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## CHAPTER I Ichikawa's Healthy City Program

#### 1. The conception

Based on the Constitution of the World Health Organization (WHO), which states that "the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being," Ichikawa, a city where health is respected as one of its basic visions, has established the Healthy City Program, which aims to create a Healthy City where physically healthy and mentally enriched citizens will live. This aim not only seeks the improvement of physical health conditions, but also of various health determinants, such as a good living environment, social systems, and culture.

In other words, Ichikawa is determined to create a city where all its citizens

- are physically and mentally healthy	< <i>Body &amp; Mind&gt;</i> →	Promoting the people's health
- live in a pleasant and comforting environment	<town> ¬</town>	Creating a
- cooperate with one another within their local comm	nunity < <i>Society</i> >	supportive environment
- are able to cultivate high spirits and develop a rich	culture < Culture>	for health

## 2. The objective of the program

As Ichikawa participates in the WHO Healthy City Program, Ichikawa's Healthy City Program will promote its policies to improve the health of its citizens; at the same time, it will clarify the current health status of its citizens and define the determinants that affect health conditions. The program will also investigate ways to improve and overcome health issues in the future.

Ichikawa's Healthy City Program to promote the Healthy City Project includes

- basic ideas and goals
- a systematic scheme and framework
- an organizational structure
- policies (action plans and model projects)

## 3. The features of the program

Ichikawa's Healthy City Program shows the basic ideas and the direction of a future policy to realize Healthy City Ichikawa by providing a wide range of supports for health-related activities and systematically developing a healthy city environment. Because the program fully reflects the principle of the "Ichikawa Comprehensive Plan," it is necessary for Ichikawa to reassess the existing citywide initiatives and to coordinate city planning and other health and welfare policies that have already been carried out.

Assenting to the WHO Healthy City Program, Ichikawa will advance Ichikawa's Healthy City Program in line with Regional Guidelines for Developing a Healthy Cities Project, which was published by the WHO Western Pacific Regional Office (WPRO) in March 2000. (We refer to these guidelines as the WHO/WPRO Healthy Cities Guidelines.) Healthy City Programs conducted in other cities of the Western Pacific

Region will be a good milestone for Ichikawa. The city will implement comprehensive and unique Healthy City policies that are suitable for the citizens of Ichikawa while ensuring consistency with the city's existing plans and policies.

## 4. The scope of the program

Ichikawa's Healthy City Program covers all policies that relate to the health of Ichikawa citizens. The factors that significantly influence our health status are called "health determinants." According to Professor Takehito Takano of the School of Medicine, Tokyo Medical and Dental University, health determinants include education, employment, income, local economy, preventive activities, healthcare resources, urban clutter, housing, environmental quality, and cultural policies.

Health-related policies include two different fields: first is "health promotion," which directly relates to physical health; second is "environment," which also affects health both directly and indirectly. The latter field is further divided into 3 categories: (1) "town," which focuses on basic infrastructure; (2) "society," which promotes a better social system; (3) "culture," which fosters spiritual richness. In this context, Healthy City Program is a comprehensive long-term plan for a better "health in body and mind," "town," "society," and "culture" from the prospective of health.

Achieving the integration of activities is fundamental to the Healthy City Program, and intersectoral collaboration with various government institutions, as well as with nonprofit organizations (NPO) and private businesses, is critical and essential.

Actions and activities from different sections and the participation of the local community are vital to the improvement and success of Healthy City promotion.

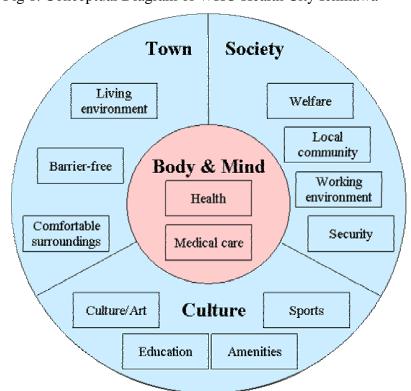


Fig 1. Conceptual Diagram of WHO Health City Ichikawa

Promoting the people's health (Body & Mind)
Creating a supportive environment for health (Town, Society, Culture)

## 5. The process to formulate the program

Ichikawa's Healthy City Program is formulated in the following two stages.

#### First Stage:

The first stage is to sort out and reassess existing health promotion plans, such as Basic Plan, Ichikawa Five-year Comprehensive Plan, and other projects enforced by departments within the municipal government. Furthermore, model projects are to be launched during this stage.

## Second Stage:

Besides the expansion of existing plans and projects, this stage will undergo necessary improvements to enhance and accomplish the tasks. Model projects will be operated on a full scale during this stage, and cooperation in various aspects among citizens will be required.

