etc.)**

Creation of an entity to coordinate various services, and the establishment of a fair remuneration system.

✓**Improvement of environment for providers to cooperate with medical institutes to implement business**

Formulation of cooperation agreement clauses, and sorting out the gray zones related to medical practices.

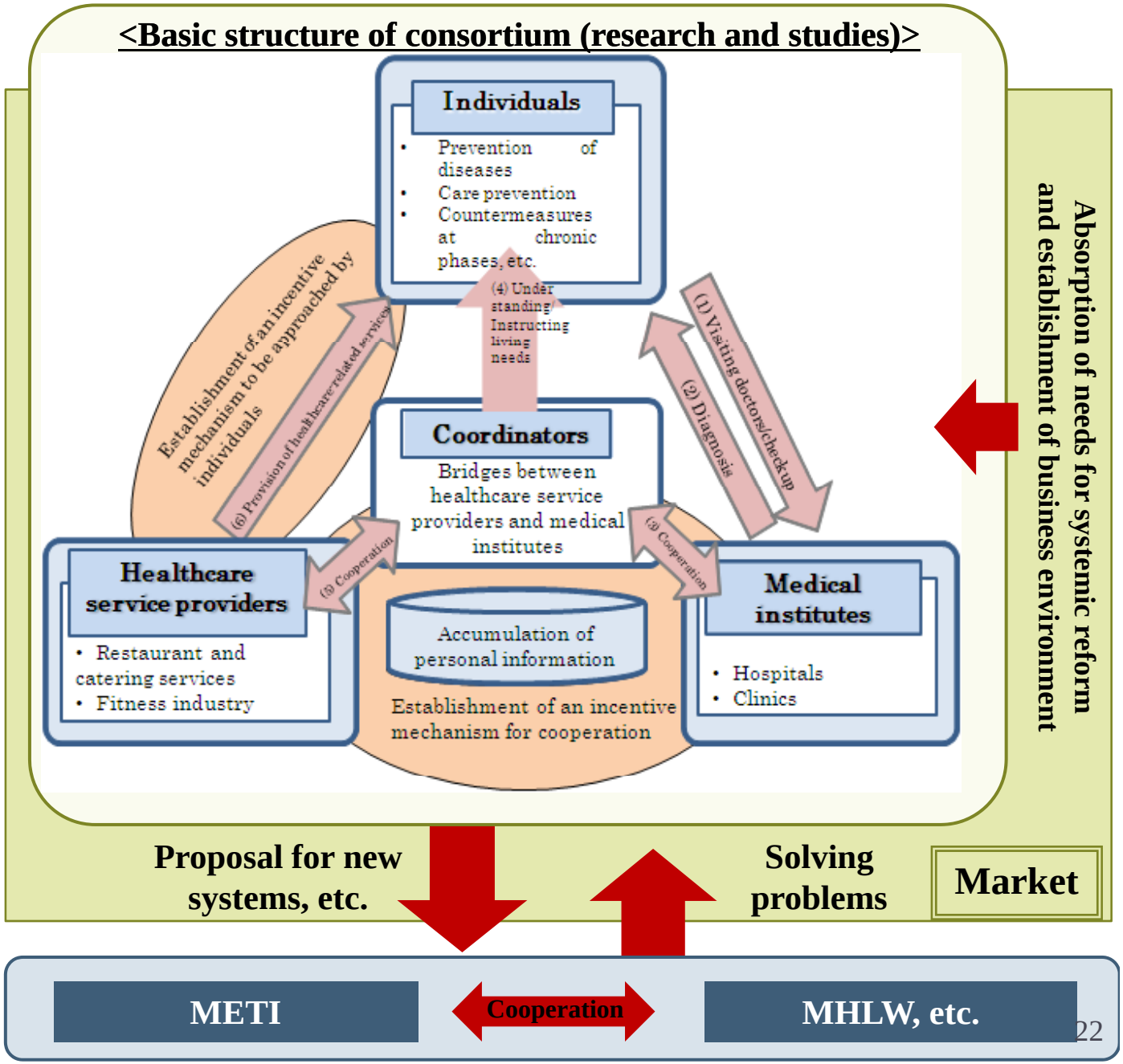
✓**Establishment of quality assurance system for service providers**

Establishment of quality criteria so the users can use services at ease.

✓**Establishment of environment to ensure flexible and efficient operation**

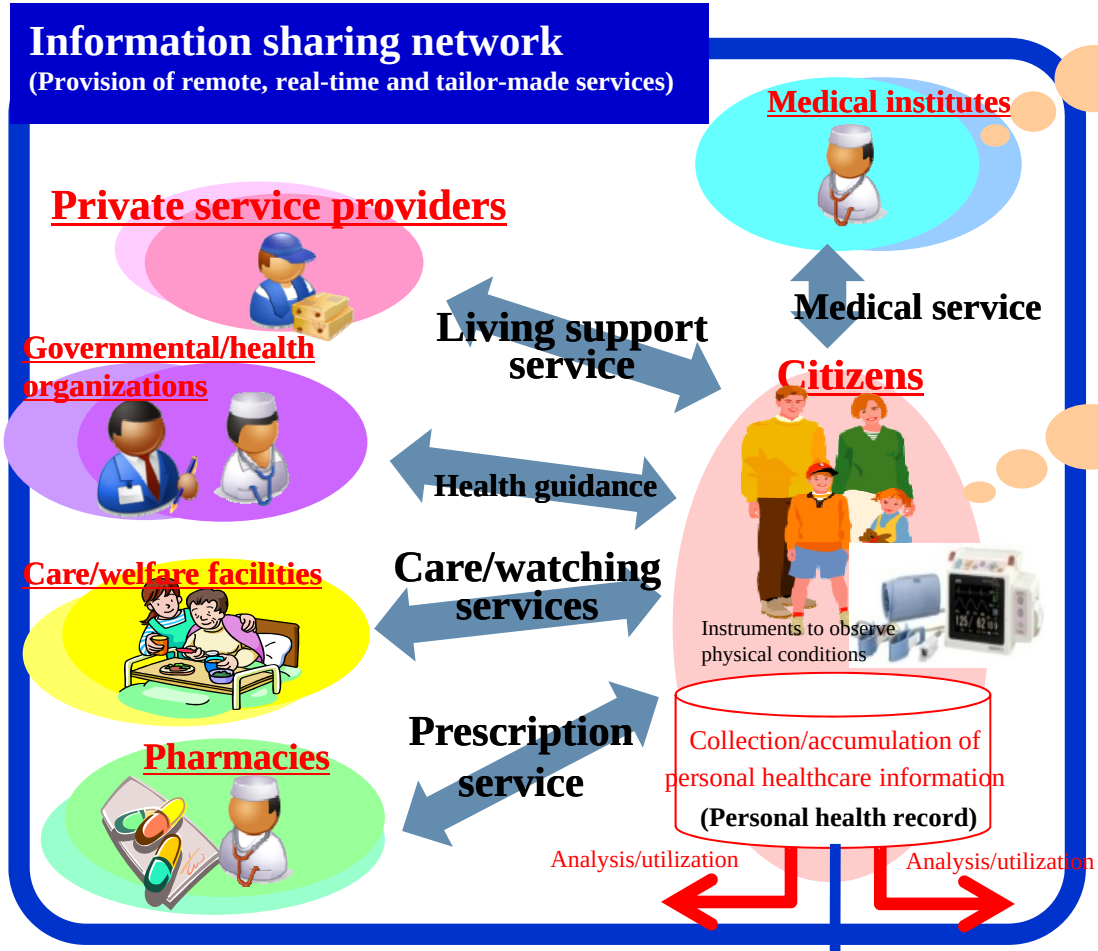
Review of criteria regarding the start of business, personnel distribution and office management in terms of nursing/care business.

etc.



