of a community in these ways may further reduce poverty and support 'decentralization' – the shift away from dependence on the central city government and toward more community self-reliance and self-governance. CODI has done all this through subsidiaries and the financial incentives of a communal welfare fund and communal welfare facilities; the Institute calls the process 'collective equalizing'.

Another success story has been documented by the Self-Employed Women's Association (SEWA) in Gujarat, India. SEWA has provided opportunities for self-employment, but, more, the Association has joined other like-minded organizations to form a trust dedicated to promoting housing for self-employed women. The trust aims to provide technical support, research and advocacy for its members. These combined interventions have led to improvements in health and declines in morbidity.

The Orangi Pilot Project (OPP) in Pakistan is another organization that has developed 'networks of networks' of community organizations to improve the lives of the urban poor (see also Chapter 8). Begun in Karachi's Orangi squatter community in the 1980s after the central city government failed to address the low quality of local water and sanitation, the OPP simply organized the community to improve the systems on its own. One 'lane manager' would represent 15 households on a 'lane committee'; the committee in turn would include some 40 lane managers, thus representing a total of 600 households. The growth of these networks or organizations gradually gained enough political clout to persuade the municipal authorities to release funds for constructing primary and secondary sewers – which are now serving more than 600,000 Karachi residents.

Helping local governments learn to improve urban health and thereby hold themselves accountable for healthy urban settings

Decentralization has not been confined to the power relations between urban communities and the municipalities that encompass them. Many national governments in Asia are also decentralizing: transferring decision-making and spending powers to local governments. The shift tends to make city and municipal officials increasingly responsive to the needs of the urban poor. Those officials would, in any event, be the first to feel the heat from the political implications of rising inequity in their cities. But with new powers to do something about it (and the new incentive to earn political credit for their actions), local politicians are becoming less threatened and more open to engaging with their poorest constituents to find solutions. Increasingly, local governments of cities and municipalities are holding themselves accountable for health and its determinants. (The trend is perhaps best exemplified by the mayors, non-governmental organizations (NGOs) and civil-society groups that have been recognized as 'healthy cities' champions for their efforts to improve health in the urban setting.)

Decentralization policies have enabled local governments to break free from the stranglehold of national bureaucracies and hierarchies, even if in many countries the process is incomplete and poorly supported. But because they, too, still bear responsibility, national governments need to develop clear policies and strategies to manage rapid urbanization. Health and human development should be at the centre of their agenda. The drama will continue to be one in which central governments and local communities must learn to work together to balance priorities, allocate resources and manage personnel issues, as mayors, other elected officials and health-sector professionals and administrators play a growing role in health care.

City-to-city learning

As emerging health issues take on distinctly urban features, cities themselves have much to offer one another as they develop ways to reduce health risks. Many cities have already engaged in city-to-city exchanges on such topics as trade, economic development, environmental sustainability and finance. The phenomenon, known as 'horizontal assistance', already likely amounts to a shadow economy in knowledge exchange (Blanco and Campbell, 2006). The United Nations Development Programme (UNDP) estimates that between 15,000 and 20,000 intercity links have been forged in the past several decades (UNDP, 2001). City-to-city cooperation has become a recognized field of development assistance. Anecdotal evidence as well as systemic hard data for specific cities suggest a large, latent demand for arranging such cooperation and a strong willingness to pay for it. The formation of knowledge markets – complete with databases on good practices, websites that present case studies of effective urban health approaches, clearing houses for research on healthy cities, and the like – could be highly useful to cities as they seek to solve emerging health problems.

Learning through international networks of cities

The AHC is an international organization that aims to protect and enhance the health and quality of life of city dwellers. (Two co-authors of this chapter, Nakamura and Kiyu, are affiliated with the Alliance.) AHC is an autonomous organization, though it has a close relationship with WHO (indeed, WHO confers the name 'healthy city' on cities that are 'continually creating and improving those physical and social environments and expanding those community resources which enable people to mutually support each other in performing all the functions of life and in developing to their maximum potential'). AHC was founded in 2004 with 26 member cities, and by November 2010 it had grown to 121 member cities, from Australia, Cambodia, China, Japan, Republic of Korea, Malaysia, Mongolia, Singapore and Vietnam. That steady growth by itself

reflects the high value cities place on city-to-city learning via international networks. The network fosters learning and capacity-building by publicly recognizing good practices. It has also helped cities pursue 'twinning'. For example, since 2005, Marikina City, Philippines, and Ichikawa City, Japan, have worked together to promote healthy diets and physical activity through urban planning. With WHO support, exchange visits between two twin cities enable city senior officers, technical officers, practitioners, community group leaders, teachers and children from both cities to gain insight and learn from one another.

The Asian Infectious Disease Project (AIDF) is another instructive example of city-to-city learning. Launched in November 2004 in response to the threats of SARS and avian influenza, AIDF was a health project of the Asian Network of Major Cities (initially, New Delhi, Hanoi, Jakarta, Singapore, Taipei, Tokyo and Yangon, though since that time the membership has grown). Its main contribution was to provide a mechanism for direct communication between cities about the spread of those diseases.

Working with local researchers to understand and address local problems

Solutions to local problems in cities require local evidence and the active participation of local researchers. Community participation in a research project on the health of communities living on boats in Hue, Vietnam, and research on drug abuse in Vientiane, Laos, show the importance of a community-level research capacity (Fujiwara *et al.*, 2005; Quang *et al.*, 2005). In the former case, for instance, outside researchers were unsuccessful in securing cooperation from the community. Only when local investigators joined the research teams did people begin to open up and participate. Research at the Healthy Urbanization Project of the WHO Centre for Health Development is an essential tool for understanding how the active participation of urban poor communities has affected health inequities in six urban sites. (Three of those sites are in Asia: Bangalore, India; Suzhou, China; and Kobe, Japan.) (For a more extensive discussion of one important kind of participatory action – namely, participatory budgeting – see Chapter 4).