## 6. The positioning of Ichikawa's Healthy City Program

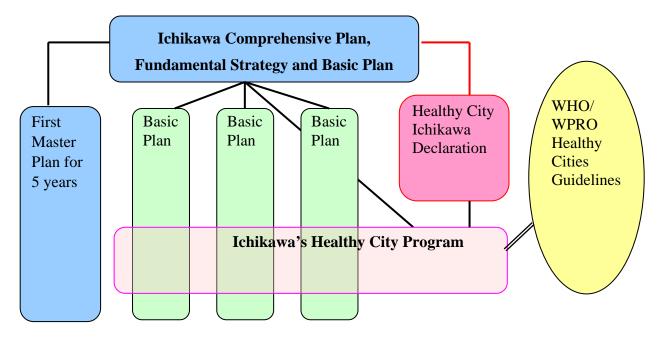


Fig. 2. Positioning of Ichikawa's Healthy City Program

Since long ago, Ichikawa has been successful incorporating health issues into a wide variety of citywide plans and initiatives.

The city has reexamined the objectives of these existing plans and policies in connection with the Healthy City Program to improve the health status of citizens by incorporating health considerations into them. A reassessment of the plans in progress has dual benefits because it must not only avoid a duplication of efforts and resources, but also help to reveal deficiencies in ongoing initiatives with respect to health concerns. The following table demonstrates how each plan was reviewed from a Healthy City prospective.

Table 1. Ichikawa's Plans relevant to the Healthy City Program

	Name of Plan	Duration	Objective	Relevancy to Healthy City Program
1	Basic Plan for a Gender– Equal Society	Sept. 2002 - 2025	Realization of the independence of men and women and a cooperative society by enhancing women's role in society	Lifetime support for women's health
2	Health Care Service Plan	1998 - 2005	Settlement and promotion of concrete measures to provide effective and efficient health-care services that can flexibly meet citizen demands	• Substantial and comprehensive health— care services that include health promotion, prevention of diseases, medical checkups, medical treatment, and rehabilitation
3	Community Welfare Plan	2003 - 2007	The creation of a safe community where all citizens can fulfill a high quality of life in socially independent ways through community participation	Promotion of local welfare activities and development of systems to support these activities
4	Long-term Plan on Measures For People with Disabilities	1998 - 2007	Enabling disabled people to exert their abilities and play a role in society	• All measures to support the independence of the disabled are contained. The four major measures are: (1) the setup of a general consultation counter; (2) the establishment of a support center for job placement for the disabled; (3) the establishment of a local support center; (4) the preparation of a barrier-free welfare map
5	Health and Welfare Plan for the Elderly	2003 - 2007	Creation of a society in which people can appreciate health and long life and live comfortably and safely	<ul> <li>Lifetime health promotion</li> <li>Assisting people to lead fulfilling lives</li> </ul>
6	Elderly Care Insurance Plan (second phase)	2003 - 2007	Establishment of a system that enables elderly citizens who need nursing care to live in a community where they have lived for a long time	Policies to improve the quality of life for senior citizens

	Name of Plan	Duration	Objective	Relevancy to Healthy City Program
7	'Angel' Plan	1999 - 2009	Support for children and child-raising	Policies related to raising children
8	Education Plan	Jan. 2001- (revised in July 2003)	Enabling children to study voluntarily and to become independent social adults as a result of what they have learnt	Promotion of health of body and mind throughout life
9	Vision for Cultural Promotion	2003 - 2025	Developing a community through the promotion of arts and cultures uniquely identified in Ichikawa and encouraging the creation of new cultural products and activities	A leading program designed to enable Ichikawa citizens to feel pride and affection for the city.
10	Basic Plan for Environment	2000 - 2010	Implementation of environment-related policies to pass on to the future generation a city enriched with nature and culture	All measures related to the preservation and improvement of the environment
11	Basic Plan for Greenery	2004 - 2025	Implementation of general and comprehensive measures to preserve and increase the city's green area	<ul><li>Building parks in urban areas</li><li>Securing green areas</li></ul>
12	Master Plan for Urban Development	2004 - 2025	A basic policy to create a safe and secure urban environment from the perspective of "healthiness in an urban area," while taking full consideration of the environment, culture, economy, and landscape	<ul> <li>Safe environment (disaster-prevention, crime-prevention)</li> <li>Comfortable space (landscape)</li> <li>Pleasant environment (universal design)</li> </ul>
13	Basic Plan for Household Waste Management	2002 - 2011	Aims to reduce household waste and realize a sustainable, recycle-oriented society	Cleaner city     Recycle-oriented city
14	Basic Concept for a Barrier-Free Transportation System	Oct. 2003 - 2010	Urban planning for a people-friendly city and the realization of barrier-free major transportation stations and passageways to public buildings	<ul> <li>Expanding a barrier-free public transportation system and facilities</li> <li>Building roads that are friendly to people</li> </ul>

