

## Achievements and future path of Tehran municipality in urban health domain: An Iranian experience

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### Abstract

**Background:** According to national laws and world experiences; provision, maintenance, and improving citizens' health are considered to be the essential functions of municipalities as a "social institute". In order to equitably promote health conditions at urban level, particularly in marginal areas, since 2004 targeted efforts have been implemented in the municipality of Tehran metropolis. This study was intended to identify and analyze these targeted measures and tries to analyze health interventions in a conceptual framework and propose a future path.

**Methods:** This is a qualitative study with content analysis approach. Reviewing documents and structured interviews with national health policy making and planning experts and executive managers of 22-region municipalities of Tehran metropolis were used to collect data. The data were analyzed on the basis of conceptual framework prepared for urban health in 4 domains including municipal interventions, goal achievements, drivers and obstacles of success, and the way forward.

**Results:** From the viewpoint of interviewees, these new health actions of Tehran municipality are more based on public participation and the municipality was able to prioritize health issue in the programs and policies of Tehran city council. Tehran municipality has accomplished three types of interventions to improve health, which in orders of magnitude are: facilitative, promotional, and mandatory interventions. Development and institutionalization of public participation is the greatest achievement in health-oriented actions; and expansion of environmental and physical health-oriented facilities and promoting a healthy lifestyle are next in ranks.

**Conclusion:** Since management alterations seriously challenges institutionalization of actions and innovations especially in the developing countries, it is suggested that mayors of metropolitan cities like Tehran document and review municipal health measures as soon as possible and while eliminating overlapping of interventions with other sectors, design and approve the charter of "health promoting municipality". The most important role of municipalities in this charter would be coordinating health improvement of citizens. This charter, when approved as a national policy could be used for other cities too.

**Keywords:** Tehran Municipality, Urban health, Tehran metropolis, future path.

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### Introduction

According to World Health Organization (WHO), the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being (1). It is estimated that by 2030, more than six out of ten individuals will live in cities (2). The urbanization rate is higher in low-

and middle-income countries (3) and as the cities grow, providing jobs, health care, water, transportation, and education will be challenging. Urban settings is a health determinant and according to WHO urban health is threatened by three factors: 1) Infectious diseases exacerbated by poor living conditions, 2) Non-communicable dis-

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eases such as heart disease, cancers and diabetes and conditions fuelled by tobacco use, unhealthy diets, physical inactivity, and harmful use of alcohol, and 3) Accidents, injuries, road accidents, violence and crime (4).

Because of diverse urban components including housing, water, sanitation, food, transportation, noise exposure, indoor and outdoor pollutions, climate change, social environment, and social and health services, urban health should be considered by policy makers and planners as a necessity. While warning all countries, WHO suggests at least five solutions to improve urban environment: 1) Promoting urban planning for healthy behaviors and safety: Urban designing to increase peoples' activity; safe, acceptable, and accessible food provision; supplying public health care; and increasing streets' safety. 2) Improving urban life conditions: settling residential places in secure regions, improving residency conditions, controlling indoor and outdoor pollution, safe drinking water, and confidence and improved sanitation. 3) Ensure participatory urban governance: sharing information of urban planning for health, inspiring (encouraging) public negotiations, participating people in decision makings, providing cooperation opportunities. 4) Build inclusive cities that are accessible and age-friendly: accessible and facilitated public transportation for the disabled; secure pavements for the individuals with special movement needs; constructing public places and buildings with easy access, and promoting active urban life and sports for all individuals. 5) Increasing resistance of urban regions to disasters and emergencies: settling health care facilities in secure regions and making them resistible, reinforcing community preparation and capacity of accountability, improving disease care (4).

During the past three decades, Iran Health System had great achievements such as improving maternal and child health population control, reducing vaccine-preventable infectious diseases, and access to safe

(clean) water, thus improving health outcomes in rural areas equitably and efficiently in the light of developing and implementing the Primary Health Care (PHC) network (5).

However, increased urbanization and migration from rural areas which led to population growth in urban and marginal areas (6) as well as epidemiological transition and increasing burden of non-communicable diseases (7) has confronted urban health management with great challenges.