Benchmarking against a healthy city demonstration site

Kuching City in Sarawak, Malaysia, is a healthy city demonstration site that first applied the healthy city concept to its communities in 1994. Since then more than 1,000 observers have visited Kuching City to see how a healthy city can be established. What visitors also see are 'process indicators' (such as improvements in local living conditions) and the establishment of 'elemental settings' (healthy marketplaces, schools that promote health), all attesting to the effectiveness of the healthy city approach. Senior officers of Kuching City also share their experiences at seminars, meetings and consultations with other cities.

Exchanging information with other cities in the same country to bridge language barriers

Although international networking and exchange have many benefits, language barriers can also keep local officials from learning much about the experience of foreign cities. Domestic networks of healthy cities give secondary and smaller cities a fairer chance to gain access to knowledge about healthy urban governance. For example, the Mongolian Association of Urban Centres (MAUC), established in 2003, is an NGO that demonstrates how cities can learn from each other within Mongolia.

Working with the private sector to promote health in cities

In the Asia-Pacific region, corporate social responsibility efforts directed toward improving health and reducing the vulnerability of groups in the urban setting is on the rise.

Independent media groups such as the Corporate Social Responsibility Asia Magazine provide a clearing house of information, news and reports that are relevant to business-initiated and supported projects on compliance with labor law, occupational health, environmental and health issues and the alleviation of poverty. In China, for example, a partnership between academics and NGOs, and a consortium of export-processing companies including Ford Motor Company, Gap Inc., Hewlett-Packard Company, Liz Claiborne Inc., MeadWestvaco Corporation, Pfizer Inc. and Target Corporation launched the Global Supplier Institute to offer training on management, health and safety, HIV/AIDS and other topics (Yan, 2005).

In 2002 the first Asian Forum on Corporate Social Responsibility (AFCSR) was convened by the Ramon V. del Rosario, Sr. Center for Corporate Responsibility (a center within the Asian Institute of Management). The forum now meets annually to encourage social investment by corporations in low-income housing and the delivery of health services, as well as corporate partnerships with health professionals.

Taking advantage of infectious disease outbreaks to promote healthy settings over the longer term

In the past decade outbreaks of infectious disease in Asia have prompted national authorities and ministries of health to pay closer attention to health risks and vulnerabilities created by such urban conditions as high density, crowding, increased mobility, connectivity and diversity. Both the SARS and avian influenza outbreaks led to improvements in public health infrastructure and promotion of healthy settings in Asia. Shigeru Omi, Regional Director of the WHO Western Pacific Region, nicely summarizes the positive outcomes in the book *SARS: How a Global Epidemic was Stopped* (WHOWPRO, 2006, pvii):

> SARS shook the world. By some standards, the first emerging and readily transmissible disease of the twenty-first century was not a big killer, but it caused more fear and social disruption than any other outbreak of our time... I don't know if one can decently say that SARS had a silver lining, but if it did, it was that it awakened the global public-health community from a kind of slumber... Since those days many countries and cities have invested extensively in public health... Health care workers have been drilled in infection-control measures. Better surveillance systems are in place. And research has been intensified. SARS, for all the fear and suffering it caused, has left public-health systems greatly improved.

Two tactical initiatives that emerged from the outbreaks deserve special mention. One is the Hygiene Charter, a document circulated by Hong Kong's health promotion sector while the bold and effective responses to SARS were still fresh in people's minds. Those responses had come from national governments and affected cities throughout Asia, which, despite tremendous political pressure and often adverse public opinion, mustered the political will to enforce strong surveillance, quarantine and isolation measures to control the spread of the disease. The Hygiene Charter put forward suggestions and guidelines on hygiene practices. Individuals, as well as representatives from business, industry, education, medicine and a number of other sectors were asked to sign the Charter as a pledge of their commitment to creating a new culture of hygiene in Hong Kong.

The second tactical initiative that owed its political acceptance to the disease outbreaks was the establishment of healthy marketplaces and safer food systems. The spread of the H5N1 virus in Vietnam and Hong Kong was linked to the unrestricted movement of poultry both within and between countries and, in particular, to the role of wet markets (fresh food) in that movement. Because marketplaces in Asia serve multiple cultural, economic, political, religious and social functions, closing the marketplaces was not an option. Instead, countries such as Vietnam invoked the avian influenza epidemic as a rallying cry to reform the poultry production and distribution systems. Before the epidemic, most Vietnamese markets did not have separate areas for different kinds of food. Fresh meat, fresh poultry and cooked food were often sold in the same stall. A lack of basic infrastructure for hygiene meant that the food sellers' hands were seldom clean.

Under the WHO's guidelines for healthy marketplaces, poultry sellers were given gloves, boots and aprons to protect them from the virus and prevent them from handling live chickens with their bare hands. They also underwent monthly preventative health check-ups. Most important, they were ordered to keep sick poultry out of market stalls. Sick or dead poultry were no longer allowed to be sold secretly, and an official stamp of approval was required for all poultry intended for sale. Healthy marketplaces have been successfully set up in the popular tourist area of Ha Long Bay, inspiring

public admiration from officials in Quang Ninh and Thai Binh provinces. When new markets are built, the officials say, the two provinces may decide to duplicate the measures demonstrated in Ha Long Bay.

Improving the efficiency of financing health promotion in cities

In Asia and the Pacific it is estimated that less than 10 per cent of all national health expenditures are allocated to prevention or promotion.[2] Considering the magnitude of public health challenges that could benefit from prevention and promotion, the funds available for such attention to population health are a pittance compared with what is spent on hospital services, treatments and cures for acute medical conditions. Innovations in the financing of health promotion – public health insurance and 'sin taxes' on tobacco and alcohol – can ensure better health promotion and protection for people up and down the urban social gradient.