	Name of Plan	Duration	Objective	Relevancy to Healthy City Program
15	Vision for the Promotion of Commerce and Industry	2001 - 2011	Guidelines to promote the development of industry by indicating the present conditions and the possibilities of commerce and industry	<ul> <li>Development of shopping streets that focus on the local community</li> <li>Urban development that coexists with environmental preservation</li> <li>Coexistence between industry and citizens</li> </ul>
16	Comprehensive Plan for the Transportation System	2004 -	Basic and long-term policies for the public transportation system based on the idea of joining various means of transportation as one integral system	• Private businesses and municipal government working together to establish and enhance transportation policies through cooperation to support citizens' daily lives by reducing burden on the environment, improving convenience, and increasing options in public transportation
17	Regional Disaster Prevention Plan	2000 -	Policies on safety and disaster-prevention measures for citizens	Protecting citizens' lives and property as well as the community's resources from earthquakes and other natural disasters by enhancing cooperation among citizens, municipal governments, local businesses, and organizations for disaster prevention
18	Disaster-Prevention Urban Development Plan	2004 -	A plan to reinforce the structural safety of the city against earthquake disaster, aiming to minimize the damages to residents, the environment, and the economy  • Short- and long-term measures.  • A plan to reconstruct the city following any occurrence of disaster	<ul> <li>Building a disaster-resistant urban infrastructure</li> <li>Securing the safety and lives of citizens</li> <li>Developing a safe living environment</li> </ul>

	Name of Plan	Duration	Objective	Relevancy to a Healthy City Program
19	Comprehensive Plan to Utilize the Edo River	2000 -	Promotion of effective usage of the Edo River	Development of a waterfront area along the Edo River as a place for recreation and relaxation, providing cycling roads, rows of cherry trees, and various waterfront events
20	Basic Plan for the Ichikawa Sewerage System	1988 -	Maintain high water-quality standards and improvement of the living environment	Systematic implementation of a sewerage system in urban areas
21	Wastewater Countermeasure Plan	2002 - 2012	Taking countermeasures against domestic drainage to restore clear water at Mama river	Alleviate the contamination of domestic drainage and improve the water quality of the river
22	Basic Plan for the Promotion of Sports	2004 - 2014	Promotion of a broad range of sporting activities for citizens to enjoy throughout life	Promote sports as lifelong activities
23	Basic Plan for the Landscape	2004 -	Basic idea and concept to carry out the urban development of a superb city landscape in cooperation with citizens, yet maintain the uniqueness of the city (Nature and culture)	<ul> <li>Carry out urban development that will enable citizens to feel pride and affection for their community and develop a desire to live there for a long time.</li> <li>Comfortable and lively city through good living environment and strong economy</li> </ul>
24	Traffic Safety Plan (7 <sup>th</sup> phase)	2001 - 2005	Implementation of a comprehensive policy on traffic safety	<ul> <li>Educate pedestrians on traffic safety</li> <li>Take safety measures in regard to the traffic environment</li> <li>Promote these measures in coordination with citizens and organizations related to traffic safety</li> </ul>

	Name of Plan	Duration	Objective	Relevancy to Healthy City Program
25	Master Plan for Housing	2003 - 2012	Reexamine the existing housing policy and develop a new one by reviewing measures over an aging society with fewer children and a utilization of existing housing perspectives	<ul> <li>Develop a healthy and safe housing environment</li> <li>Develop a safe and pleasant city and housing for the residents</li> <li>Develop an eco-friendly housing and city</li> </ul>
26	Guidelines for the Preservation of the Natural Environment	2004	Aiming for the coexistence of human beings and nature.	<ul> <li>Preserve and revitalize the natural environment, observing the characteristics of the community</li> <li>Enforce eco-friendly development</li> </ul>
27	Guidelines for the Development of a Crime-Free Community	2004	Establish basic guidelines and concrete measures to promote citywide crime prevention	Enhance the safety and security of the community
28	Basic Plan for the Development of a Crime-Free Community	2005 -	Promote and implement citywide crime prevention measures by the establishment of a well-planned and comprehensive basic plan	Enhance the safety and security of the community

## 7. The system and duration of Ichikawa's Healthy City Program

## (1) The program's system

Ichikawa's Healthy City Program consists of a "basic concept," a "plan," a "promotion plan," and "model projects."

The basic concept defines the basic principle, the courses of policy measures, and the applicability of the Healthy City to the context of Ichikawa.

The plan systematically shows the major policy measures in line with the basic concept. The target is for the year 2010.

The promotion plan is the driving force of Ichikawa's Healthy City Program, leading a variety of policies and plans from the perspective of the Healthy City concept. Based on these promotion plans and through use of the city's unique attractiveness, relevant projects will be systematically and comprehensively implemented to enhance the program. This is targeted for the year 2010.

Various model projects actualize the momentum of Ichikawa's Healthy City Program.