Although, the PHC network was developed in the cities too, the accelerated pace of migration to urban areas surpassed the capabilities of health care network in the cities and the passive and fragile PHC networks in the cities became gradually weak to respond to the needs of population and the success in rural areas was not repeated (8). Consequently the role of private sector and non-governmental health services in cities was dominated.

Main reasons for PHC network inefficiency in the cities include: A) to ease public access, urban health centers should be established in designated and appropriate places. Proper financial and administrative resources was required for finding real estate and constructing it or renting a suitable place which was difficult because of hardships during the war, B) rural health care centers were the only health care service providers in rural areas, but in the cities the private sector had considerable power and potentials. Due to lack of appropriate rules for cooperation between state and private sectors, the health system was not benefited from private sector that had a major contribution. Therefore, private sector acted as an opponent to the state health system (9,10).

Tehran metropolis with approximately 730 square kilometers area and population of more than 8.2 million is the largest city and the capital of Iran, and it is the world's 25<sup>th</sup> most populous city. Tehran suburban margins are expanded three times the city size (11). Tehran Mayer is appointed by the City Council and is responsible for provid-

ing urban services. In order to deal with the inequity, Tehran Municipality has attempted to develop a health services network especially in city margins during the past ten years (12).

This article presents results of the study accomplished to identify and analyze achievements of Tehran Municipality for citizens' health hoping that other countries could benefit from these experiences.

**Methods**

This is a qualitative study with content analysis approach.

Due to the lack of the original data collected before implementing of the interventions in 2004, the qualitative method was used in order to evaluate the municipality actions. Reviewing documents, structured interviews with 22 executive managers of region municipalities of Tehran metropolis and 9 national level health policy making and planning experts were used to obtain a valid and generalizable sample.

With a directed approach content analysis (13), the data was collected based on conceptual model in four main domains including municipal interventions, goal achievements, drivers and obstacles of success, and the way forward (Box 1).

We conducted an in-depth examination of two groups of documents: 1) Upper hand documents including: the Iranian Constitution (14), Municipalities forming law of Iran, laws for the third, fourth, and fifth development plan of the Islamic Republic of Iran (15), and citizenship rights from the

viewpoint of Iranian leaders; 2) All documents and evidence related to health-oriented actions of Tehran Municipality. The analyzed results of the first group showed the main emphases of the upper hand documents on duties of municipalities for health, and the second group revealed Tehran municipality health-oriented facilitative, promotional, and mandatory interventions effecting proximal (behavioral) and distal (social and environmental) factors.

Structured interviews were conducted with two groups of individuals (as follows) to get their opinions on achievements, driver factors, obstacles of success, and the way forward:

1) Executive managers of all 22 Tehran Municipality regions.

2) Selected experts with health-related planning and policymaking experience at national level, public health related educations, and familiar with the Municipal health actions. They were selected from both advocates and critics of Municipal health actions. Tehran Municipality's General Department of Health had little role in choosing these people, and the researchers selected the interviewees based on their experiences. Also in each interview the snowball sampling method was applied in order to find other informants. All the eligible experts were enrolled in the study. Altogether 9 experts were interviewed that includes a nearly equal distribution of advocates (supporters) and critics.

We adhered to principles of interview in-

Box 1. Conceptual Model for Urban Health

Functions (stewardship, resources, and services)	Promoting urban healthy lifestyle Providing health-oriented environmental and physical facilities (direct and indirect) Building support and leadership for improving major factors affecting citizens' health Implementing health-oriented urban policies, programs, and projects Developing and institutionalizing public contributions Managing information, research, and evaluating urban health		
Goals	Distal factors Health influencing social factors, controllable in urban limits Health influencing social factors, impressive on extra-urban levels	Proximal factors Reduction of risk factors, diseases, injuries, and death; and rise of protecting factors (life style improvement)	Final effects Promoting Indices: Quality of life, happiness, a healthy life expectancy, and equity in health

