Chapter VII. MODERN HEALTH INFORMATION & COMMUNICATION SYSTEMS (MHICS)

Embarking on the relationship between the modern medical system and the Modern Health Information & Communication Systems (MHICS), this chapter begins with an overview of the strategy of 'Better Health for Indonesia', followed by an assessment of the recent policies of the government of public health education in relation to health promotion, and its implementation in Sukamiskin. The next paragraph describes the recent policy of decentralisation of public health education and promotion, and its implementation in the research area. Then, the chapter elaborates on the concept of the Modern Health Information & Communication System (MHICS), as it operates in Sukamiskin, also outlining the recent development of the related local health information technology. Finally, an assessment is presented of the current process of integration in partnerships of various Health Information Systems (HIS).

7.1 Public Health Education and Promotion in Indonesia

7.1.1 The Strategy of 'Better Health for Indonesia'

In Indonesia, the public health sector represents the development of modern medicine and public health and is managed by the Ministry of Health led by a Minister, who is directly responsible to the President. In performing his duties, the Minister is assisted by several functionaries of the Directorate General, namely: (a) the Medical Development Efforts Division; (b) the Disease Restraint and Public Health Division; (c) the Nutrient Development of Mother and Infant Health Division; and (d) the Pharmaceutical Development and Health Equipment Division. The different divisions are present in all provincial and residential offices. The Ministry of Health (2010) supports and promotes the 'Vision of Indonesia' as an independent society and pursues the following objectives:

1. raising the degree of people's health by empowering them in both private and civil situations;
2. protecting people's health by assuring the availability of the plenary health's efforts, which are equitable and qualified;
3. assuring the availability and distribution of health resources; and
4. creating good governmental management systems.
   (*cf.* Ministry of Health 2012)

In order to reach these objectives, the Ministry of Health encourages the values of a centred, inclusive, responsive, effective and clean society. By consequence, the Ministry of Health has designed the following strategies with a view to accomplishing its objectives, including health promotion activities, as follows:

1. raising people's empowerment with regard to health development in private and public situations through national and global cooperation;
2. securing the availability of equitable, affordable and qualified health services and of evidence-based disease-preventive and health-promoting efforts;
3. improving the financial health development, particularly the national health insurance;
4. encouraging the development and utilisation of equitable and qualified human health resources;

5. ensuring the availability, equity, affordability, safety, efficacy, benefits and quality of medicines, medical equipment and food; and
6. advocating health management in the form of decentralisation of accountable, transparent, efficient and effective health management efforts to fulfil responsibility.
   (*cf.* Ministry of Health 2012)

According to the Ministry of Health (2010), during the period of time of 2010-2014, priority in modern health planning has been given *'to improve the access and quality of health care'*. The health efforts which have been taken thereafter in order to realise the objective by 2014 include several aspects which are related to the provision of information to the general public as follows:

1. public health programmes which include an integrated preventive programme to ensure the provision of basic immunization to 90% of infants; the provision of clean water to 67% of the population; the provision of basic quality sanitation to 75% of the population; a reduction in the maternal mortality rate of 228 to 118 per 100,000 births in 2007; and a reduction in the infant mortality rate of 34 to 24 per 1,000 births in 2007;

2. a family planning programme which aims to improve the quality and range of family planning services offered through 23,500 government and private clinics;

3. health facilities which ensure the availability of hospitals with minimum international accreditation in the major cities of Indonesia whereby the targeted number of three cities in 2012 has been raised to five cities;

4. medicines which are used following the enforcement of the National List of Essential Medicines (NLEM) as the basis for medicines' procurement throughout Indonesia; and

5. the National Health Insurance which achieved a total coverage of poor families in 2011 and has since gradually expanded to include coverage of other families between 2012 and 2014.
   (*cf.* Ministry of Health 2010)