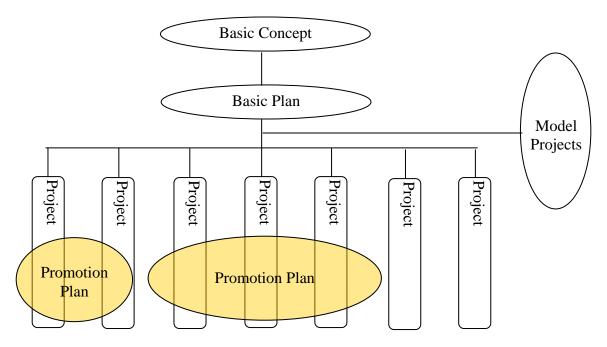


Fig. 3. System of Ichikawa's Healthy City Program

#### (2) The program's duration

Ichikawa's Healthy City Program started in 2004 and is targeting completion by 2010, identical to that of the "Ichikawa Comprehensive Plan" and the "Ichikawa Second Fiveyear Comprehensive Plan." Therefore the project has a seven-year target span for achievement. (If the "Second Five-year Comprehensive Plan" is shortened to three-year planning, the Healthy City Program would be shortened accordingly.)

The contents of Ichikawa's Healthy City Program will be reviewed as necessary upon changes in social and economic conditions.

Table 2. Schedule for Ichikawa Master Plan & Healthy City Program

	Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2025
uı	Basic Concept												
r Plan	Basic Plan												
Master	1 <sup>st</sup> 5-vear Plan												
2	2 <sup>nd</sup> 5-vear Plan												
ty	Healthy City Image												
y Ci	Basic Plan												
Healthy City Program	Model Project					\							
Ĥ	Revised Program					*							

#### 8. The mechanism to promote Ichikawa's Healthy City Program

The integration of citizens, private businesses, and municipal government is the fundamental mechanism of the Healthy City Program. To ensure interdepartmental collaboration and to advance the program efficiently, two committees were set up. Furthermore, international liaison with WHO Alliance for Healthy Cities and domestic interchange with other cities are highly encouraged.

### (1) Municipal Committee for Promotion

In July 2003, a preparatory team was formed within the Planning Department and conducted research on a Healthy City. Soon afterward, the Municipal Committee for Promotion of Healthy City Ichikawa was established in December 2003. Chaired by the mayor of Ichikawa, this committee has been working toward municipal-wide vision development and administrative coordination.

In July 2004, a subcommittee consisting of deputy managers was set up to reinforce the organization within the municipal government. Moreover, a new section in charge of promotion was established in the Planning Department in April 2004 to fortify the secretariat's functions.

#### (2) Promotion Committee of Citizens and Private Businesses

In December 2003, the Multi-sectoral Committee for Promotion of Healthy City Ichikawa was formed, consisting of citizens and private businesses from various fields. This committee was established to achieve the goal of realizing a healthy city that the citizens of Ichikawa could be proud of.

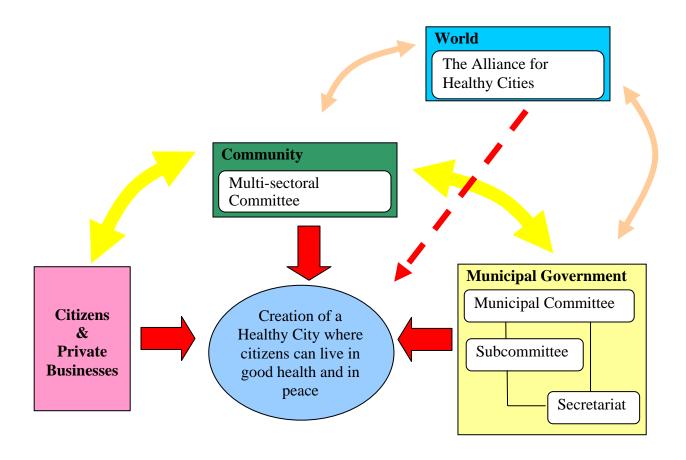


Fig. 4. Mechanism to promote Ichikawa's Healthy City Program

#### **CHAPTER II**

## A Process Evaluation of Ichikawa's Healthy City Project

## 1. WHO Western Pacific Regional Guidelines for Developing a Healthy Cities Project

The Regional Guidelines for Developing a Healthy Cities Project (WHO/WPRO Healthy Cities Guidelines) was established to support the development of Healthy City activities in the WHO Western Pacific Region. The WHO/WPRO Healthy Cities Guidelines consists of five elements: "definition," "major lessons learnt from regional experiences," "generic approach," "development of action plan," and "monitoring and evaluation." Because circumstances differ among cities, it is not always necessary to adapt all guidelines to every program.

Although Ichikawa has already had some health promotion plans of its own, it has decided to follow the WHO/WPRO Healthy Cities Guidelines to further enhance the health of its citizens.

Taking note of the major lessons learnt from regional experiences, Ichikawa is developing its promotional approach and plans in line with the WHO/WPRO Healthy Cities Guidelines in order to gain momentum to the program while maintaining uniqueness.