## Box 2. Questions of the interview

1. How and when did you get familiar with Municipal actions?
  2. From your point of view, what are the achievements of Tehran Municipality in health promotion? How many goals are achieved?(at least three important achievements)
  3. What are the main and auxiliary factors influencing those achievements?
  4. What obstacles and reasons hindered more achievements?
  5. In your opinion, what can be expected from of the next Mayor on health-oriented actions? (What are other necessary or complementary actions could the potential Mayor could do?)
  6. What are your suggestions for stabilizing and institutionalizing the Municipal achievements in citizen's health promotion? What about other cities?
- In your opinion, has satisfaction of citizens with Municipal health-oriented affairs compared to the past periods become more or less? Why?

cluding written correspondence and sending questionnaires, interview guide, using a familiar interviewer, and confidentiality. The interview questions are shown in Box 2.

All interviews were recorded and transcribed. Following the conceptual model a thematic analysis was conducted in order to identify key issues and actions. Then all answers were classified in 4 main areas and after reviewing speeches in each area, domains were specified.

In order to organize "the way forward", two matters were considered:

- 1) How should an achievement (whether as a strength point or an improvement opportunity) be stabilized and institutionalize?
- 2) How should strength points be generalized?

Scientific rigor was confirmed according to Guba and Lincoln, using credibility, dependability, confirmability and transferability (16). Credibility was assessed by re-checking the results with each of the interviewees. Dependability, confirmability and transferability was confirmed in a group discussion session with all expert inter-

viewees and the research team.

## Results

### Health-oriented Actions

Reviewing upper hand documents in Iran shows that municipal health-oriented interventions for citizens, environmental health, citizen rights, and citizen empowerment, are emphasized in existing laws; moreover, cooperation with the Ministry of Health for health care provision is posed in forth development plan of the Islamic Republic of Iran. Table 1 shows health-oriented actions of Tehran Municipality classified as facilitative, promotional, and mandatory interventions influencing proximal and distal factors.

### Achievements

From the view of interviewees, Tehran Municipal achievements were numerous, including encouraging public participation which is carried out through formation of 10 societies and NGOs in different domains, setting up health houses (centers), at least one for each urban region to supply direct health care services, neighborhood

Table 1. Health-oriented Actions of Tehran Municipality

Intervention	• Effective on the proximal factor	Effective on the distal factors
Compulsory	Enactments of Tehran Islamic Council including the decree "Tehran, No Tobacco City" The Decree "Municipal obligation to change the pattern and reduce consumption of plastic bags, dishes, and disposable products"	Municipal strategic management (five-year plan of Tehran Municipality, decentralization, neighborhood orientation) Financial management of Municipality and city economic condition development Urban-planning and legality (developing structural strategic comprehensive plan of Tehran, preparing detailed plan of Tehran urban regions, construction control and supervision, standardization of urban planning guidelines) Implementing Urban Health Equity Assessment and Response Tool (Urban HEART)