Furthermore, the promotive activities include efforts to prevent and eradicate sexual diseases. However, the prevalence of infectious diseases, such as *i.a.* tuberculosis, malaria, HIV/AIDS, dengue fever and diarrhoea has remained a critical health problem for the people of Indonesia. In addition, the health of the citizens is prioritised in the 'Vision of Health Service 2013-2018' of the Ministry of Health (2010) which includes the following goals:

- the development of human resources which are reliable and religious;
- the realisation of a society which is physically and mentally healthy;
- the increase of the quality of environmental conditions through basic and public sanitation;
- the improvement of the quality of referral and access within primary health care towards being easy, equitable and affordable; and
- the support of empowerment of communities with regard to health.

7.1.2 Policies Regarding Public Health Promotion

In Indonesia, the policies and regulations concerning the promotion of modern health have been developed and implemented by the government, encompassing not only the central government,

but also the regional and local governments. In this way, the public health policies have initially been formulated in the Constitution of 1945 of the Republic of Indonesia, in consultation with the People's Advisory Assembly, government regulations, presidential decrees, local regulations at the provincial level and city district regulations.

The Constitution of 1945 has been amended four times between 1999 and 2002 in a public, annual plenary session by the People's Consultative Assembly as the country's supreme institution. The general basis of the modern health policies in Indonesia is formulated in Article 28A of the Constitution of 1945: '*Everyone deserves the right to live and to survive in life*.' Paragraph 2 of Article 28B continues: '*Every child has the right to take place in living, growing and amending*'. Table 7.1 presents a number of government regulations which have been issued in the health sector, including the integration of traditional medicine and social security.

Table 7.1 Government Regulations (PP) concerning Health and Health Information (2012).

No.	Government Regulation	Concern
1	PP 103 of 2014	Traditional Health Services (*Pelayanan Kesehatan Traditional*)
2	PP 84 of 2013	The Ninth Amendment of Regulation No.14 of 1993 on the Implementation of the Social Workers Security Programme
3	PP 85 of 2013	Procedures for the Administering Agency for Inter-Institutional Relations of Social Security

Source: Ministry of Health (2012)

Health policies have been formulated by the Ministry of Health of Indonesia which addresses rather operational topics, such as licensing or the forming of organisations in the area of health agencies. Table 7.6 illustrates a number of decrees of the Ministry of Health, known as *Keputusan Menteri Kesehatan* (*Kepmenkes*). With regard to health information, the Ministerial Decree No. 424/MENKES/SK/XII/2012, for example, deals with the concept of e-health as well as with the formation of an e-health Workgroup.

In general, modern medical treatment involves the use of generic medicines produced by pharmacies which have an affiliation with the Ministry of Health. The partnership between pharmacies and the Ministry allows clients in most cases to purchase medicine at an affordable price. Meanwhile, the Ministry of Health is able to supervise the distribution of patent and generic medicines. Regarding the use of pharmaceutical medicine, the environment of health care services available in Indonesia moreover involves a distinction between government-owned and privately-owned services. In government hospitals, medicine prescriptions are managed and supervised directly by the government, while in private hospitals, prescriptions are usually handled independently. Throughout Indonesia, medicines are also available over the counter in pharmacies and other drug stores.

In Indonesia, the Ministry of Health has defined health promotion as a primary objective within its strategies towards achieving the goal of 'Healthy Indonesia'. Furthermore, the concept of health promotion has been framed in the government regulation SK Menkes RI No. 1193/2004 regarding the National Health Promotion Policy and has hereafter provided a sound basis for the establishment of health programmes. Throughout Indonesia, strategies of health promotion have been implemented through the idea of *Perilaku Hidup Bersih dan Sehat (PHBS*) ('Clean and Health Life Patterns Programme') which emphasises hygienic living and healthy behaviour while supporting the materialisation of a new, healthy Indonesian society. In this way, the idea follows a transition from the old environment with room for improvement to the new environment as the standard of achievement, thereby raising hope and aspiration among the society. PHBS moreover deals with the implementation of health promotion in consideration of

socio-cultural aspects and aims at provoking intrinsic changes in the behaviour of humans and their interaction with the natural environment in order to ensure its perseverance. Figure 7.1 shows the flow chart of health information as formulated in 'Health Indonesia' among different health care systems throughout the country (*cf.* Ministry of Health 2010).