Utilization of IT in the Medical Area

✓ Promote the creation of tailor-made services based on personal information and improving the quality/efficiency of treatment and efficiency



Lessen doctors' burden

Diagnosis and treatment relying largely on the experience/skill of the doctor

(E.g.) Supporting diagnosis/treatment through AI technology

Development/utilization of surgical robots

Improving the level of diagnosis/treatment skills using IT

Remote and real-time services

Go to hospital in one's spare time

High-quality services provided anytime and anywhere as necessary by related organizations in coordination

(E.g.) Early detection of and reaction to anomalies by monitoring 24 hours a day

Tailor-made service

Uniform service

(E.g.) Optimized medical services based on past treatment records and DNA information

Service tailored for "oneself" based on personal information

Healthcare information

Improving the quality/efficiency of measures/services by utilizing information

Anonymized healthcare information is collected, accumulated and utilized nationwide to improve public health measures and to promote the development of effective medical technology, pharmaceuticals and medical instruments

(E.g.) Real-time pandemic countermeasures

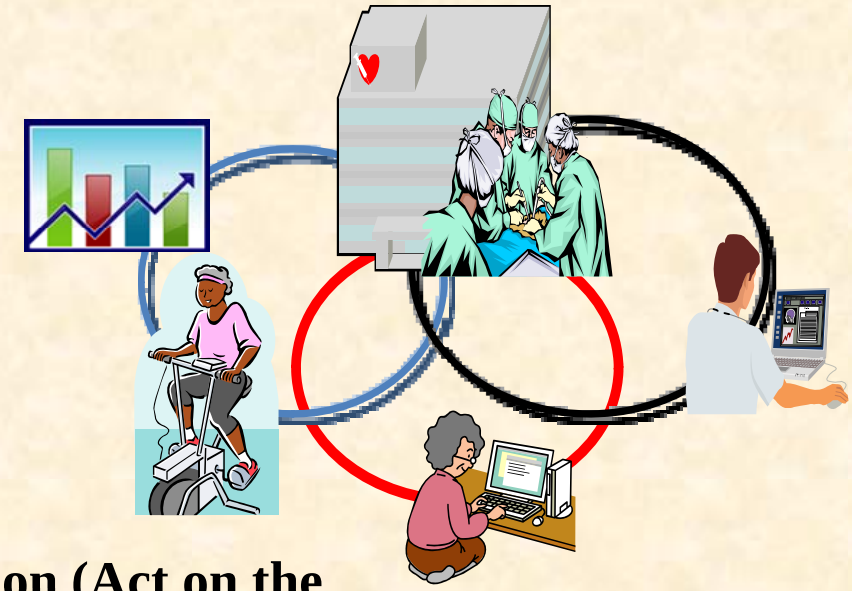
Healthcare information

Mining accumulated information to create new medical services

Measures for the Promotion of IT Utilization

○ Standardization of healthcare, medical and care information

- Sorting out items related to healthcare, medical and care information to be standardized
  e.g. The definition of "Healthcare information" is already decided.
- Formulation of national standards based on international standards
  e.g. Formulate basic package of information to be shared among hospitals based on international standards (HL7, DICOM, etc.)
- Promotion of introducing standards at relative organizations
  e.g. Support for introducing standard electronic medical charts (certification/subsidies, etc.)



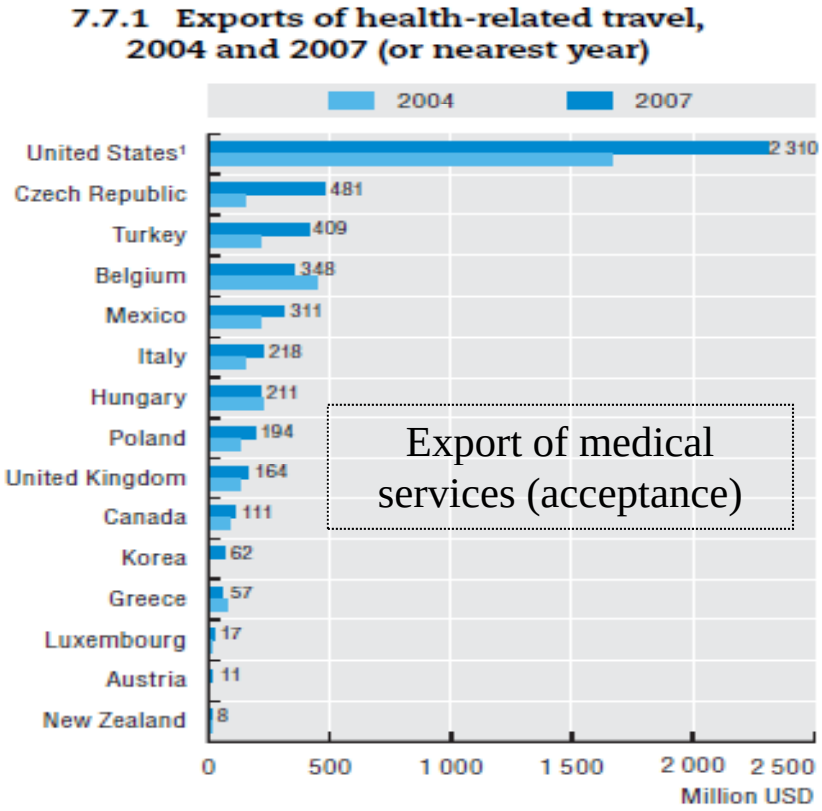
○ Formulation of rules for handling information (Act on the Protection of Personal Information, etc.)

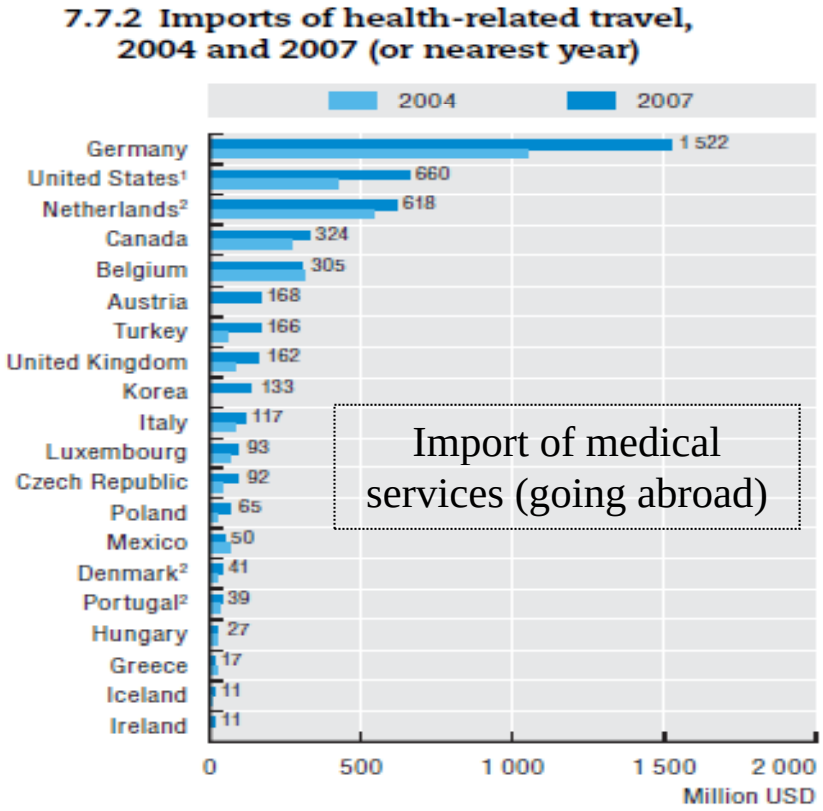
- Formulation of rules for handling information shared among different jobs
  e.g. Formulation of operational guidelines on cooperation among different jobs (access control, security control, contract models, etc.)
- Formulation of rules on the handing of information collected for secondary use
  e.g. Consideration of how to anonymize personal information for use in care/healthcare service areas

2. Medical Services Provided Internationally

✓ “Medical tourism,” in which people move beyond national borders seeking medical services abroad, is increasing on a global basis