Table 1. Cntd

Promotional and Support Building	<p><b>Providing health education</b> Educating high risk behavior prevention and empowering citizens Relief and first aid training Life skills training Preparing and distributing educational materials</p> <p><b>Implementing special programs</b> Organizing health care tours (visit of Malaysian delegation, deputy of WHO General Director, advisor and representative of WHO in the field of aging, Lebanese delegation, foreign guests participated in International Conference on Crisis Management, social and cultural experts from Mashhad Municipality, some faculties of Tehran universities, Advisor to the Minister of Health and head of the health care supporting donors association). Organizing health exhibitions (“Iran Health”Exhibition, Digital Media Fair, Festival of best things for buds of our city, strategic meeting on cultural and social development of cities in Iran, neighborhood management exhibition held in Milad Tower, “Seven Apples Fair”) Participating in the World Conference of Urbanization and Health Reinforcing family structure No smoking city plan Health taxi plan</p>	<p><b>Cultural and Social Management</b> Software Activities (expansion and development of religious identity; production and dissemination of cultural products; promoting the culture of enjoining the lawful and forbidding the sinful acts; fostering prayer; promotion and consolidation of jihad, sacrifice, and martyrdom; publicizing the culture of reading)</p> <p><b>Improving scientific insight in urban administration and holding scientific conferences</b> Performing various educational programs (rights and duties of citizenship, training headlines for the Department of Transportation and Traffic, educating through media, training headlines for Legal Departments of the Council, the Parliament, and City Council, training headlines for technical and developmental deputy, instructing topics for urban-planning and architecture deputy, training headlines for the deputy of urban services) Citizenship trainings and social participations</p>
Facilitative	<p><b>Formation and Development of Health social networks</b> District health council Tehran’s Salamatyaran network Health strategic council of Tehran Strategic council of Tehran Municipality for the disabled 22-district health care board of directors Health-oriented social institutes (elderly, physicians, mothers and children, mosques health servants, voluntary blood donators, the disabled, the youth, diabetes prevention, tobacco prevention, and obesity prevention)</p> <p><b>Providing consulting services</b> <b>Implementing occasional programs</b> Health week, world day and national week of No Smoking, great festival of Shabanie, national day for blood donation, world breastfeeding week, the blessed month of Ramadan, national doctor’s day, world day and cultural week of the elderly, world day and national week of vision, world day and national week of diabetes, AIDs prevention week, International day of the disabled, Besij week, Nutrition training and improving food consumption pattern, clean air week, and Men’s health week)</p> <p><b>Developing physical spaces</b> Establishing the community-based innovation center Construction and setting up health Pardis construction and management of neighborhood health houses /toys houses/children social skills training houses(Faramouz)/obesity clubs/relaxation houses Construction and setting up urban health management center</p> <p><b>Implementing special programs:</b> Neighborhood blood donation Expanding public sport (holding annual fair for citizen sport, developing health stations, setting up and expanding family walking programs, biking, mountain climbing, and group running, setting up men and women sport competitions, and the elderly sport services) Prevention and control of social damages (shelters, mobile patrol units in order to collect, settle, and refer working and street children, and runaway girls and women, high-risk addicts, beggars, the homeless, and down-and-outs (vagrants), counseling and social work services, implementing urban social worker plan, empowering socially vulnerable women)</p>	<p><b>Construction and maintenance of urban physical infrastructures and capacities</b> construction and maintenance of highways and urban passages Construction of bridges and Street Interchanges. construction and maintenance of tunnels and underpasses Construction of urban parking, terminals, and park-and-rides Construction of surface water managing network Construction and inauguration of multipurpose Milad Tower</p> <p><b>Management of public transportations and traffic improvements</b> construction and maintenance of rail transport construction and maintenance of public transport bus services Managing and improving taxi services Management and development of combined systems and (Bus Rapid Transit) BRTs. Traffic monitoring, controlling and Management system.</p> <p><b>Urban management services and environmental issues:</b> Waste management construction and maintenance of urban green spaces Dealing with environmental pollutions Goods and services supplying systems Civic beautification and visual improvement of urban sights</p> <p><b>Tehran disaster relief, and rescue management</b> Comprehensive disaster management in Tehran Managing and developing capacities and infrastructures for relief, rescue, and firefighting Renovating and strengthening Urban decay</p> <p><b>Social and cultural Management</b> Developing religious spaces and infrastructures Developing social and cultural spaces (a collection of ritual theaters, audio studio of music museum, Neynava cultural facility, the city’s professional theater center, turning Ghasr prison into a recreational center, BanooyeAftab cultural-recreational complex, Raga cinema complex, Mellat Park, Iran Faranama, Pardis-e-shargh cultural and recreational complex, Tehran book garden, Bagh-e-Ferdous Cinema, Aban 13<sup>th</sup> Library</p>

health councils, recruitment of Salamatyaran (community health workers), ed-

ucating and empowering the community about prevention particularly by establish-

ing Faramouz (learner) centers to teach life skills to children and adolescents and prevent high risk behaviors, assessment and announcement of health and equity conditions of residents throughout regions of Tehran city and identifying problems of each region in 2010 Urban HEART projects (17,18), Intersectoral cooperation particularly through Neighborhood Health Councils with participation of the representatives of the Ministry of Education, Police Force (Disciplinary Force), and the NGOs. Neighborhood-oriented approach brings about bordering neighborhoods and highlighting local identity for individuals. Identifying neighborhood potential capacities such as the benevolent and localizing service provision in social health domain increases the community's social capital. Raising the subject of health impact assessments of municipal macro projects and acquaintance of municipal with this concept is another level of prosperity. Green space development, promoting public sports, improvement of urban sidewalks, and development of public transport led to increase physical activities of citizens.