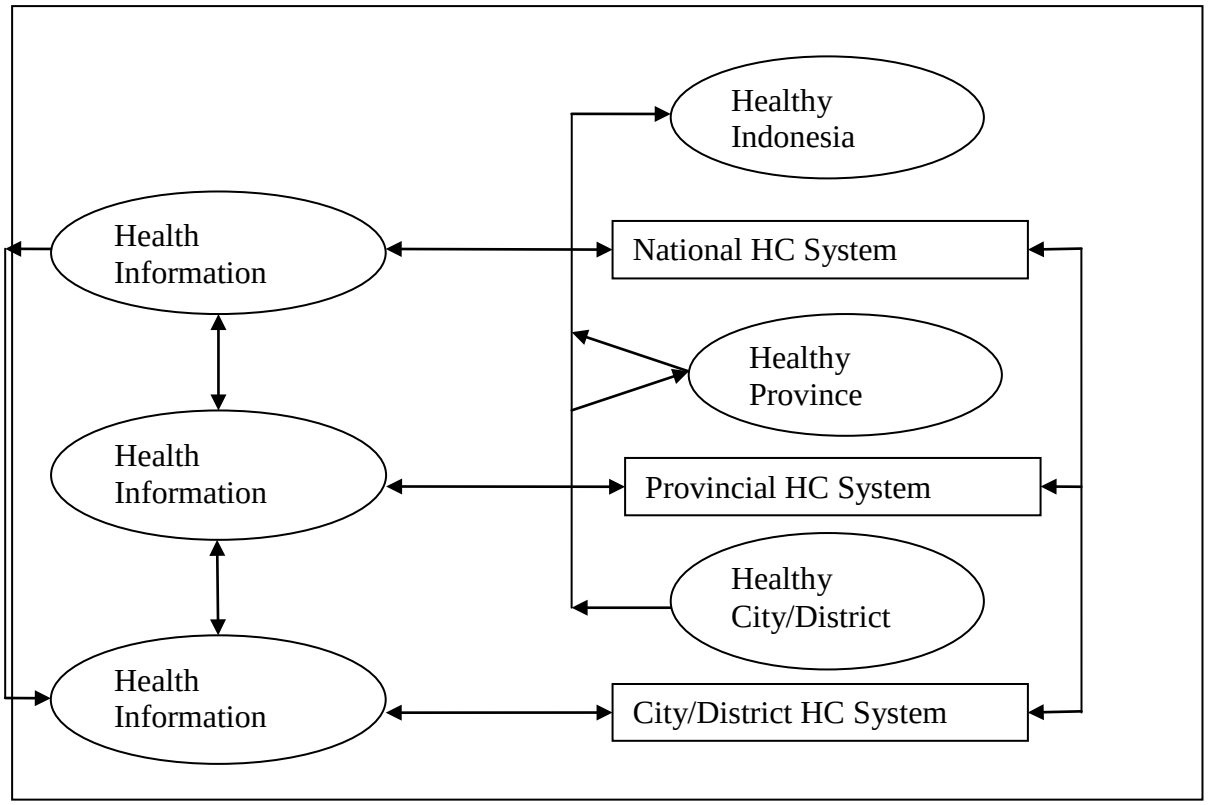

Figure 7.1 Flow Chart of Health Information among Different Health Care (HC) Systems. Source: Ministry of Health (2010)