Trend of medical tourism market in OECD countries





1. Expenditure by patients in foreign countries for treatment (BEA). 2. SHA concept of imports.

(Source) OECD Health at glance 2009

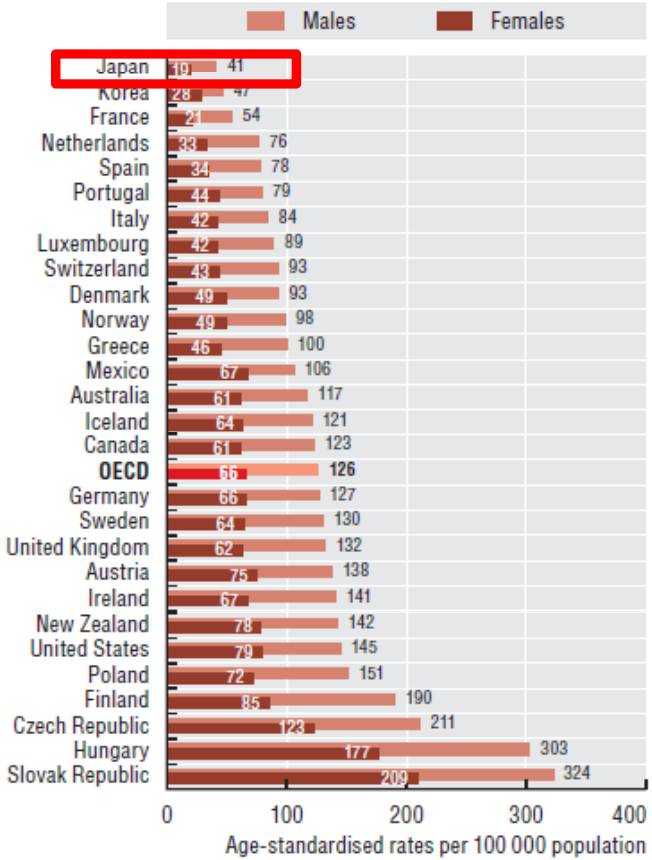
✓ The level of medical services in Japan is high

● Mortality rate of cardiac disease patients is the lowest among OECD countries.

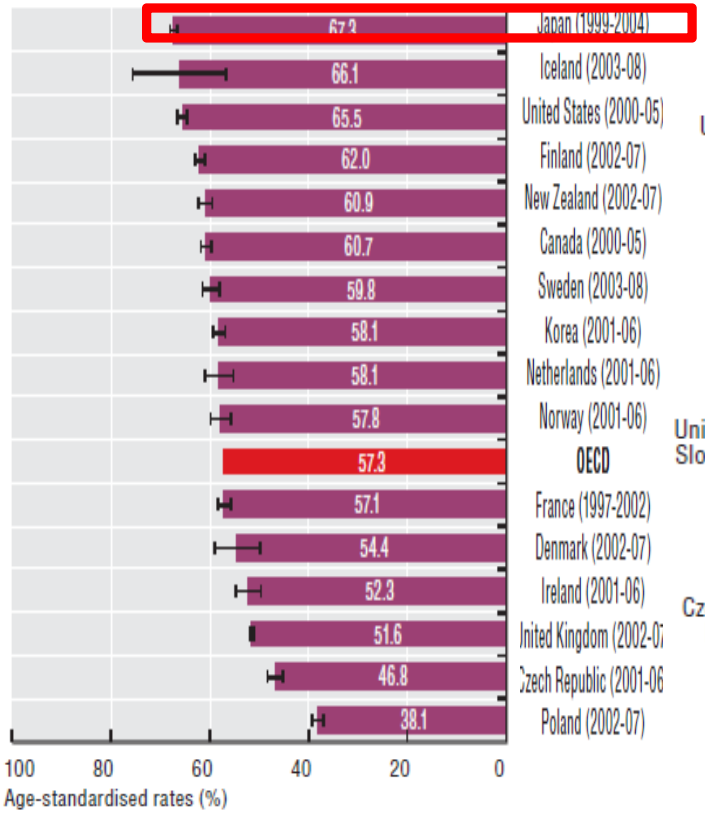
● Survival rate of colorectal cancer patients within five years is the highest among OECD countries.

● Mortality rate of prostatic cancer patients is also at the lowest level in the world.

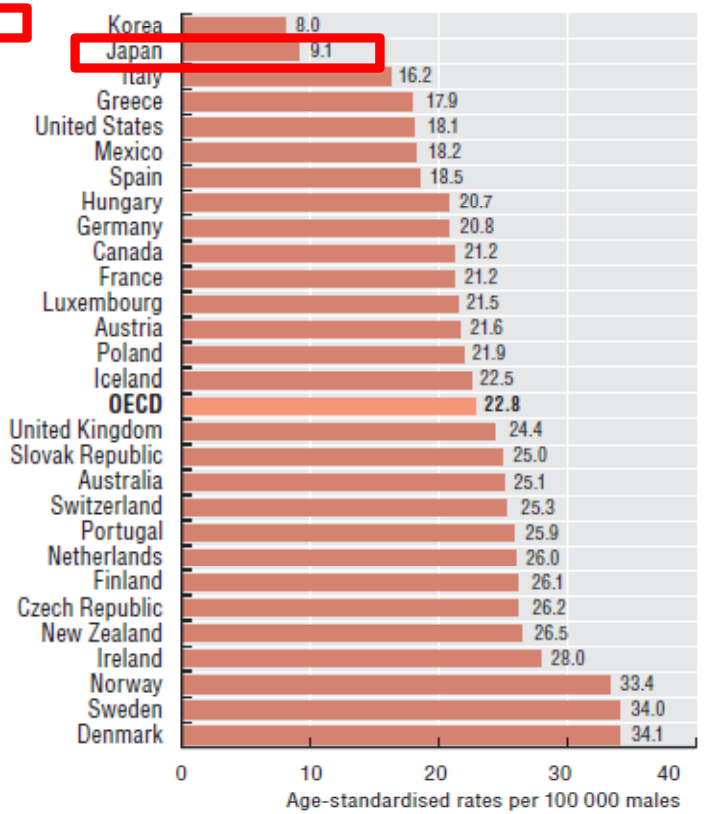
Mortality rate for cardiac disease (2006)



Survival rate for colorectal cancer within five years



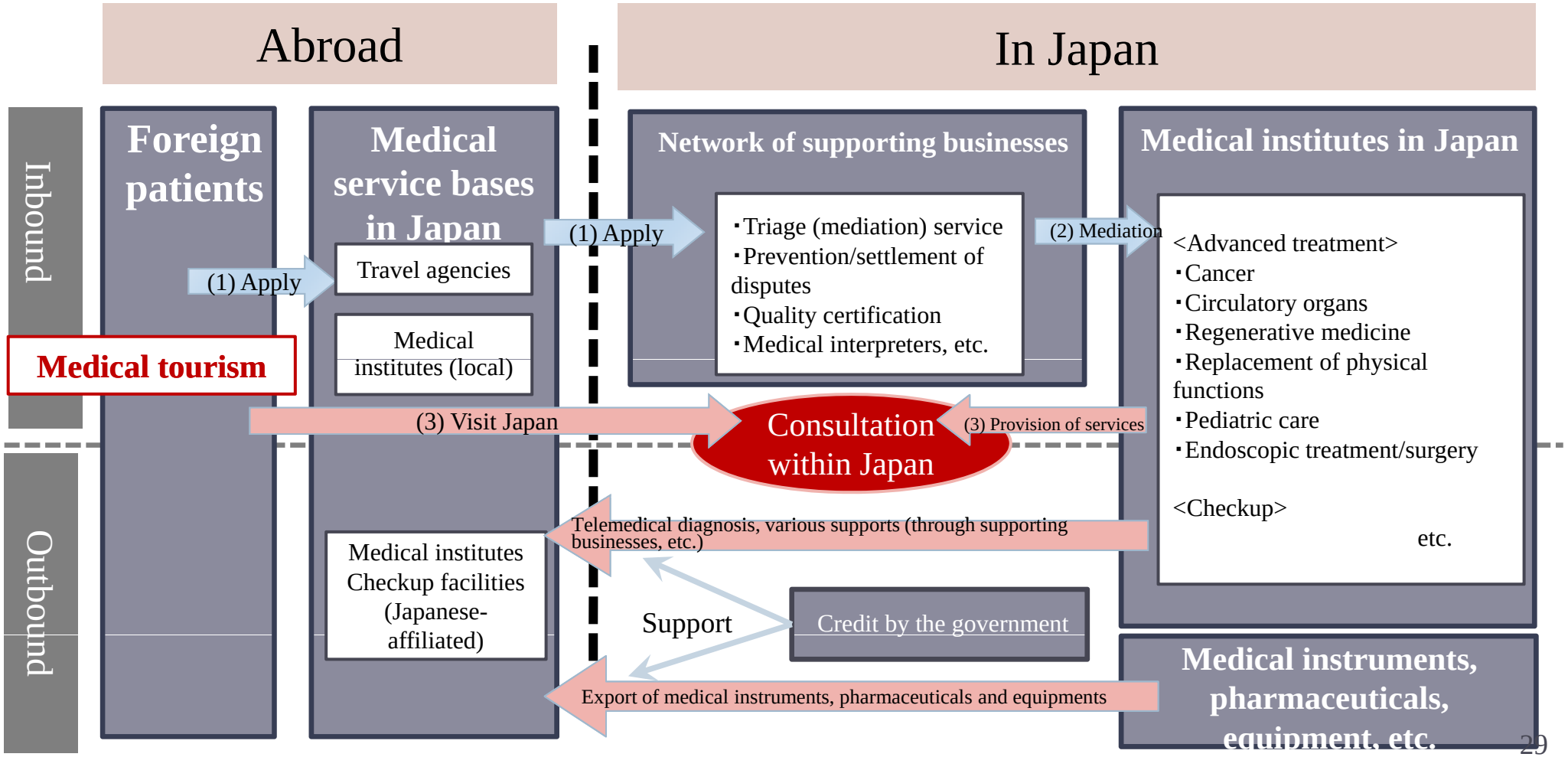
Mortality rate for prostatic cancer (2006)