Changing municipality as a merely service providing organization into a social and dynamic entity, and entering urban social health issues and accepting health as a priority by municipal and other organizations involved in health of urban society authorities are other important results of efforts in this period.

Expanding coverage of health-oriented services to target groups such as mothers, children, disabled, and elderly and paying attention to physical and mental health of people in the society are among other achievements.

Intra-organizational contribution with Social Deputy of the Municipality and devising managerial structure of Urban Health is resulted from municipal health-oriented actions. The interviewees emphasized on the necessity of making a precise and quantitative evaluation of each achievement.

Different answers were given to the question: "In your opinion, how is satisfaction

of citizens with Municipal health-oriented affairs compared to the past periods? Why?" Five experts believed that field studies are required to determine the amount of citizens' satisfaction changes; a few believed that it would be recognized over time. Two of 9 interviewees thought that satisfaction has raised and most executive managers assumed that public satisfaction is increased with the municipal health interventions; others believe that satisfaction rate and cooperation were reduced after the implementation of Neighborhood Management Plan (receiving tariffs) as implementing some unsystematic and merely propaganda programs are also caused the decline of satisfaction. From the viewpoint of executive managers of Tehran municipal regions, vastness of provided services and culture building activities at Health Centers, community empowerment and increasing their demands, high public participation, people's feedback through 1888 hotline and other communication ways, designing programs according to people's needs and demands, support and contribution of neighborhood trustees and participation of secretaries for neighborhood councils in monthly and annual sessions in health domain of municipal regions, and decrease in destruction of public property due to increased public awareness and people trust are signs for their improved satisfaction.

#### *Drivers*

Driver factors in previously mentioned achievements from the interviewees' views consist of participatory and health-oriented approach of municipal authorities, presence of the experts in policy making and implementation (municipal health steering council), using existed capacities of citizens in every locality as physicians or specialists and drawing their contribution and participation, cooperative approach rather than individualism, involvement and participation of urban council with comprehensive composition and diversity of expertise and also Neighborhoods' Shorayariha (Coun-

cils), increasing available financial resources and infrastructures, simplification and offering a new definition of health (social determinants of health approach) focusing on “health for all” through “all for health”, legislating new laws (%3 of total municipal revenues should be spent on health costs and %10 on social expenditure and poverty reduction), presence of Tehran’s Strategic Document prior to formation of General Department of Health and Annual planning, support of WHO, subject-oriented programs (Commemorate the occasions), trust of organizations such as Welfare Organization and also staff contribution. Embracing new ideas, recruiting a great number of educated staff in Tehran municipality, a proper and specific definition of “urban health” and its constituent elements, trying to make a socially rather than medically healthy citizen, identifying urban dangers affecting social and mental health of citizens, planning according to needs of citizens, and free service to citizens, are the other components contributing to success.

### *Obstacles*

According to respondents, obstacles and impediments that hindered the achievements, can be summarized into five categories: 1) poor inter-sectoral and intra-sectoral collaborations: A lasting understanding and consensus was not formed between the municipality and other government departments particularly the Ministry of Health in order to deliver integrated health services in the city; the policies and priorities of Family Physician national plan which was initiated in mid-2005, had a significant effect in this conflict; absence of a memorandum of cooperation between governmental, non-governmental, and private organizations in Tehran and the Municipality is another obstacle; the lack of teamwork within the municipality that has led to collateral activities by municipal departments is another affecting factor; meanwhile, we should point to the non-health-oriented budgeting of the Municipal-