The *Perilaku Hidup Bersih dan Sehat (PHBS)* ('Clean and Health Life Patterns Programme') describes the underlying requirements for health promotion to achieve its objectives as well as the essential efforts and activities which should be undertaken. The different health promotion strategies seek to: (1) empower the individual, family and society to live healthily; (2) maintain an environment which encourages and supports the realisation of *PHBS* in the society; and (3) provide advocacy for decision- and policy-makers. Supporting the empowerment of the society can, for example, stimulate public participation in health promotion programmes. While social empowerment involves the society as a whole, strategies towards ensuring advocacy for decision- and policy-makers are directed at public figures in health and other sectors, who are employed either formally as *i.a.* teachers, village chiefs or district heads, or informally as *i.a.* religious figures. Finally, health promotion strategies include ways to raise public awareness of the benefits of health promotion, as it emphasises the importance of healthy life patterns.

Throughout Indonesia, health policies have encompassed a significant number of strategies and programmes of health promotion. Considerable efforts have been taken in order to educate community members on various health topics, such as *e.g.* the choice of medicine. In this way, the Active Mother Learning programme, *Cara Belajar Ibu Aktif (CBIA),* which was developed in Yogjakarta, has been implemented as a trial project to improve the community members', particularly mothers', knowledge about the use of medicine as well as about conventional and

alternative forms of medical treatment. *CBIA* focuses on a variety of topics including the administration of the power of suggestion as a form of medical treatment to patients who are terminally ill. The programme also addresses the concepts of availability, accessibility and distribution of health care facilities and aims at developing a profound understanding of the benefits and advantages of medicine use among the members of the community.

In the same fashion, the Medicine Information Service, *Pelayanan Informasi Obat (PIO)*, is a service offered by health care practitioners which concerns the dissemination of information about medicine use to the community and provides detailed explanations as to the different prices of medicines as well as when and how to take the medicine. Besides being offered under trial at hospitals in West Java, *PIO* is run as a pilot project in several public health centres, hereby offering information about medicines to both patients and the public.

7.1.3 Public Health Promotion in Sukamiskin

The objectives of health planning of Bandung are specified in a regional long-term development plan, known as the *Rencana Pembangunan Jangka Panjang Daerah* (RPJPD) for the period of time of 2005-2025. The number of health personnel registered by the Bandung Health Office amounts to 59 doctors per 100.000 residents, thereby exceeding the national standard of 40 doctors per 100.000 people. Similarly, the ratio of nurses and midwives is 172 per 100,000 residents with the national standard set at 117 per 100,000 people. Moreover, the human resources for health services available in the city include 136 medical staff members, 246 nursing staff members, 62 pharmacy workers and nutritionists, 69 community health workers and eleven sanitary people (*cf.* Strategic Plan of Bandung Health Office 2014). Apart from these human resources, the modern health care facilities available in Bandung, are shown in Table 7.2. From the total of 30 hospitals located in the city, eleven are owned by the government providing supplies and funding, while there are 19 private hospitals. Throughout Bandung, hospitals represent the core facilities for the delivery of modern health care services to the population.

Table 7.2 Modern Health Care Facilites available in Bandung

No.	Health Care Facility	Total
1	Community Health Center *(Puskesmas)*	73
2	*Puskesmas* with Maternity Services	5
3	Mobile *Puskesmas*	13
4	*Puskesmas*with ICU/Emergency Room	16
5	Hospital	30
6	Psychiatric Hospital	2
7	Maternity Hospital	3
8	Other Specified Hospital	9
9	Pharmacy	97
10	Traditional Medicine Facility	105

Source: *Renstra Kesehatan Kota Bandung* (2014).

In addition to national and regional modern health systems and the availability of human resources and health care facilities, the health profile of Indonesia is characterised by the prevalence of a number of specific diseases. The prevalence of the ten most recorded diseases in Sukamiskin is shown in Table 7.3.