The WHO/WPRO Healthy Cities Guidelines introduced "lessons learnt from the past experiences of the Healthy Cities" in the Western Pacific Region. Following are the summaries of these lessons:

- a. Regional Diversity of Healthy Cities

  The challenges and approach to a Healthy City differ according to one's regional economy, local history, culture, and political situation.
- b. Make the best use of the existing structures and resources and build on existing city initiatives
  - A new Healthy City Project should review relevant existing initiatives and integrate them into the project as much as possible.
- c. Strong political support for coordination and resource mobilization
  Political support is essential to cooperation across sectors and an effective utilization
  of resources in order to implement a Healthy City Project.
- d. Need for well-coordinated structure and efficient secretariat

  Placement of the secretariat is a necessity to encourage various sectors to collaborate
  and enhance involvement in town development.
- e. Proactive involvement of the community
  It is vital that local organizations take part in every phase of the Healthy City Project proactively.
- f. Effective leadership

  For an implementation of sustainable and efficient projects, a consistent leader who can collaborate with various sectors and communities will play an important role.
- g. External support and interaction
  External support from WHO and similar other international partner institutions along with interactions with other cities will contribute to the development of a Healthy Cities Project.

- Need for short-term achievements in long-term goals
   Many of the goals in the improvement of health and the environment cannot be accomplished in the short term. To achieve a long-term goal, set a short-time goal, and its accumulated accomplishments will eventually lead to long-time achievements.
- i. Ensuring sustainability of Healthy Cities initiatives
  - Strong political support
     A politically supported environment is necessary to promote the Healthy Cities Project.
  - Community reliance
     A self-relying community where citizens mobilize and manage local resources and become independent of external resources.
  - Demonstration of concrete achievements
     Sustainability depends on retaining the concept and vision of Healthy Cities and demonstrating concrete achievements.
- j. Need for process evaluation, monitoring, and indicators
   It is important to undertake process evaluation in order to assess the effectiveness of the project activities and to develop future plans of action.

## 2. The process evaluation of Ichikawa's Healthy City Project.

The WHO/WPRO Healthy Cities Guidelines proposed the following three steps to develop a healthy city.

- Phase 1: Promotion of awareness of the Healthy City concept and approach. Establishment of an intersectoral committee and gaining strong support from the municipal government.
- Phase 2: Development of an organizational structure, working mechanisms, city health profile, action plan, and program framework
- Phase 3: Implementation of plans. Development of sustainable mechanisms to ensure the lasting promotion of a Healthy City Program.

At Ichikawa, the progress in each step of the three phases of a Healthy City development process was evaluated. The following table shows the results of this evaluation of Healthy City Ichikawa as of March 2005.

Table 3. Development of Healthy City Ishikawa

	Items indicated in WHO/WPRO Healthy Cities Guidelines	Process evaluation of Healthy City Ichikawa
<f< td=""><td>Phase 1&gt;</td><td></td></f<>	Phase 1>	
1	Promote awareness of a Healthy City concept and approach • Explore the concept and approach.	Under the strong leadership of its mayor, Ichikawa will undertake research and study about Healthy Cities and learn from other
2	<ul><li>Establish an intersectoral committee</li><li>Set up a committee with local members from various fields, and prepare for the Healthy City Project.</li></ul>	advanced Healthy Cities worldwide in order to create Healthy City Ichikawa, which will ensure the health and happiness of its citizens.
3	<ul> <li>Build support mechanisms</li> <li>Make efforts to gain support from the municipal government, which holds a crucial role in the Healthy City Project.</li> </ul>	
4	Gain strong support from the municipal government • Political support is vital for the Healthy Cities initiative.	

<f< th=""><th colspan="6"><phase 2=""></phase></th></f<>	<phase 2=""></phase>					
1	<ul> <li>Establishment of promotion committee</li> <li>Set up a secretariat to support this committee. (For the effectiveness of the project, the committee should consist of intersectoral members such as government officers, private businesses, and representatives from the local community.)</li> </ul>	For coordination and decision making, the Municipal Committee for Promotion of Healthy City Ichikawa and its subcommittee will be established within the city administration. Furthermore, a Multi-sectoral Committee for Promotion of Healthy City Ichikawa will be set up to take proactive activities. To support these committees, a secretariat is established within the city's administrative structure.				
2	<ul> <li>Development of city health profile</li> <li>A city profile, created intersectorally, will provide a comprehensive view of the status of the city and the environment and will outline health determinant factors.</li> </ul>	Ichikawa will develop a new city profile based on the existing information, referring to Annex 2 of the WHO/WPRO Healthy Cities Guidelines. This profile will be a foundation for Ichikawa's Healthy City Program.				