ity, and maybe the main reason for this is lack of clear guidelines and regulations for intra-sectoral coordination or clarify health-oriented duties for each municipal units (offices). 2) The different attitudes of municipal managers to the health issue: Tehran regional mayors are not convinced equally about the health issue, the centralized vertical management instead of a horizontal management and lack of existing an ‘urban united management’ is a result of managers’ perspectives. The policy making is a top-down process and planning is not carried out based on the feedbacks from citizens and the scientific need assessment. In other words, municipal health-oriented interventions are sometimes merely based on personal preferences. Unfamiliarity of other managers with objectives and missions of the newly-established social deputy and underestimating social domain and its goals is another reason; without a defined rule, statute, and guideline for the Department of Health approved by the City Council its activities is not enforced. 3) Poor planning, resource provision and evaluation system: health dimensions and multiplicity health-related programs, in some cases have led to deviation from the original programs and purposes. There is no long-term systematic programming, thus planning is mainly focused on one-year programs. Same planning for all regions without considering social and economic circumstances of each, and the differences in regional indices makes it difficult to implement the programs; budget shortage and low proportion of the allocated budget considering the extent of services, unsuitable physical space of Health Houses and absence of adequate facilities and equipment in Health Houses which is inappropriate to the physical and psychological conditions of target population (the elderly and disabled) are other obstacles. Poor attention to human workforces in health houses and lack of reimbursement, bonuses, insurance, and job security for them and inattention to their motivations are some other challenges in municipal health-oriented programs. The lack of

attention to effectiveness of plans and the held courses; paying attention to the quantity of programs rather than the quality of performed activities and failure to introduce scientific indices for evaluating health-oriented programs are also among problems and obstacles. 4) Operational problems: difficulty in coordinating Health Houses in different neighborhoods; lack of consistent social marketing about health-oriented actions and achievements to increase public awareness and participation; self-governing of Health Houses in neighborhoods without proper preparations which has led to receiving tariffs for consulting and training services in Health Houses. The administrative bureaucracy, as a result of region-oriented, district-oriented and locality-oriented managements, is another operational barrier. Refusing to transfer new ideas and health-oriented achievements from one region to the others prevents the spread of achievements. Emergency implementation of some non-scientific policies and programs prevents development of original programs and duties. Numerous ongoing projects and their concurrencies, restraining rules and constraints in the implementation of programs by regional health managers will cause a delay in the implementation of programs or not implementing them at all. 5) Problems regarding working with the people: The unilateral expectations of people from the Municipality for service delivery as they only prefer receiving services and not realizing the importance of contributing and participation, and inequalities in the levels of literacy and culture in different regions caused some regions to achieve municipal health-oriented goals with delay. Low power of local councils and shortage of the qualified local managers familiar to administrative affairs; unclear duties and jurisdictions of the local directors leading to an economical-look to health issue; the effect of other municipal sectors on public confidence and contribution should not be underestimated and must be considered as a challenge.

### *The way forward*

The way forward for Tehran Municipality in health domain from the viewpoint of respondents are as follows: 1) efficient and useful actions of the Municipality in the health domain should be institutionalized: application of urban health equity assessment and response tool (Urban HEART) in Tehran; organizing health tours for Parliament Members and then ratifying bills for child and elderly's friendly city, transforming Tehran to a No Smoking City, strengthening Tehran Islamic Council Health Commission; supporting the spreading of achievements to other cities through the Assembly of Metropolitans of Iran, formation of urban health committee in metropolitans; revision, approval, and enforcement of Tehran Municipality structure according to the diversity of activities; training and empowering municipal staff; putting health-oriented actions in urban programs; division of work and signing agreements with the Ministry of Health with support of Ministry of Interior, Parliament and legislation structures in order to ensure institutionalization and durability of programs. Documenting experiences, organizing health exhibitions and expanding health-oriented social marketing programs in a way that health would changed into a well-known 'brand' to citizens, are among proposed measures for institutionalization. 2) Generalizing experiences of Tehran Municipality to other cities: there were different ideas in this regard which were mostly posed by executive regions' managers including: the pattern implemented in Tehran can carried out in other cities as a country model. This is possible regarding the maturity (completion) of the implemented plan in Tehran and eliminating its weaknesses; health be considered as an integral (inseparable) part of the Municipalities, and related laws and legislations become a binding law by the Supreme Islamic Council of Provinces and be promulgated to other cities; the pattern should be adapted for other cities on the basis of assessment and be specially tailored accord-