(Source) All from OECD Health at a Glance 2009

✓ Strategic approaches toward the internationalization of medical services

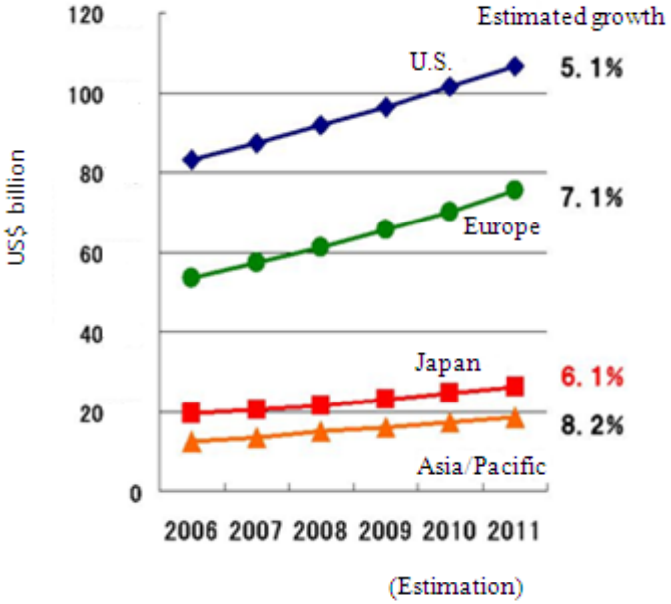
●Establishment of supply system: Networking of medical institutes, visualization of brand values of medical services in Japan
●Fostering of arrangement function: Development of function to introduce foreign patients to medical institutes, fostering of medical interpreters
●Establishment of overseas medical regions: Setting up of a medical visa, developing bases for acceptance into local medical institutes, placement of Japanese-affiliated medical and checkup facilities
●Establishment of environment to develop medical technology: Fostering of cutting-edge medical care in Japan based on the internationalization of medical services



3. Securing Global Market for Pharmaceuticals, Medical Instruments and Care Robots

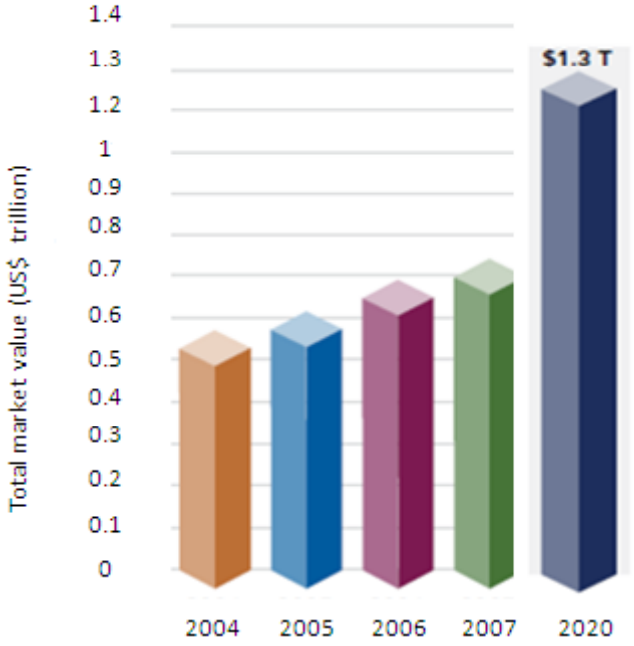
✓ Ever-expanding global market for pharmaceuticals and medical instruments

Changes in global market for medical instruments



(Source) IMS World Review 2006

Changes in global market for pharmaceuticals



(Source) Japan Pharmaceutical Manufacturers Association website

Sizes and growth rates of markets for medical instruments in different countries

Rank	Country	Market size (million dollars)	Year-on-year growth rate (%) (in local currency)
1	U.S.	252,222	5.1
2	Japan	67,741	6.8
3	Germany	31,869	8.5
4	France	30,297	6.4
5	Italy	19,796	2.6
6	U.K.	19,453	-2.2
7	Spain	15,141	8.0
8	Canada	13,512	7.1
9	China	11,629	20.4
10	Brazil	9,098	38.5
11	Mexico	8,802	12.0
12	South Korea	7,625	14.6
13	Turkey	6,972	21.9
14	Australia	6,586	4.9
15	India	6,328	8.6
16	Belgium	4,700	3.6
17	Poland	4,645	7.5
18	Greece	4,402	12.5
19	Netherlands	4,316	0.6
20	Portugal	3,873	7.7

(Source) EUCOMED (European federation of medical instruments industry)
* Shows the sizes of markets for medical technology and includes wheelchairs, hearing aids, etc.

✓ Pharmaceutical/medical instruments industries in Japan have an advanced level of technology

- The quality level of basic medicinal research achievements is high.

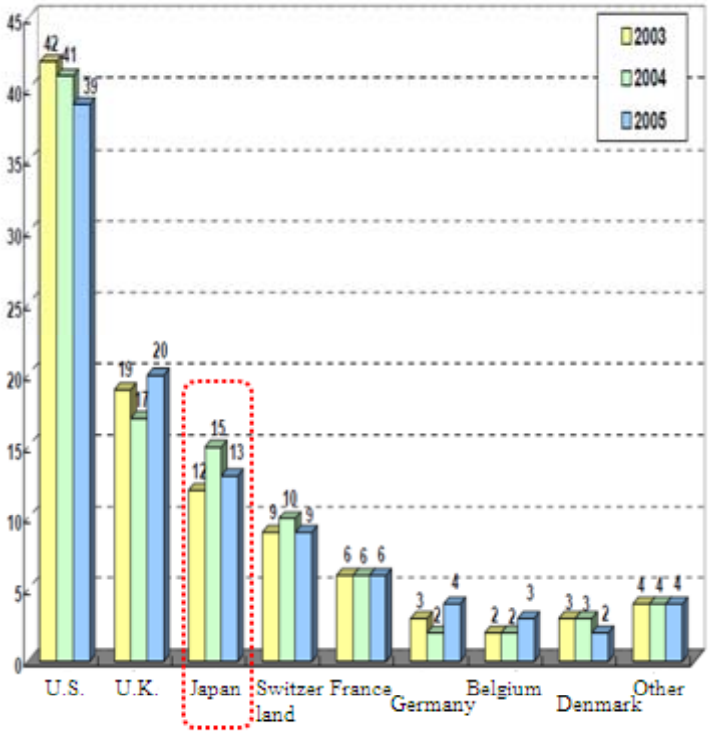
- Japan is ranked third in the world in terms of the number of new medicines created.

- There are also areas where Japan is ahead of the world, such as the charged particle radiotherapy instruments for cancer.