	Items indicated in WHO/WPRO Healthy Cities Guidelines	Process evaluation of Healthy City Ichikawa
3	<ul> <li>Development of action plan for Healthy City Project</li> <li>This plan will reflect the priority issues identified in the city health profile. (Integrate activities as much as possible at this stage.)</li> </ul>	Clarify and prioritize issues in the city health profile and develop action plans. Implement the plans by integrating existing activities and/or achieve uniformity.
4	<ul> <li>Integrating activities at the basic environment for wider influence</li> <li>The activities at the basic environment, such as schools, workplaces, and hospitals, should be integrated from a health perspective. The activities in such an environment have a great effect on health, and if actions are taken to improve this environment, it will support health accordingly.</li> </ul>	Based on the result of a city profile, a basic environment will be selected that can perform as a model and investigate measures for promoting Ichikawa's Healthy City Program. Set up a comprehensive goal and enhance participation of the local community at the launch and at the planning stage of this model project.
5	• •	To demonstrate Ichikawa's strong commitment to a Healthy City, announce a Healthy City Declaration to the public. Familiarize the Healthy City Project by providing information through a newsletter and a Web site. The Promotion Committee will establish clear and comprehensible action plans and put them into practice. The committee will also conduct intersectoral activities in collaboration with people from many different fields and spread the Healthy City concept.
6	<ul> <li>Expansion of coverage of the Healthy City Project</li> <li>Expand the coverage of the project by combining human resources, funds, and technology through participation by various organizations and institutions.</li> </ul>	To secure human resources and enhance fiscal efficiency, Ichikawa will interact with other healthy cities and international organizations like WHO, learn lessons from other cities, and collaborate with local communities for further promotion.

	Items indicated in WHO/WPRO Healthy Cities Guidelines	Process evaluation of Healthy City Ichikawa
<p< td=""><td>hase 3&gt;</td><td></td></p<>	hase 3>	
1	<ul> <li>Implementation of plans and activities</li> <li>The activities are implemented by various organizations and/or the local community. Examples of these activities are environmental management projects and illness prevention in particular environments.</li> </ul>	Split the healthy city policies to include two categories: (1) health promotion and (2) environmental improvement. Undertake relevant promotion activities for each of the four factors, which are "body and mind," "town," "society," and "culture."
2	<ul> <li>Monitoring and evaluating the implementation</li> <li>Manage the process and have it evaluated. The feedback will be used to check the activity's effect on health. This can be used to revise activity as necessary.</li> </ul>	After conducting thorough research and study, set up a target and/or indicators to monitor and evaluate the process.  To analyze the health impact, conduct a detailed study to select an indicator that is direct and fairly easy to quantify.
3	<ul> <li>Revising the action plan as required</li> <li>The action plan should be revised and amended as necessary, depending on changes of conditions and project assessment results. Examine the latest update of the city information health profile, and review/amend the action plan as needed.</li> </ul>	Based on monitoring and evaluation, the plan should be revised if necessary because of the change of conditions. Upon completion of the 1 <sup>st</sup> action plan, examine and review it according to the latest conditions.
4	<ul> <li>Developing sustainable mechanisms</li> <li>Exchange of experience. To assure sustainability, the following is essential: political support, intersectoral collaboration, community participation, and domestic and international networking.</li> </ul>	Actions such as Healthy City Declaration, public announcement of administrative policies related to a Healthy City, establishment of a committee with intersectoral members, and participation in the Alliance for Healthy Cities ensure the sustainability of the program throughout the future. Establish domestic and international networks by joining the Alliance for Healthy Cities.

#### **CHAPTER III**

## Improving the Health and Quality of Life of Ichikawa's Citizens

#### 1. Health determinants

For some time now, Ichikawa has assimilated health perspectives in its plans and policies over a broad range to protect and improve the health status of its citizens. In this conventional context, however, the administration has been supporting only the health activities of each individual on the assumption that health is a personal matter. But in modern urban life, there are many health factors that the individual citizen can neither control nor resolve by self-effort alone. Therefore WHO does not regard health as a problem of each individual and has established the basic concept of improving the urban environment itself.

The factors in our everyday lives, which significantly influence our health status, are called "health determinants." They include factors that are derived from physical, social, and economic environments, such as education, employment, income, local economy, preventive activities, healthcare resources, urban clutter, housing, and environmental quality. The following diagram shows the correlation coefficient of health determinants and individual health status. As seen in this diagram, health status, placed in the center, is more or less affected by such factors as education, environmental quality, housing, and preventive activities, both negatively and positively. The influence is more significant as the figure becomes closer to one.

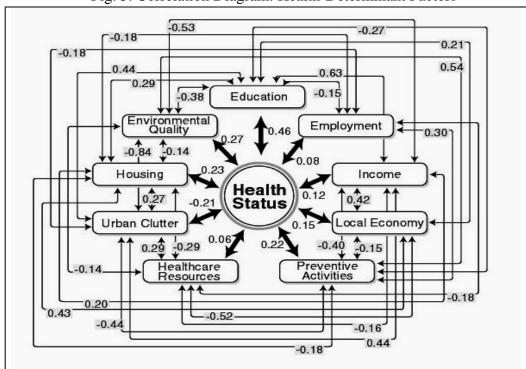


Fig. 5. Correlation Diagram: Health-Determinant Factors

[Supplementary explanation]

Health status: life expectancy, health expectancy

Education: school, lifelong education

Environmental quality: living environment, social environment

Housing: housing condition

Urban clutter:progress of urban developmentHealthcare resources:medical facilities and institutionsPreventive activitieshealth checkups, health education

Local economy: industrial structure, size and diversity of business

*Income*: level of income

*Employment*: unemployment rate, employment conditions

As proven in the previous diagram, the citizens' health status is influenced by various health determinants. Conditions of individual health determinants fluctuate in any society and thus health status of the population is affected by these changes. Therefore if the health of individuals is to be ensured, the improvement of the environment that surrounds its citizens in terms of living and social conditions is highly significant and necessary.