Upping the ante for tobacco and alcohol taxes

In 2006, the Thai government approved a budget of 5 billion Thai baht (US$125 million at then-current exchange rates) to support sports and cultural events, but that was only half the story. Much of the funding for those events was to come from a 2 per cent annual sin tax on tobacco and alcohol, based on the amounts spent per year to import those products (including insurance and freight), thereby paying for appealing public events by discouraging the use of unhealthy products. (In April 2011, the cost basis for the cigarette tax was changed to the retail value of the product, making it a simple sales tax.) Today ThaiHealth spends 6 per cent of its budget on raising awareness of health issues associated with tobacco and alcohol, and conducting an annual seminar on 'Cigarettes versus National Health'. The seminar is designed to facilitate regular exchanges among researchers, campaigners and the general public. ThaiHealth has also established an academic centre to train health care workers in the risks of cigarette smoking to health, to conduct further research on that topic, and to support legal and economic measures that will help expose unethical practices by the tobacco industry. The breakthrough by ThaiHealth in taxing tobacco to discourage its use has inspired other countries in the region, including Malaysia, Mongolia, the Philippines and Tonga. All are now in various stages of setting up autonomous infrastructure and financing for promoting health.

In the Republic of Korea, a national tobacco tax accounts for 14.2 per cent of the total price of a package of cigarettes, but, under the Local Tax Law, local governments are allowed to impose additional tobacco taxes that bring the total tax to as much as 32 per cent per package. One city taking advantage of this law is Wonju City. In 2005, its local tobacco tax accounted for 19.6 per cent of all city revenue, Wonju City's second largest revenue

source. The tobacco-tax revenue was used for expanding and improving the housing supply and the supply of clean water, and providing free health care to low-income families.

Applying information technology to population health activities

Information technology can also benefit population health – by improving the efficiency of health systems, creating a more equitable distribution of health resources and providing access to information for planning and decision-making.

Geographic information systems (GIS) for city health programmes

In the Philippines, a number of local governments are leading the way in exploiting GIS technology. In the province of Capiz, for instance, a 'backyard GIS' system – running on low-end computers and using data already collected in government surveys – helped policy-makers and community members to take part in what was billed a 'Participatory Planning Budgeting Workshop'. Because provincial leaders and their constituents were looking at the same GIS picture and standing over the same GIS page, all the stakeholders had an overview of the community's infrastructure, investment plans and projects. Developing a list of funding priorities was then relatively straightforward.

In Cebu City, Philippines, the city government has exploited GIS technology to quickly identify 'disparity areas' or undertake 'poverty mapping' – graphical information displays that can call officials' attention to problem areas much more compellingly than can a written report. In health care, for instance, GIS maps enable city planners to monitor at a glance the spread and distribution of programmes for maternal and child health. Colour-coded representations of, say, the city's various *barangays* (villages) graphically and immediately show where health workers are scarce, or where infant mortality rates are high or low. This information guides policy and helps the city to direct its limited resources as beneficially as possible. Cebu officials credit GIS technology with helping them to narrow the gap between the health realities of 'disparity areas' and those elsewhere – in the larger, surrounding region or even in the nation as a whole. With GIS, officials can quickly determine where immunization is not being delivered or is still urgently needed.

Seeking to optimize the social determinants of health in urban settings

Social health issues need to be recognized and addressed in many different types of urban activities. Interventions that build social cohesion and address the social determinants of health point to a growing recognition of the links between social norms and fairer health opportunities.

Offering life skills and pre-employment training programmes to give the urban poor a fairer chance of employment

Marikina City, Philippines, has been a designated healthy city for more than 15 years; it is now recognized both locally and internationally for its successes in population health. In 2004, it embarked on a project known as 'The Marikina City Volunteer Corps', which sought to overcome social barriers to formal employment among the urban poor. The programme provides 'transformation and preparation of the poor for regular employment'. The 'volunteers' are engaged in training programmes on life skills such as how to budget a minimum wage for nutritious meals for a family of five, how to write a curriculum vitae, how to prepare for a job interview and the like. In addition, the volunteers receive health training that enables them to serve as volunteer health workers. They also get the job experience needed for them to rebuild confidence in their own ability to take on productive work – as clerks, as community health workers or as greeters for the local tourist programme. For four hours a day they earn a wage of 100 pesos (roughly $2).

The programme has helped add more than 4,000 volunteers to the city's health workforce – with an immediate, positive impact on its health systems. And though it is hard to attribute the subsequent reduction in diarrheal disease or the lower rates of dengue to this single intervention, the approach demonstrates how much local government accountability for the development of its human resources can accomplish at the municipal level. But even beyond this, Marides Fernando, a former mayor of the city, says the programme was also about 'creating opportunities for the people' – giving her constituents a greater capacity to compete in the job market. The Marikina government allots some 15 million pesos (US$350,000) a year to maintain the programme. From the perspective of the local government, the dividends, clearly, far outweigh the cost.

Implementing a fuel regulation policy to create healthier city air for all

'New Delhi was choking to death,' says Sunita Narain, director of India's Center for Science and Environment. 'Air pollution was taking one life per hour.' Bhure Lal, chairman of New Delhi's Environment Pollution (Prevention and Control) Authority, agrees: 'The capital was one of the most polluted on earth. At the end of the day your collar was black, and you had soot all over your face. Millions had bronchitis and asthma' (Perry, 2006).

For the past decade and a half, local advocates and champions of clean air from civil society have worked to pass regulations that would force Delhi's buses, taxis and rickshaws to convert to cleaner burning compressed natural gas (CNG). In July 1998, the Indian Supreme Court ruled largely in favor of the CNG proposal and ordered a ban on leaded fuel, the conversion of all diesel-powered buses to CNG, and the scrapping of old diesel taxis and rickshaws. But the powerful lobbying of bus manufacturers and oil

companies – supported by government ministers – threw up serious obstacles to implementing the law. Bus companies took vehicles off the road, stranding angry commuters. Endless queues of rickshaws formed at the handful of gas stations with CNG pumps. Oil companies trotted out scientists who claimed that CNG was just as polluting as diesel. But Narain and Lal fought back. By December 2002, the last diesel bus had left Delhi. Ten thousand taxis, 12,000 buses and 80,000 rickshaws were powered by CNG (Perry, 2006). The city now stands as the world's best test case for CNG.