Percentage of high-quality articles published by country

Country	Percentage of articles published N=23,168
U.S.	66.4%
U.K.	8.4%
Germany	4.8%
Japan ⇦	3.3%
France	3.1%
Canada	2.7%
Switzerland	1.9%
Netherlands	1.1%
Australia	0.9%
Sweden	0.8%
Italy	0.8%
Israel	0.8%
Austria	0.4%
Belgium	0.4%
Spain	0.3%
Finland	0.3%
Denmark	0.2%
China	0.1%
Norway	0.1%
New Zealand	0.1%

Number of items by country of origin



Source: Japan Pharmaceutical Manufacturers Association

Charged particle radiotherapy facilities in the world (currently operating)

Name of facility	Country
National Institute of Radiological Sciences Research Center for Charged Particle Therapy Hospital	Japan
Hyogo Ion Beam Medical Center	Japan
Gunma University Heavy Ion Medical Center	Japan
GSI Helmholtz Centre for Heavy Ion Research	Germany
University of Heidelberg	Germany
Institute of Modern Physics, Chinese Academy of Sciences	China

Source: Prepared from the materials by the National Institute of Radiological Sciences

✓ Decreasing appeal of environment for research and development in Japan (withdrawal of research institutes with foreign capital and reliance on introducing technologies from venture businesses abroad)

Institutes with foreign capital withdrawing from Japan

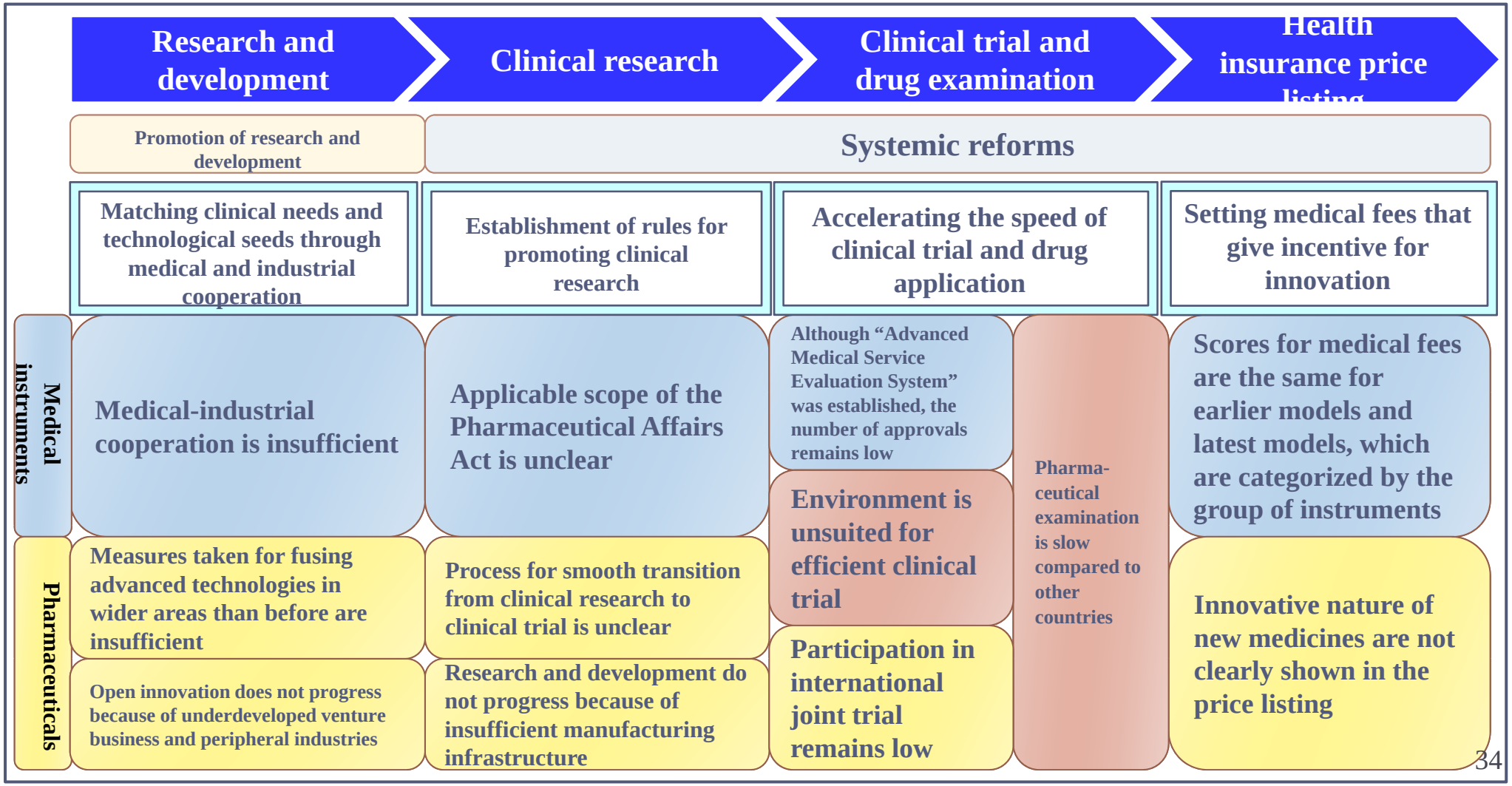
Foreign capital companies that withdrew research institutes from Japan	Closed	Details of withdrawal
Glaxo SmithKline	2007	Tsukuba laboratory was closed. (Opened a new research basis in China in 2007.)
Pfizer	2008	Nagoya laboratory was closed. (Opened a new research basis in China in 2005.)
Novartis Pharma	2008	Tsukuba laboratory was closed. (Opened a new research basis in China in 2007.)
Banyu Pharmaceutical (acquired by Merck)	2009	Tsukuba laboratory was closed and sold to Taiho Pharmaceutical.

Examples of the acquisition of venture businesses abroad by Japanese companies

An-nounced	Acquired by	Acquired venture	Amount paid	Details
November 2007	Astellas Pharma	Agensys Corporation (U.S.)	387 million dollars (approx. 4.2 billion yen)	Acquired a venture business specializing in antibody drugs for cancers.
April 2008	Takeda Pharmaceutical	Millennium (U.S.)	8.8 billion dollars (approx. 900 billion yen)	Acquired a venture business that developed many items mainly for cancers.
January 2010	Eisai	AkaRx, Inc. (U.S.)	255 million dollars (approx. 23 billion yen)	Acquired a venture business specializing in circulatory organs, gynecology and pediatrics.

✓ There are issues for each processes of research and development including clinical research, clinical trial, examination and national health insurance price listing