ing to requirements and circumstances of each city; introduction of health-oriented actions of Tehran Municipality through: 1) holding health exhibitions in other cities to be visited by their authorities and holding educational workshops, 2) piloting Health Department plans (e.g. Health Houses) in other cities; the task of empowering other provinces can be assigned to senior managers of provinces and cities or each health manager of Tehran regions be delegated as a health ambassador to another city and share the experiences with other urban managers. 3) Continuity of Support of the next Mayor and his colleagues: That will appear in promoting interactions with other state sectors particularly the Ministry of Health and agreement for joint actions such as designing long-term plans and creating a single annual program, intra-organizational coordination and synergy for health-oriented actions including formation of health organization, development of community-level action, institutionalizing of neighborhood-oriented programs, increasing jurisdictions of the regional health managers, operating in legal framework and accepting stewardship of the Ministry of Health in health-oriented actions and making interventions merely as selling services to the stewards e.g. public education, initiating and implementing of programs in a measurable and agreed order, accepting a certain volume of responsibility and removing duty of the other organizations, collecting and monitoring indices and setting up a comprehensive system of health information, institutionalizing Tehran health map, presenting an administrative plan to fulfill “integrative and coordinated management of urban services”, strengthening and inspiring scientific-based potential of regional municipals, putting urban health concept prior to security and environmental domain, dealing with social, economic, and cultural factors, and using NGOs and media capacity. During the following periods, it is necessary to pay special attention to workforces employed in Health Houses regarding job security, wages, bonuses, and insur-

ance systems, attendance of district mayors in locality council sessions, creating organizational position of “Health Manager” in the Municipality chart, reducing management changes, receiving and regulating new ideas and more serious attention to environmental health.

### Discussion

This study revealed that Tehran Municipality has obtained numerous achievements in health domain. According to conceptual framework of urban health result chain, these achievements mostly have focused on environmental changes as encouraging (incentive) facilities to change health behavior (proximal factors). Comparing health-oriented actions of Tehran Municipality with five strategies recommended by WHO shows that the Tehran Municipality has tried to improve urban planning for sound and safe behaviors; urban designing to increase people’s physical activity, setting up fairs in order to promote safe and healthy foods, establishing Health Houses, social health-oriented messages through environmental advertisements, resolutions for financing health programs in the City Council, application of Urban HEART in Tehran, traffic engineering and improving street security. The municipality has tried to advance urban collaborative governance as one of the most pivotal recommendations; creating neighborhood council in different specialized workgroups, ten health centers, neighborhood meeting places (Patoogh) and public announcement of Urban HEART study results are evidences that shows managers’ decision to share information on urban planning with people, encouraging public participations, getting them involved in decision making and preparing opportunities to collaborate.

Development of urban green spaces, providing sports facilities in parks and spaces of collective games, safe playing areas for children, facilitating the elderly and the disabled movements and expanding (developing) sidewalks are objective examples of establishing the strategy of elderly

and child friendly cities. Reinforcing community preparation and accountability potential are actions to raise resistance of urban regions to disasters and emergencies.

In the conceptual model used in the study, six main functions of municipalities in citizens' health were as follows:

1. Promoting urban healthy lifestyle
2. Providing health-oriented environmental and physical facilities (direct and indirect)
3. Building support and leadership for improving major factors affecting citizens' health
4. Implementing health-oriented urban policies, programs, and projects
5. Developing and institutionalizing public contributions
6. Managing information, research, and evaluating urban health.