Conclusions

Globalization, urbanization, decentralization, democratization and advances in information technology, among the great forces in the world's economic development of the past several decades, have created a new political space. It should come as no surprise, then, that innovations in population health affecting Asia's urban poor have been driven by players and stakeholders who have learned how to use those forces in the service of the most vulnerable populations. They have been able to create opportunities, build capabilities, achieve greater security, empower, engage and mobilize support for policies and actions that improve the urban living environment. Thus, even from the necessarily limited set of examples we have cited in this chapter, it should be clear that a strong social movement is confronting the stark inequities in cities that not only create and perpetuate themselves, but also render the poor highly vulnerable to poor health.

Our survey of local innovations leads us to highlight three strategic entry points for scaling up actions:

1 Engage with the key players of existing social movements. As in any social movement, there are recognized political leaders at all levels (local, national, global) who have gained credibility over many years of staying focused on issues. Engagement with these key actors requires an appreciation of the asymmetry of the movements and skill in maneuvering through the networks and power nodes of governance.
2 Support the creation of 'global knowledge markets' for healthier cities. In many instances, the *effective* sharing of knowledge about municipal policy options may be all that is needed to solve what seem to be intractable problems. Previous work done by UN-Habitat and UNDP demonstrates how deploying the tools of urban governance, promoting systems for recognizing good practices and facilitating the mechanisms for cities to learn from each other can bring about a critical level of change. Global coalitions and alliances of cities such as United Cities and Local Governments, Metropolis and the Cities Alliance can strengthen their focus on health as part of their current agenda. There is clearly a demand and willingness among cities to pay for understanding how

practical interventions can be applied to specific contexts. Of course, these knowledge markets need not be confined to Asia: they could have a global reach.

3 Partner with global media to define more 'responsive forums' that can help the key actors reach a tipping point together. The global media – which have a natural interest in transparency and accountability – reach huge audiences, and engaging with them can create enormous opportunities for political mobilization. The threats of SARS and avian flu demonstrated the power of the global media in helping to control an epidemic, albeit indirectly.

We have stressed the need for a broad perspective on urban health in making interventions aimed at economic development. We have also argued that the goal of healthy urban governance, a constantly evolving and self-correcting emphasis on reducing the health vulnerabilities of the urban poor in Asia, is attainable. But to achieve that goal, the principles of good governance must be continually applied to the promotion and protection of health. There is no 'one-size-fits-all' solution, and those working toward any solution will need to continuously navigate a fast-changing environment in order to achieve results. Nodes of power and influence among the urban poor, within local governments and inside the public health sector itself are multiplying and discovering their counterparts and natural allies across geopolitical regions. In Asian cities, as in other cities in the world, there are countless examples of living networks of people, communities, organizations and institutions with the knowledge, skills and resources to scale up change. They could certainly benefit from a more supportive and enabling environment for achieving fairer health opportunities for all. Focusing attention on the health vulnerabilities of the urban poor by skillfully framing them as issues of public policy seems to be an effective starting point.

Acknowledgment

This chapter draws on a background document prepared by the World Health Organization (WHO) Centre for Health Development in collaboration with the Alliance for Healthy Cities (AHC) and in cooperation with the Southeast Asian Press Alliance for the Global Urban Summit, Rockefeller Foundation, 2007.

Disclaimer

This research was undertaken as work for the Urban Summit, Rockefeller Foundation, 2007. The views presented herein are those of the authors and do not necessarily reflect the decisions, policies or views of the WHO.

Notes

1 There is no universal agreement on the definition of what a 'slum' is, but for purposes of this paper, the general definition used by UN-Habitat denotes 'a wide range of low-income settlements and/or poor human living conditions.' (UN-Habitat, 2003).

2 Email exchange with Dr D. Bayarsaikhan, Regional Adviser for Health Financing, WHO Western Pacific Region, on April 27, 2007.