In terms of education, for example, a systematic education is necessary at schools in order to lay the groundwork for a physically and mentally healthy and safe life for the children. In terms of labor and employment, to ensure that people undertake work, we must harmonize health and labor factors. Furthermore, there are many other daily life issues that should be improved, such as food safety, supplies of clean water, alleviation of air pollution, improvement of housing conditions, and improvement of quality in health and medical services.

#### 2. Analysis of health resources, existing activities, and priority issues for the future

#### (1) Public health and medical services

Until a few years ago, the Japanese administration on public health gave priority to secondary prevention, focusing on early detection and early treatment, and worked to establish a periodic medical checkup system. However, in recent days this policy has changed, and the idea of primary prevention has been prevailing, focusing more on the improvement of lifestyle to prevent illness and diseases that eventually will delay their progression. Reflecting this change, a new concept of "lifestyle-related diseases" was introduced in December 1996 in a report compiled by the Public Heath Council of the Ministry of Health and Welfare to replace the phrase "adult diseases."

In Ichikawa, group medical checkups for stomach cancer were started in the 1960s, followed by checkups for uterine cancer, high blood pressure, and breast cancer. Since the Elderly Health Law took effect in 1982, checkups for various cancers and basic health checkups have been conducted. The percentage of citizens who have had these checkups is higher in Ichikawa than in neighboring cities.

In the prior years, the second prevention, focusing on early detection and early treatment was the main tactics to prevent adult diseases, such as high blood pressure, diabetes, cancer, and heart diseases.

However, because of the changes in lifestyle and the emergence of the aging society, the disease structure itself has changed. Lifestyle-related diseases such as cancer, heart

disease, and cerebral vascular disease have become dominant, accounting for more than 60% of causes of death, according to the 2001 survey of the Ichikawa Public Health Center.

Lifestyle-related diseases is defined as a group of diseases deeply related to dietary habits, physical exercise, rest, smoking, and drinking habits. Therefore based on this concept, public health policy needs to implement primary prevention measures to prevent their appearance by improving lifestyle, such as proper dietary habits, appropriate exercises, quitting smoking, moderate drinking, and stress reduction. In other words, the society must strive as one to develop a healthy environment, which could lead to the prevention of lifestyle-related diseases.

Furthermore, when a person becomes ill, it is also important to establish a comprehensive medical structure and institution by which the patient can receive basic to highly developed medical care as tertiary prevention measure that will ensure all citizens the resources to restore their health conditions to the best extent possible.

Concerning emergency medical care services, Ichikawa has established a three-grade system depending on patient symptoms. Primary emergency medical care deals with patients who are slightly ill or need to be examined on holidays or during night hours. Secondary emergency medical care deals with patients who need to be operated on or hospitalized. Critical cases such as cardiac infarction, stroke, and head injury are treated in tertiary emergency medical care.

By differentiating the functions and roles of each medical institution, this emergency system fulfills its functions to treat patients on primary to tertiary levels and to conclude emergency medical services within the daily local community.

The Ichikawa Emergency Medical Clinic is engaged in primary emergency medical care on holidays and during night hours all year, providing internal, surgical, and infantile treatment. For secondary medical care, seven medical centers work on a rotating basis, providing internal and surgical secondary medical care in the off-hours. Another nine medical institutions are also registered as providers of secondary medical care. When these institutions and hospitals cannot cope with the conditions of patients, four general hospitals will provide semitertiary emergency medical care, and the Funabashi Municipal Medical Center, which is officially designated as a tertiary emergency critical medical center, will provide tertiary emergency medical care.

One tertiary emergency critical medical center is to exist for every one million population. However, the Tokatsu Nambu Public Health and Medical Service Region, which consists of the cities of Ichikawa, Urayasu, Funabashi, Narashino, Yachiyo, and Kamagaya, is an area of highly dense population. This region has only one tertiary emergency critical medical center for its 1.5 million people.

Further, the Hanshin-Awaji Great Earthquake was a good opportunity to review Ichikawa's crisis management. Emergency medical care during natural disaster has become another issue to be resolved.

#### (2) Infrastructure, environment, and barrier-free mobility

Besides public health and medical service factors, urban environment is also an important factor for the improvement of health status. The definition of urban environment includes the development of parks in the urban area; the preservation of greenery, air and water cleanliness; a reduction of noise pollution; waste management; road development; traffic control; water supply; and sewerage systems.

In October 2003, Ichikawa conducted an Internet survey to understand the health-related demands of its citizens. For the question "what facility(s) do you want more or improved?" 56.2% of adult respondents demanded a reinforcement of park development, 39.5 % answered promenade (a place for strolling), and 39.1% were interested in sports facilities. (Multiple replies were acceptable.)