The most important achievement of Tehran Municipality during the past decade is to have a more social look to the municipal system of service; but it has to be noted that people's participation is one of the two arms of health equity improvement and intra-sectoral cooperation is the other arm which has to be improved. In another word, public participation arm is more powerful than intra-sectoral cooperation and Tehran Municipality is far from achieving inter-sectoral collaboration and playing a coordinating role. However, it should be emphasized that since people are able to have an effect in all community domains by acquiring experience and knowledge, in scientific literature people's contribution is considered as an end not a means. Municipality has developed a pattern for promoting public participation in all three steps of the participation ladder. The disseminating health information to people (as the first step), receiving neighborhood consultations and cooperation in order to solve the problems (as the second step), and creating surveillance systems by city council and shorayariha (as the third step) are some examples. Developing health-oriented environmental and physical facilities and promoting healthy life style are respectively next in

ranks in Tehran Municipality achievements. According to the views of experts and executive managers of this study compared to previous years, the health actions of Tehran Municipality are now more fundamental and are based on people's real contributions, and despite huge political, economical, social, and international transformations during past eight years, the Municipality has been able to draw satisfactions of citizens to a great extent. But this claim needs to be examined and studied more and it is therefore suggested that the future urban managers initially adopt specific measures for citizens' satisfaction and evaluate them at the beginning and at the end of their management period.

As suggested by WHO, most municipal health-oriented actions should focus on ensuring the existence and adequacy of facilitative, promotional, and compulsory interventions affecting healthy behaviors and providing an encouraging and protective environment for citizens' health improvement and does not have a clear recommendation for delivering health care services. So, some of Tehran Municipal programs such as examining and population screening and patients' treatment required to be reviewed and overlapping programs should be discarded. Continuing those programs will certainly lead to a waste of resources.

Also, according to the respondents, inter-sectoral coordination is weak and incentive techniques such as ranking and consulting are recommended for health-orienting other municipal sectors as principal duties of general department of health in Tehran Municipality.

Implementing health impact assessment in large-scale municipal projects and assessing compliance with health standards in these programs and projects are further steps in the completion of municipal health-oriented actions.

Despite the approval of legal guarantees for the allocation of municipal revenues on public health improvement, does the views of respondents regarding budget deficit should be considered as an obstacle? It

looks like that the main problem is weak prioritization of resources and then if not enough, more attempts should be made to attract further resources.

Evaluation is recommended as a tool to all planners. Spending a part of the budget of each program on periodic evaluation may help the managers to identify effectiveness of spent resources. In this context, evaluating the establishment of health houses is suggested.

In this study, views of experts and executive managers were examined and it is necessary to measure all mentioned issues through quantitative research. The rate of changes in the level of people's satisfaction with municipal health-oriented affairs, changing behavior and life style of people living in Tehran, quantitative process of various health-oriented facilities in Tehran, changes in the rate of diseases, mortality and morbidity of citizens in different regions are some examples.

Management changes almost always challenges institutionalization of former innovations and actions, particularly in developing countries. Thus, in order to draw political support and commitment, the importance of explaining the health-oriented actions to the next mayor and his team is crucial. Also it is recommended that mayors of megacities like Tehran document and review their actions with the assistance of national experts as soon as possible, aiming the stability and durability of their health-oriented experiences, and while removing overlaps with other sectors express and approve "Health promoting Municipality" workbook. The key role of municipalities in this workbook would be coordinating citizens' health promotion in metropolitans, which could be established through health management of urban regions and coordination with national health care system. This workbook when changed into a national policy can be applied for other cities as well.

The factors that hindered further achievements are rooted in the cultural context, as lack of a teamwork spirit, "Plural-

istic" attitude, and a "systemic" thinking. These hindering factors may be different in other societies.

### *Limitations*

This study has the inherent limitations of the qualitative method.. Research quality is heavily dependent on the researchers' skills and could be influenced by the researchers' own mental background. Moreover the unavoidable presence of the researcher in the interviews might affect the subjects' responses (19).

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### *Conflict of interest*

Researchers state that although the project was ordered (commissioned) by Tehran Municipality, but in the process of collecting and analyzing the data and making reports, they have tried to stay away from any possible bias and have no conflict of interests.

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