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資　　料

The Prevention of Non-communicable Diseases by the Healthy Asahi 21 Plan

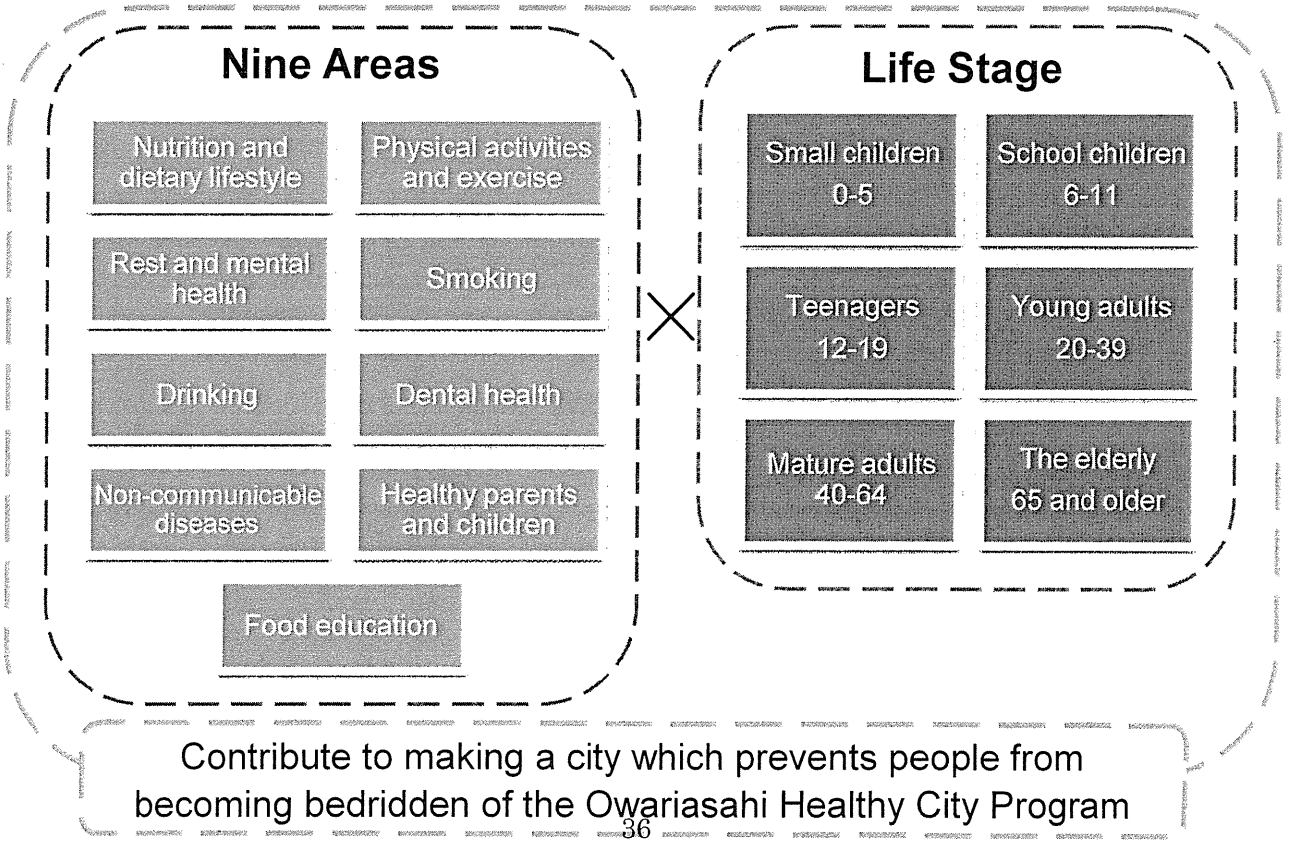
[Overview]

Development of health and environment which enables the prevention of illnesses and maintenance of a healthy life are of great importance in Japan which copes with an aging population with fewer children and growing rate of non-communicable diseases. This is why we emphasize the importance of attaining healthy lifestyles which prevents illnesses (primary prevention) in addition to the early detection and early treatment of diseases (secondary prevention).

Therefore, the City of Owariasahi designated the Healthy Asahi 21 Plan in March 2005 with the aim of developing an environment in which citizens can live healthily throughout their lives and in which each citizen undertakes health development at his/her will with the support of their families, local communities, and social surroundings. The plan has four guidelines: a) support for lifelong health development, b) promotion of health development (emphasis on primary prevention), c) health development supported by society as a whole, and d) setting of concrete plan targets and evaluation. Aims and targets were initially set for eight major areas by four life stages.

We also designated the Owariasahi Healthy City Program in December 2005 with the aim of promoting Healthy City development comprehensively by sorting programs along the three guidelines of the program which are to make a city which prevents people from becoming bedridden, one which people want to go out into, and one which people would want to keep living in. The main programs of the Healthy Asahi 21 Plan fall under making a city which prevents people from becoming bedridden, which is at the very core of Healthy City development.

We conducted a midterm review of the Healthy Asahi 21 Plan from fiscal 2009 to 2010 wherein we evaluated how far our targets were achieved, identified issues for the future, and added the prevention of non-communicable diseases including metabolic syndrome and food education as a new focus. As a result, we reorganized the plan to cover nine areas along six life stages to enable more careful attention and treatment. With regard to achievement of targets, cancer screening rates and awareness of non-communicable diseases had risen. These achievements can be attributed to our efforts to encourage people to take the Genkimaru Health Assessment and cancer screenings as well as to enhance quality control of the screenings along the Healthy Asahi 21 Plan during the five-year-period.



I. Healthy Asahi 21 Plan

Targets to prevent non-communicable diseases are set by area and life stage in the Healthy Asahi 21 Plan. They are set not only for individuals, but also for communities, schools, workplaces, local government and health organizations so that they will work together to support health development comprehensively taking advantage of their features.

[Guideline for individuals and groups to prevent non-communicable diseases]

(Young adults / 20-39 years old)

Citizens	a. Get to know your optimal weight, and review your lifestyle. b. Have health checkups. c. Receive instructions after having checkups.
Communities, schools, and workplaces	a. Enhance health checkups at workplaces. b. Enhance activities to develop health.
Local government and health organizations	a. Spread knowledge on the prevention of non-communicable diseases. b. Develop and enhance systems for health checkups and cancer screenings. c. Enhance post-health checkup instructions for participants d. Provide information on family doctors, dentists, and drugstores. e. Enhance program for health checkups.

II. Genkimaru Health Assessment

The Genkimaru Health Assessment implemented from 2001 is Owariasahi's main program for primary prevention of non-communicable diseases. Health conditions of individual citizens are checked and instructions and advice to improve their health are provided accordingly in a form. Citizens are encouraged to engage in health development and take the assessment regularly to check their improvement, thereby establishing a cycle to control citizens' health.

In this way the Genkimaru Health Assessment is not just an opportunity to check one's condition and physical strength; it serves as an opportunity to reflect on and improve one's lifestyle and physical activities. The assessment covers six (nutrition and dietary lifestyle, physical activities, rest and mental health, smoking, drinking, and dental health) out of nine areas of the Healthy Asahi 21 Plan.

(1) Objective

To have citizens recognize their own health conditions, lifestyle and habits, and physical strength objectively, and thereby encourage them to maintain and develop their health to prevent non-communicable diseases (primary prevention), and prolong their healthy life expectancy.