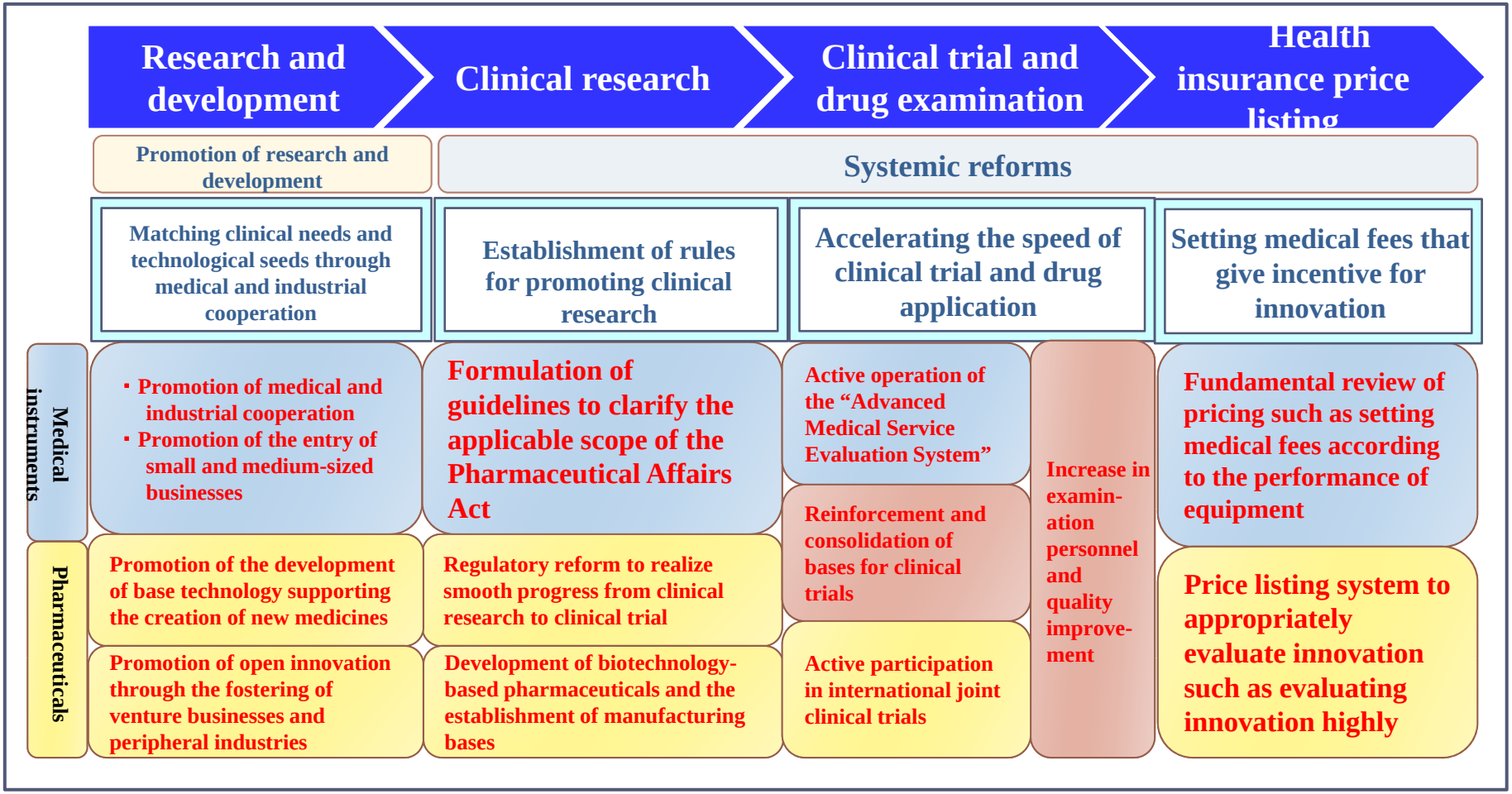
Issues regarding the environment for developing pharmaceuticals/medical instruments



✓Reform the environment for launching the achievements of research and development in the market in order to promote innovation of pharmaceuticals and medical instruments

* Assuming that the market share of the top ten Japanese companies doubled in the global market thanks to such reform, there is a magnification effect equivalent to about 7 trillion yen (pharmaceuticals: about 5.5 trillion yen [2008]; medical instruments: about 1.3 trillion yen [2006]).

Restructuring of institutional framework of environment for the development of pharmaceuticals/medical instruments



✓ Issues and approaches for the practical use of care robots

● Although it must be ensured that living-support robots can be safely used with humans, safety technologies and criteria/rules for safety have not been sufficiently developed.

→ While establishing safety technologies and safety verification measures, lead the trend of international standardization.

● Evaluation, examination and consultation systems to promote the installation of safety-assured devices are not sufficiently developed.

→ Develop an appropriate verification environment regarding the effect and efficiency, and accelerate the speed of devices development and the clinical evaluation process.

Data 1 From 2005 to 2025
- Working age population: decrease by about 1.31 million people
- Elderly population: increase by about 1.07 million people

(Source: Annual Report on the Aging Society 2009 [July 2009])

Data 2 About 70% of those who actually work in the field of care have back pain. (Source: MHLW, survey by the Study Group on Welfare Equipment Usage [March 2008])

Data 3 About twice the current number of people working will be necessary in the field of care by 2025. (Source: MHLW "Future Vision of Care that is Assuring and with Hope")

Large expectation toward robot technology

Living-support robots

Mobilized type

Worn by people

On-board type

Safety and effectiveness should be discussed widely also in private sectors

Robot Business Promotion Conference

No. of current members: 213 (as of January 2010)

Robot manufacturer, providers of services using robots, certification authorities, think tank, local government, venture capital, insurance businesses, leasing companies, etc.

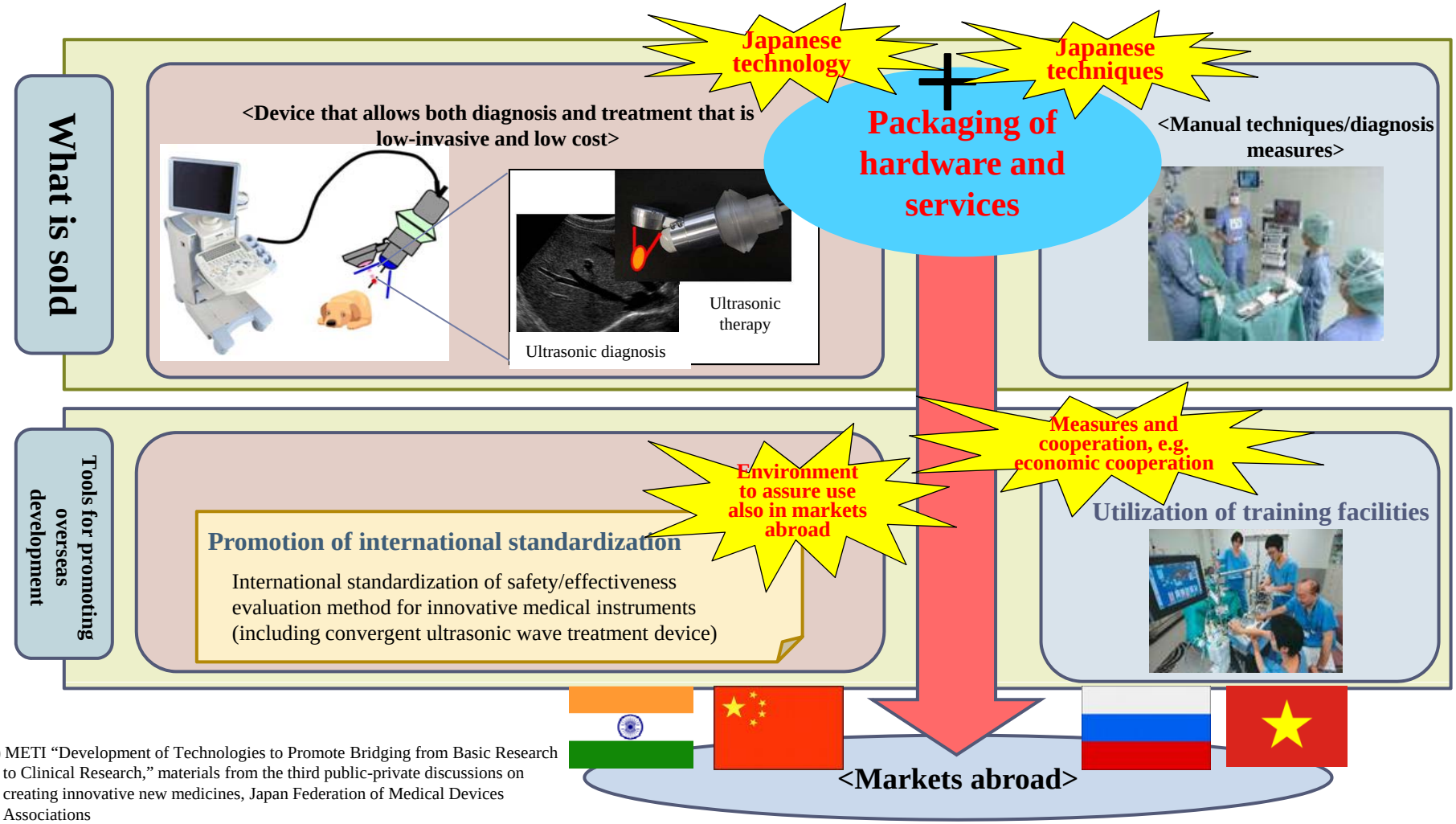
- Managing committee
  - Safety/standards working group
  - Business matching group
  - Publicity/planning working group

Relevant people discuss the safety by looking at the actual device and data

Cooperation and consideration of system among relevant ministries

✓ Strategy for the international development of pharmaceuticals/medical instruments industries

● While developing manual techniques/diagnosis measures and pharmaceuticals/medical instruments at the same time (packaging of hardware and services), also ensure the certification of international standards regarding innovative medical instruments/pharmaceuticals or provide training in the use of technology to utilize medical instruments, in order to secure a global market.