As regards the ten most recorded diseases, listed in Table 7.3, six cases of dengue fever have been reported in the community in October 2010. The community health centres available in

Sukamiskin are undertaking a number of activities of disease prevention and health promotion in the area. The health centres offer vaccinations to infants and pregnant women whereby infants are vaccinated with Bacillus Calmette-Guérin (BCG) and against polio, diphtheria, pertussis, tetatnus and measles, while pregnant women are vaccinated against tetanus.

Table 7.3 Priority List of the Ten Most Recorded Diseases in Sukamiskin (2012)

No.	Disease	Cases
1	Primary Hypertension	1.016
2	Gastric Ulcer	844
3	Non-Specific Acute Upper Respiration Infection	792
4	Acute Nasopharynxitis (Common Cold)	603
5	Acute Pharynxitis	324
6	Diarrhoea & Gastroenteritis	300
7	Myalgia	256
8	Headache	236
9	Unclassified Skin and Hypodermal Disorder	227
10	Other Acute Upper Respiration Infection	151

Source: Report of *Puskesmas* Arcamanik (2012)

Furthermore, the community health centres organise various indoor and outdoor health-promoting events which offer counselling for conditions, such as dengue fever, tuberculosis, HIV/AIDS, Avian Influenza, elephantiasis as well as non-communicable and contagious diseases in addition to information on vitamins, nutrition, smoking, narcotics, hygiene, breastfeeding and occupational as well as environmental health. Table 7.4 presents an overview of a number of health promotion events held indoors and outdoors in Sukamiskin in 2012.

Table 7.4 Health Promotion Events held by Health Centres in Sukamiskin (2012)

	August		September		October	
Purpose	Indoor	Outdoor	Indoor	Outdoor	Indoor	Outdoor
Dengue Fever	0	-	-	-	-	-
Tuberculosis	3	-	4	1	4	-
Nutrition	4	-	4	-	4	-
Smoking	-	-	-	1	-	-
Breastfeeding	3	-	4	-	4	-
Environmental Health	-	-	-	-	4	-
Jampersa	1	-	-	-	1	-
Total	11	-	12	2	17	-

Source: Report of *Puskesmas* Arcamanik (2012)

Moreover, the community health centres support the development of *RW Siaga* (‘Alert Community Associations’). In Arcamanik, 32 out of 51 community associations have been selected as *RW Siaga*. Overall, visitation and participation at the health centre among the inhabitants of Sukamiskin have recently been decreasing from 74.2% to 64.4% and have remained below the target of 75%.

In Bandung, the strategies of health promotion have mainly focused on gaining a common perception of promoting health and on inviting the private sector to cooperate in health promotion activities by using public ads, such as *Telkomse,* in order to enable the public to gain awareness and to protect themselves against disease (*cf.* Interview with Lucyati 2015).

Regarding the utilisation of information technology in health promotion, the West Java Health Agency has implemented a digital short message service which can be used to report events, such as *i.a.* extraordinary disasters or infant deaths due to poisoning.

Although new software has been developed to generate cumulative data and to create appropriate websites, health agencies continue to use traditional means, such as cards, for the management of medical and health progress records, as well as monthly and annual reports for delivering information to provincial and central agencies. The health agency of Bandung, however, has developed a health information technology programme which includes: (1) the concept of Smart City, *i.e.* a city which can monitor and control existing resources to be used effectively and efficiently in order to provide adequate services to its citizens and to identify the needs of its citizens; (2) a Health Information System (HIS); (3) an Integrated Emergency Management System which deals with emergency patients by means of providing pre-hospital, in-hospital and between-hospital care in order to ensure a rapid response; (4) a SMS Gateway which is currently employed in six primary care clinics including the Arcamanik health centre, which provides an online registration of patients whereby the registration and access control reader application tool serves as the patient's identity card; (5) an application of public services which includes the e-Health Data Warehouse, e-licence, e-Promotion, Sikda 2.0 and the e-Health Decision Support System; and (6) a social media application which involves public participation and is used as a tool to monitor and verify the programme's achievements and to assess public complaints in comparison to national development programmes (*cf.* Raksanagara 2015).