(2) Organizer

The staff of the City's Health Division organizes the program. Health development leaders* who have completed training programs organized by the Aichi Prefectural Government provide support for the checkup.

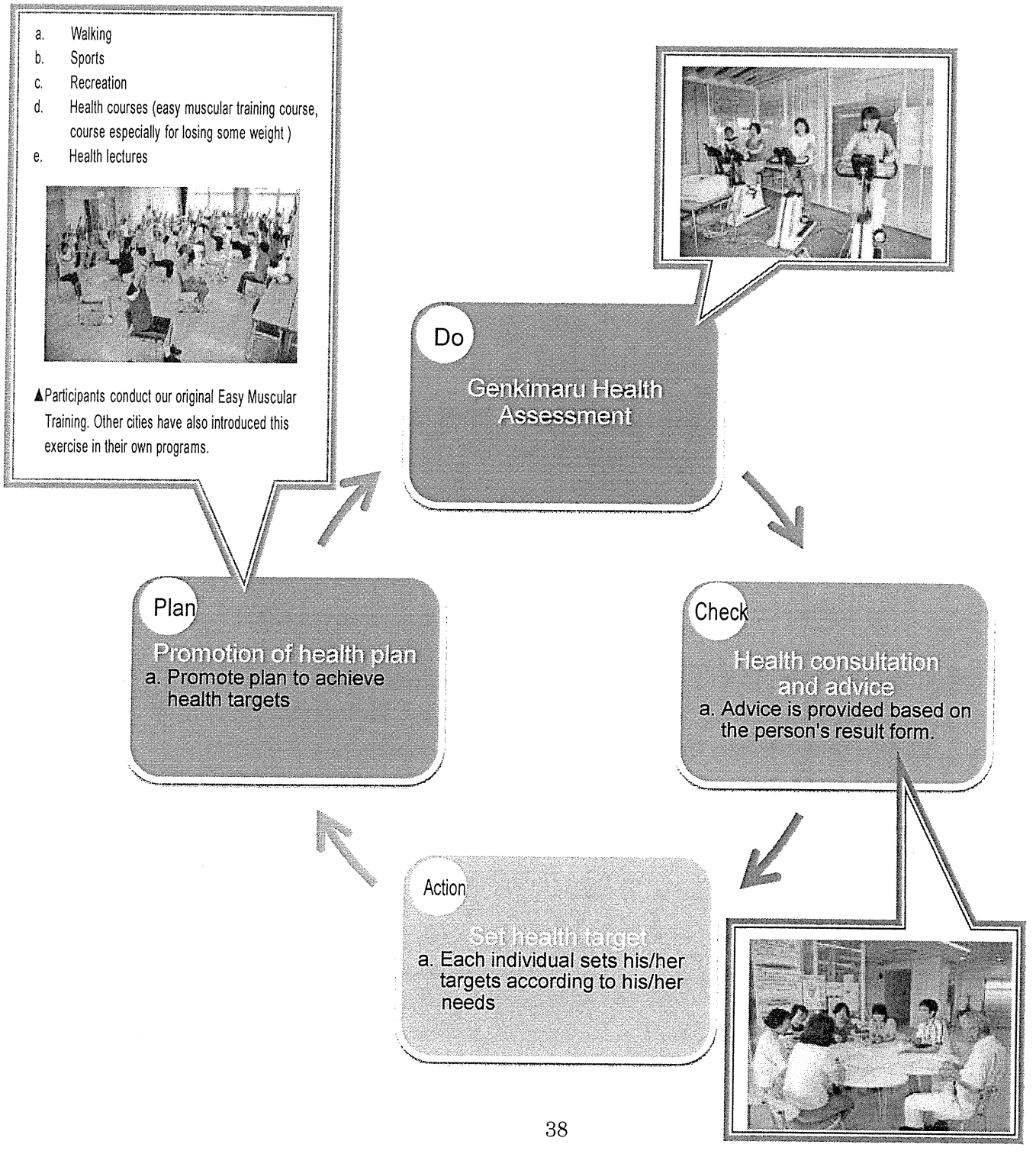
*Health development leaders have completed training programs organized by the Aichi Prefectural Government. They serve as volunteers for health development in events held by the prefectural government and local governments in the prefecture.