Among the younger generation replies, 51.6% wished for playgrounds, followed by 42.4% wanting cycling roads and 39.8% hoping for safe sidewalks, revealing that most people, both adults and children, want to have more parks in Ichikawa.

There are 693 greenery areas in Ichikawa, totaling 382 hectares (944 acres). (This includes urban parks, public facilities, and private facilities.) Urban parks occupy 345 of the 693 greenery areas. The total area of these parks is 124.2 hectares (307 acres). This shows that there are 2.7 square meters (3.2 square yards) of park space for each resident in Ichikawa, which is merely about a fourth of the 10 square meters (about a third of 10 square yards) standardized in the law. Compared with the national and prefectural averages and the status of neighboring cities, Ichikawa is in poor condition. Effective measures for the development of greenery are much in demand.

Under these circumstances, the Basic Plan for Greenery was set up in March 2004 to preserve, increase, and develop greenery. It is regrettable that that valuable natural environment in the city has been damaged by urban development.

Ichikawa also has guidelines for the preservation of natural environment. The municipal administration and citizens will continue to make efforts and work cooperatively to restore and preserve the natural environment.

Aiming to establish a recycle-oriented society, Ichikawa has been promoting recycling and encouraging citizens to separate house waste into 12 categories. In the present condition, in which Ichikawa has no final garbage disposal facilities, further measures to promote waste reduction are essential.

Concerning roads and traffic in Ichikawa, there are currently 4 national roads, 11 prefectural roads, and 2,997 municipal roads. Despite the urban plan, which includes 117.54 km (72.87 miles) of new/improved/or new and improved roads over 40 routes, only 42%, equivalent to 49 km (30 miles) has been completed. The main problems with traffic are that very few arterial roads run north and south and many roads merge with Route 14, causing congestion with the heavy traffic at these intersections.

Roads along the Edo River and the Old Edo River are often congested. The Keisei Line railroad crossing is also an obstacle to traffic. To avoid traffic jams, many drivers enter residential areas and thus affect the residential environment. Also, air pollution caused by automobile exhaust remains an issue. The implementation of regulations applying to this exhaust problem simultaneously with comprehensive traffic policies is being demanded.

With the enactment of a law to promote a public transport system for the elderly and the handicapped, a so-called Traffic Barrier-Free Law, Ichikawa has announced the Basic Concept for a Barrier-Free Transportation System to represent the city's basic principle to promote a barrier-free environment in major transportation stations and major passageways of public facilities. Many sidewalks have been made level, and steps between sidewalks and roads have been eliminated. Continued efforts to promote a barrier-free environment are necessary.

To enhance the living environment and to ensure fine water quality, sewerage systems are being improved. In 2003, the system development area totaled 2,022 hectares (4,994 acres), which covered 287,000 residents and resulted in a sewerage coverage rate of 62%. In the future, Ichikawa will be engaged in the development of the Ichikawa major sewage line and the Matsudo major sewage line, as well as the household sewage coverage enlargement in the northern area of Ichikawa. An early and speedy development of the Edogawa First Terminal Sewage Treatment Plant is desired to cope with the increasing water volume resulting from sewerage system development to collect the increased volume of drainage.

### (3) Welfare, local community, labor environment, and security

According to the statistics of January 2002, the Japanese population will peak in 2006 at 127.7 million, after which it will decrease because of a declining birth rate. As a result, it is predicted that one of four people will be elderly.

In Ichikawa, the birth rate is 1.18, lower than the national average of 1.29. The percentage of elderly persons was 12.7% at the end of 2003, and it is predicted to be 14.9% in 2007. This is slightly lower than the national average, but it is apparent that the city is heading for an era of an aging society with fewer children.

Under these circumstances, single elderly-person households and elderly-people-only households are increasing, accelerating two-generation families. The consequence of the progression of two-generation families is that it can dilute human relationships, sometimes causing anxiety or insecurity for people: They are left without someone to discuss their problems with. Elderly people and mothers with small children might tend to stay at home and become mentally unstable because of a lack of communication in the community.

Therefore to create a cordial and affectionate society where people can live comfortably, Ichikawa has launched local activities based on the Ichikawa Regional Care System. The goal is to create a welfare community with a sense of solidarity and support.

In this system, the base promoter will be the Social Welfare Council, and local residents, municipal governments, and related organizations will play their own roles. This movement will expand citywide. Besides this system, a more comprehensive regional care system is planned to be established by integrating each activity, developing welfare resource in the local community, and networking regional information.

#### (4) Culture, arts, education, sports, and amenities

As urbanization advances and society matures, people tend to value good life more than ever.

In the poll conducted in June 2002 by the press office of the Minister's Secretariat in the Cabinet Office, people were asked which affluence they would place significance over, material or mental; 27.4% valued material affluence, and 60.7% valued mental affluence. The rest were undecided.

As a result of a longer life expectancy and a reduction of working hours, people have more free time and want to improve their quality of mental life. They are becoming more and more interested in culture, sports, and study to enrich their lives.

Ichikawa has developed institutions and expands opportunities for these activities in the fields of culture, sports, and study.

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