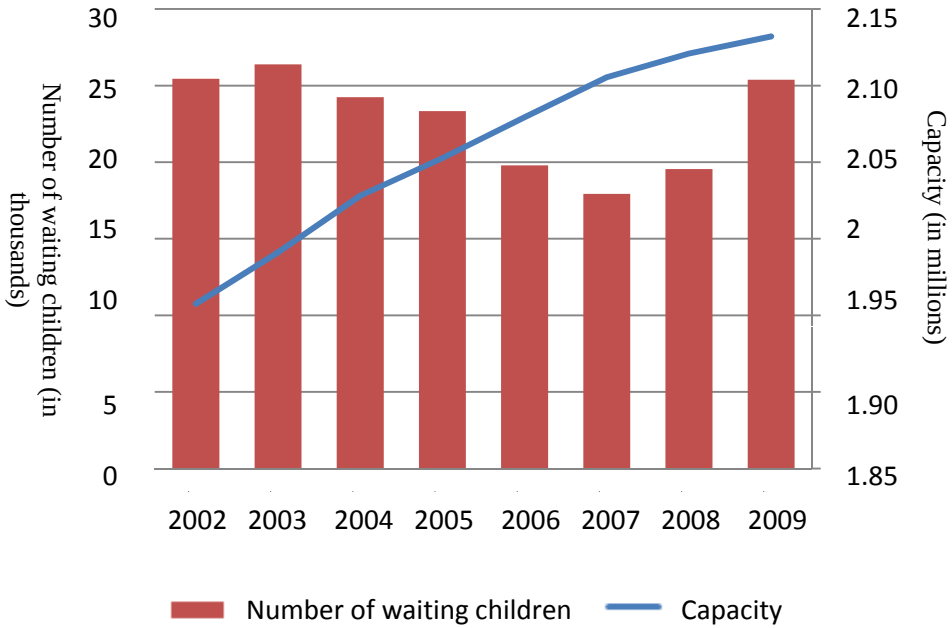
(Source) METI "Development of Technologies to Promote Bridging from Basic Research to Clinical Research," materials from the third public-private discussions on creating innovative new medicines, Japan Federation of Medical Devices Associations

4. Industrialization of Childcare Services Meeting the Diversifying Needs

✓ Needs for childcare are increasing in terms of both quality and quantity based on women's advance into society

● Recently, the number of children waiting to go to a daycare center is increasing.

Changes in the number of waiting children and capacities of day-care centers



The number of children waiting as of April 2009 is 25,384. Among them, 82% are younger children (0-2 years old).

(Source) MHLW

● In line with the diversification of working styles, the needs are also diversifying and now include nursing on holidays and at night, or nursing children while ill and after illness. However, the needs are overwhelming the supply.

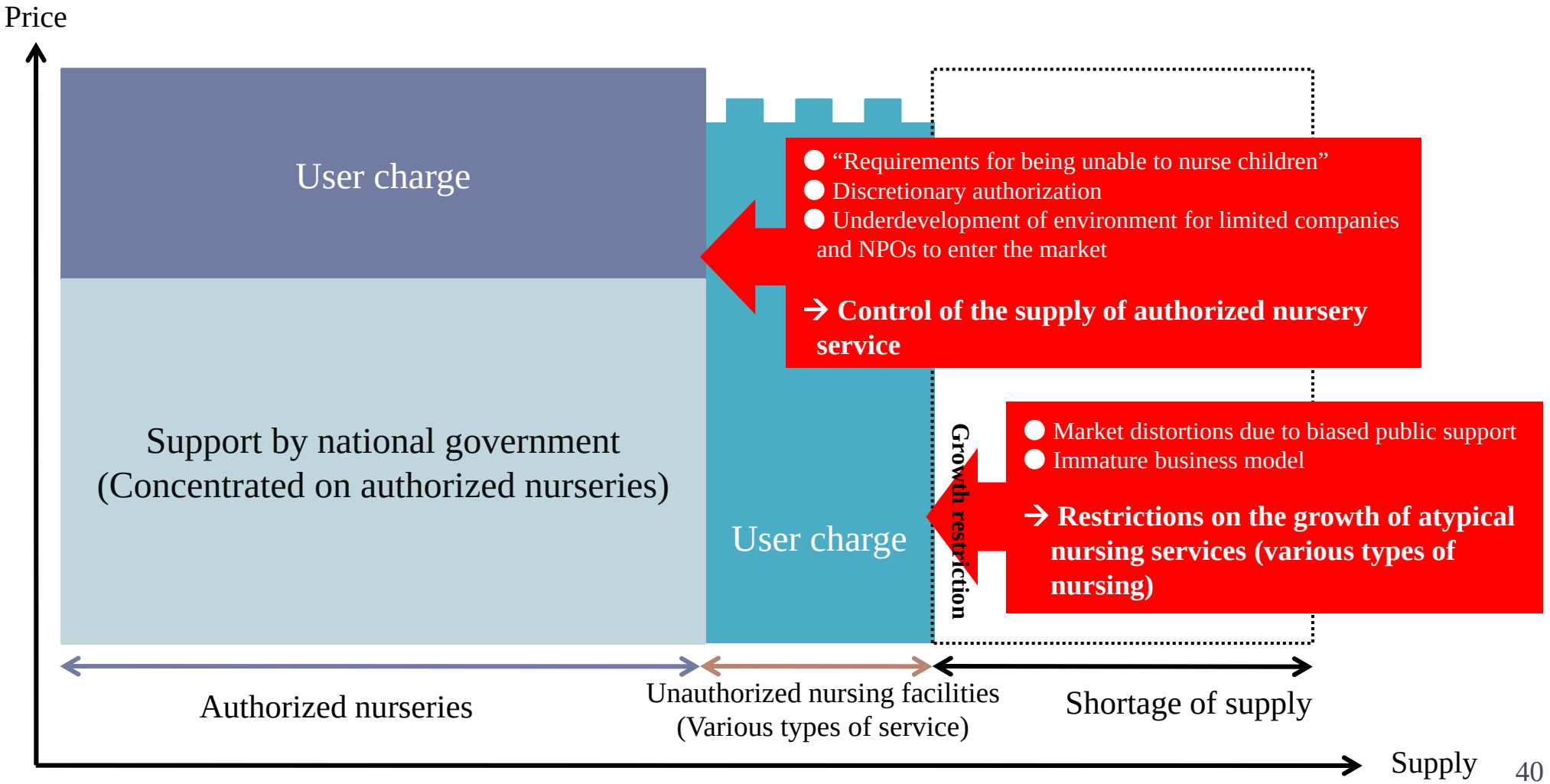
Approaches to offer various types of nursing

Nursing on holidays	● 3.8% of authorized nurseries ● 0.48 locations per local municipality
Nursing up to 10 p.m.	● 0.32% of authorized nurseries ● 0.04 locations per local municipality
Temporal nursing of children while ill and after illness	● One location per 2,714 children going to authorized nurseries ● 0.41 locations per local municipality