(3) Participants

Citizens aged 18 and older

(4) Program

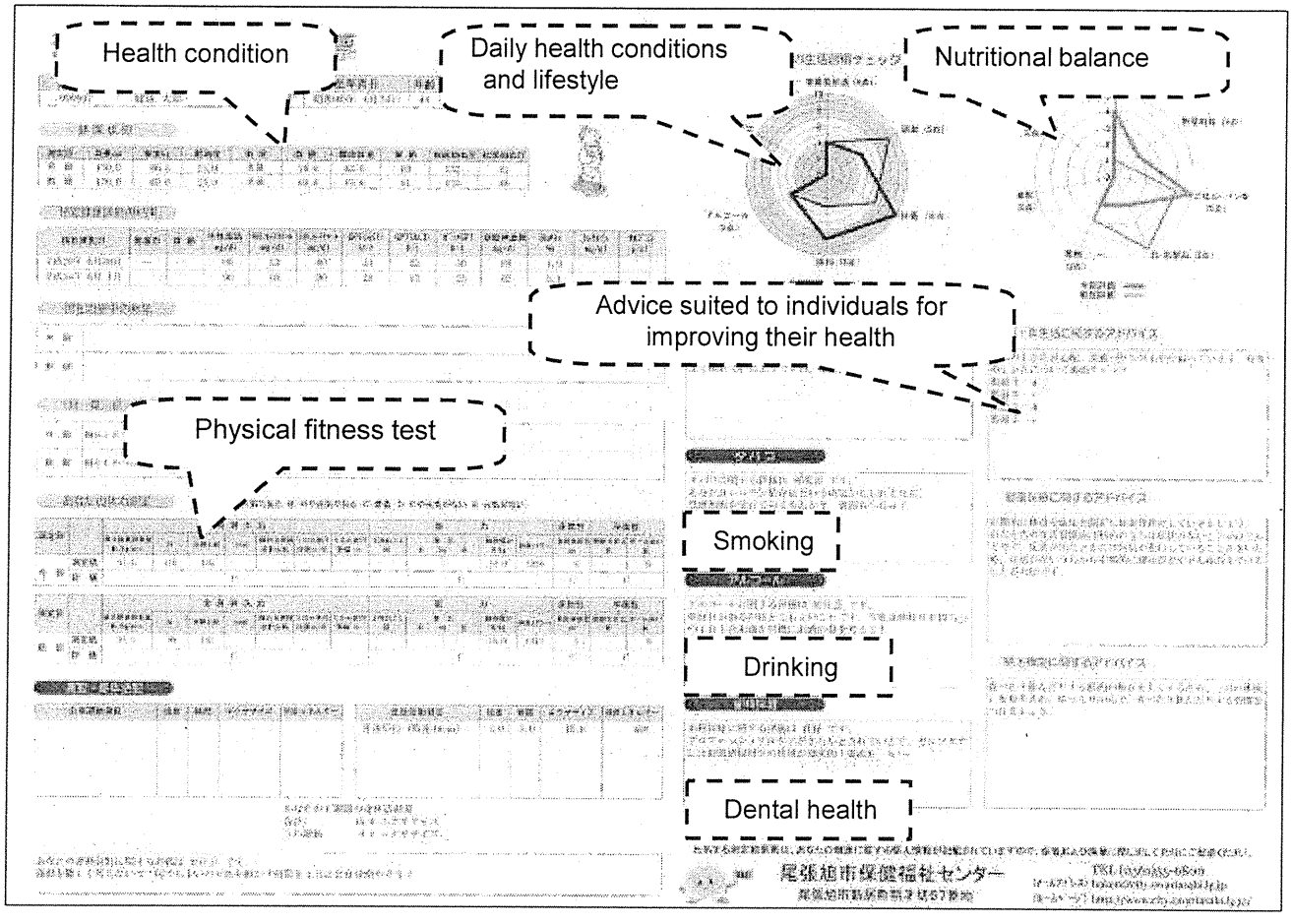
Participants respond to a questionnaire on lifestyle and habits and health condition, then undergo a health checkup and test on physical strength. They receive a form with their results and advice suited to their condition. Ways to improve their health are discussed based on these forms with other participants, and they are encouraged to take the assessment again after making efforts for health development.



(5) Assessment results

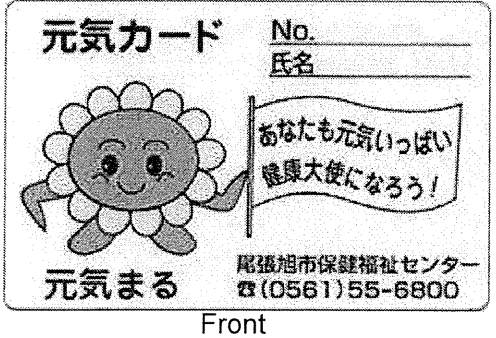
The results of the assessment including the questionnaire are presented in the form below with sections on lifestyle and habits, physical measurements, health condition, and individual advice for health development based on those results.

[Genkimaru Health Assessment Form]

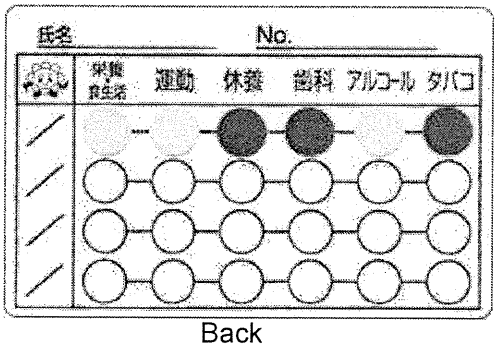


We also distribute Genki Health Cards which show how health conditions have changed at a glance according to the color of the sticker for the six areas of nutrition and dietary life, exercise, rest, dental health, drinking, and smoking.

[Genki Health Card]



Front



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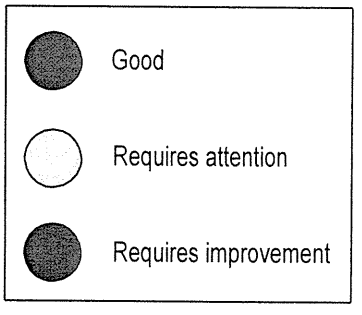


(6) Achievements

a. Number of persons who took the Genkimaru Health Assessment

Fiscal year	Those who took the assessment for the first time	Those who had taken the assessment before	Total
FY 2004	761	538	1,299
FY 2010	847	859	1,706

b. Percentage of citizens whose results of the Genkimaru Health Assessment showed health maintenance and improvement from previous results.
(FY 2010) 73.8%

III. Quality control of cancer screenings

Cancer screening is one of our main programs for secondary prevention of non-communicable diseases. In addition to promoting cancer screenings, we stress quality control with the cooperation of the medical association.

(1) Objective

To enhance early detection and treatment in the early stages of cancer by raising the rate of people who receive cancer screenings and follow-up screenings.

(2) Organizer

City's Health Division and Owariasahi Medical Association

(3) Participants

Citizens who are eligible for the relevant cancer screening and those who underwent screening and require follow-up screening

(4) Program

a. Efforts to raise primary screening rate

(i) Notices are sent to individuals informing them of the cancer screenings that they are eligible for in that year. They also receive a screening card with a list of those screenings which should be taken to medical institutions and stamped after they receive each screening.

(ii) Information on screening is posted in the city newsletter and website.

(iii) Free coupons are sent to citizens of a certain age who are eligible for screenings for cervical cancer, breast cancer, and colon cancer.

(iv) Subsidies for receiving cancer screenings

The City provides support so that everyone can receive cancer screenings regardless of their economic status.

[Fee for cancer screenings]

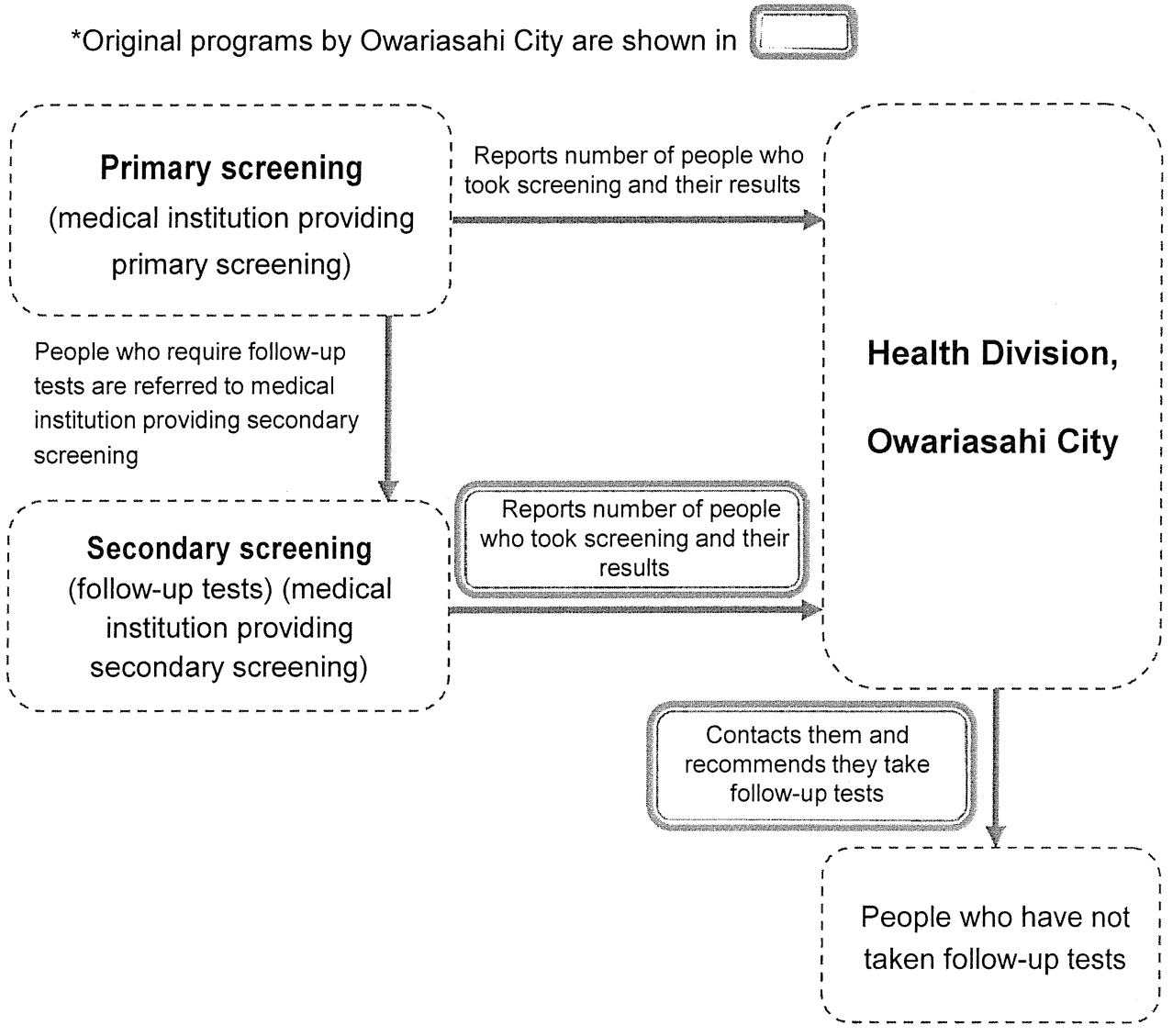
	Stomach cancer	Cervical cancer	Lung cancer	Breast cancer	Colon cancer
Persons aged 70 and older	800 yen (13,310 yen)	650 yen (7,420 yen)	300 yen (2,540 yen)	1,500 yen (6,500 yen)	200 yen (980 yen)
Persons who are enrolled in National Health Insurance administered by Owariasahi City					
Persons other than the above	2,400 yen (11,710 yen)	1,300 yen (6,770 yen)	600 yen (2,240 yen)		400 yen (780 yen)

The subsidized amount is shown in ( ).

(v) Distribution of flyers encouraging health checkups to all households (original program by Owariasahi City)

b. System for quality control
The local medical association supports this system. Medical institutions which perform primary screening provide the City's Health Division with information including the number of people who received screening and the results, and refers citizens who require follow-up tests to secondary medical institutions which offer them. The secondary screening medical institutions also report to the City on the people who received follow-up tests and the results.

c. The City's Health Division matches the above information to identify those who need to but have not received secondary screening. It then contacts the primary screening medical institutions to find out which institution they were referred to, and if they have not yet received additional screening, contacts them and recommends them to take those tests.



(5) Cost effectiveness

Examination of the costs and screening results for fiscal 2009 shows that 235,690,000 yen for medical treatment was saved for approximately 156,000,000 yen.

Costs for Cancer Screening (FY 2009)

Printing and binding	Printing of cancer screening report forms and other relevant information	1,839,524 yen
Postage	Postage to mail screening cards and notices	812,410 yen
Commission	Commission to prepare individual notices for cervical cancer and breast cancer	309,381 yen
	Commission to prepare individual notices for cancer screenings other than the above	1,165,240 yen
	Commission to perform cancer screenings	150,264,481 yen
	Commission to prepare free coupons for cancer screening	1,874,250 yen
Total		156,265,286 yen