(Source) Materials from MHLW

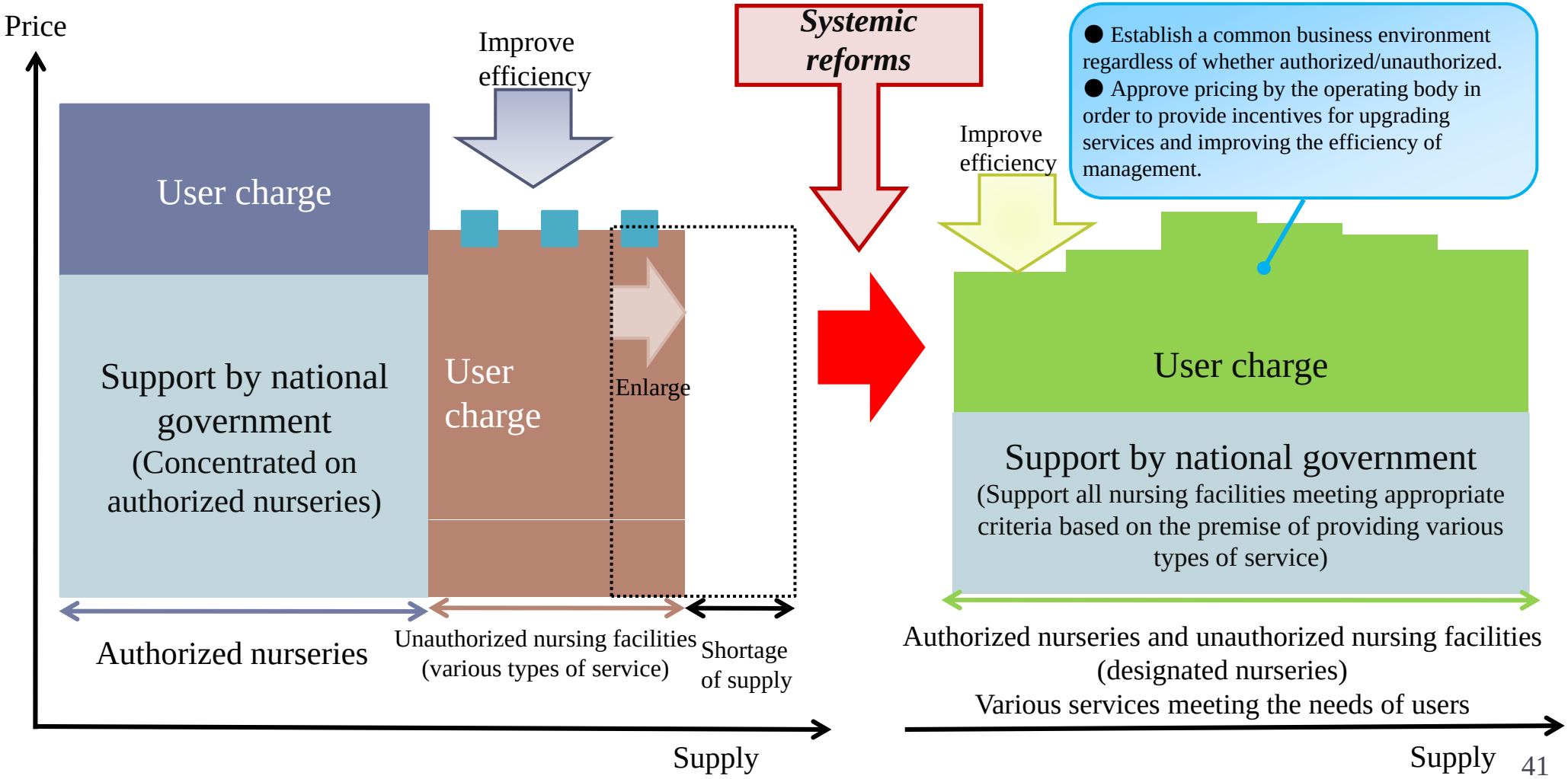
✓Problems of supply structure regarding day-care services

- Authorized day-care centers rendering services mainly to those working in an ordinary style receive generous public support.
- The level of public support to unauthorized nurseries meeting various needs remains low. Because the fee for use is high, people abandon the plan to use services provided by these nurseries, which results in the increase of the number of waiting children.



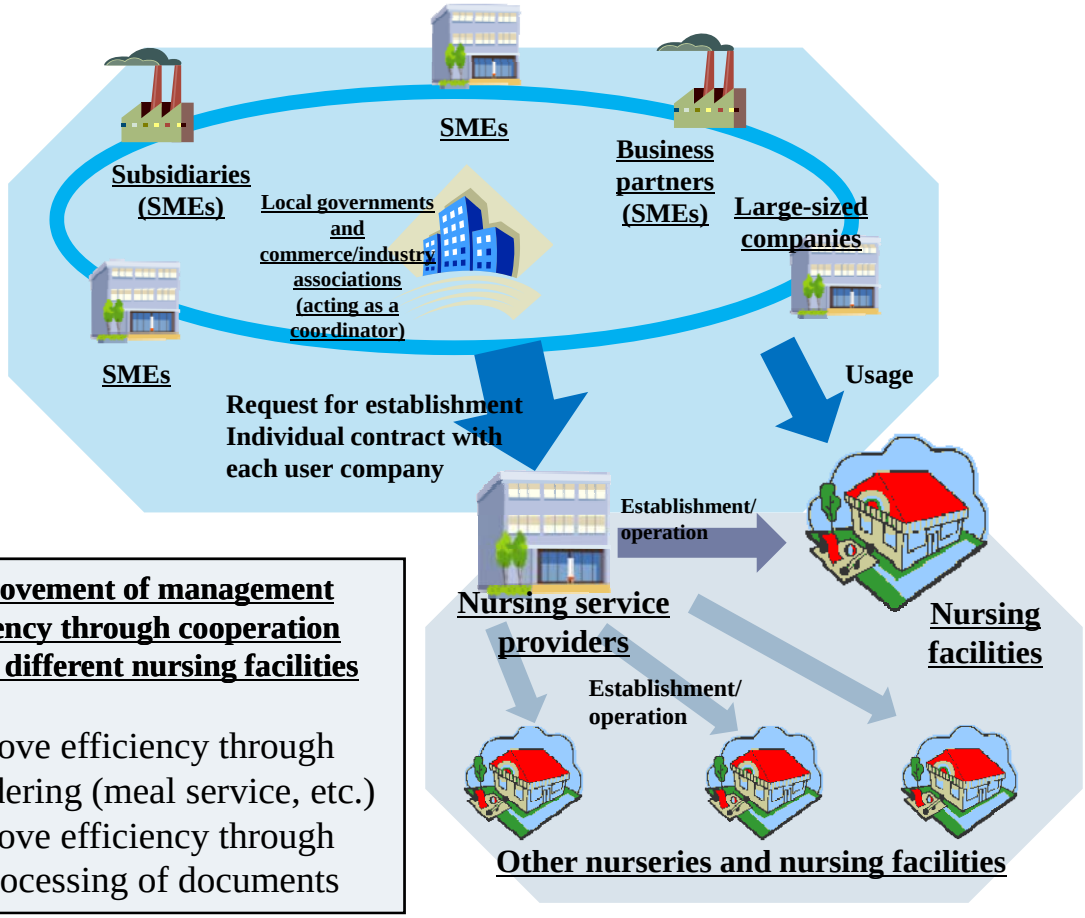
✓Direction of the reform of nursing service supply structure

- First, improve the efficiency of the management of unauthorized nursing facilities and establish a business that is profitable even with a low fee for use.
- Then, increase public support to unauthorized nursing facilities and approve pricing by the operating body for both authorized and unauthorized facilities. While holding down government spending, realize a supply structure that can improve both the quality and quantity of services.



✓ Improve the efficiency of unauthorized nursing service through the cooperation of multiple business bases

● Improve the efficiency of management through the cooperation of multiple business bases and magnifying the size of operation.



Improvement of management efficiency through cooperation among different nursing facilities

○ Improve efficiency through joint ordering (meal service, etc.)
○ Improve efficiency through batch processing of documents

Improvement of management efficiency through cooperation of multiple business bases (Facilities established by nursing service providers)

○ Multiple business bases jointly request nursing service providers to establish nursing facilities
○ Each business base enters a contract with the nursing service provider according to its needs
○ Because costs and risks are shared among multiple business bases, the system can be introduced also at SMEs

✓ **Establishment of agreement clauses that also coordinate interests among relative parties**
✓ **Review of the targets of public subsidies**

✓ **Review the system to enable meals delivered from outside**
✓ **Identify common items for application work format**

(Reference) Excerpt from Visions for Children and Child-raising (Cabinet Decision, January 29, 2010)
■ *Providing various types of nursing services*
In order to meet nursing needs according to the diversification of working styles, it is intended to provide increased nursing services of wider variety, including extended nursing, holiday nursing, nighttime nursing, nursing of children while ill or after illness, ***nursing within business bases including joint establishment of nursing facilities by multiple companies****.*