The community health centre located in Arcamanik has adopted a number of these health promotion strategies which include the dissemination of health information, policies of community empowerment and development as well as advocacy planning and social support. Efforts of health promotion are targeted at individuals and families as well as at particular groups and organisations in the research area. The health promotion material provided either follows health promotion programmes developed for Bandung or Indonesia at large or deals with particular topics which are tailored to the health situation in Sukamiskin. For example, information about the Avian Influenza is provided in Sukamiskin in neighbourhood meetings and through the distribution of leaflets around the village.

Various efforts have also been taken in the research area to advance community empowerment, *e.g.* by means of identifying, introducing and implementing communal health motivation programmes. Hereby, community members are invited to jointly run these programmes. Throughout the research area, a programme focussing on washing hands as a way to promote a clean and healthy life is carried out at schools and involves teachers instructing their students how to wash their hands. Efforts towards supporting community empowerment have moreover led to the appointment of *kader* ('community volunteers') advocating family planning programmes at institutions, such as the health post or the Islamic boarding school. In addition, advocacy strategies are directed at decision-makers in the field of both health and other sectors while strategies of social support are directed at both formal and informal community leaders, such as religious figures. Plans of advocacy are usually carried out in the form of *i.a.* discussions, meetings or outreach programmes. The community health centre in Arcamanik organises an annual meeting which offers a 'question and answer' session held between community leaders as representatives of the community and health workers. The meeting usually addresses the role of health care services and existing health issues in the community and tries to find solutions.

At the community level, health promotion is implemented through weekly gatherings which are attended by the community members and the village authorities. Furthermore, health is promoted through visual media or, in case of a lack of electricity, through other forms of media

which are compatible with the place and its facilities. In cooperation with radio stations in the Bandung area, health information is broadcast in the form of public discussions. Similarly, cooperation between villages and the government of Bandung results in the use of billboards and health posters as well as promotion cars by public health centres, integrated health posts, district administrations and schools in order to disseminate information about health promotion (*cf.* Illustration 7.1).

Illustration 7.1 Health Information Billboard
Photograph by W. Erwina (2012)

Illustration 7.2 (a, b & c) Examples of Health Information in Sukamiskin provided by the Ministry of Health of Indonesia and by UNPAD
Photograph by W. Erwina (2014)

Since the budget for health promotion uses funding from the State Treasury, the government plays an important role in the promotion of public health and in the implementation of health programmes which usually require an extended period of time among communities.

7.2 Recent Decentralisation of Health Education and Promotion

7.2.1 Public Health Promotion and Regional Autonomy

In the public health sector, decentralisation refers to the delegation of authority from the central government to local governments in an attempt to manage health problems at the community level. Consequently, the local government enjoys a degree of regional autonomy and has full responsibility towards addressing health issues prevalent in the area. Regional autonomy refers to a unity of legal communities, which has the authorisation to regulate and manage the interests of local people (*cf.* Widjaya 2002).

In general, decentralisation refers to the transfer of authority and power from higher levels of government to a lower level in the political hierarchy of administration or territories (*cf.* Mills *et at*. 1990). Decentralisation can also be defined as the transfer of responsibility in planning, decision-making, power and resource utilisation as well as of administrative authority of the central government to various organisations, such as:

1 the territorial ministry units of the central government;
2. a lower level of government;
3. a semi-autonomous organisation;
4. regional authority bodies; and
5. non-governmental or voluntary organisations
   (*cf.* Omar 2001).

In Indonesia, decentralisation has been a major theme over the past two decades. According to Rafei (2007), Indonesia entered the era of regional autonomy and decentralisation in 2001 although the initiating legal Act No. 21 of 1999 was introduced in May 1999. First attempts towards implementing decentralisation in Indonesia have been – albeit unsuccessfully – made since the colonial period of time. The practical preparations for the nationwide implementation of decentralisation and regional autonomy in 2001 have been executed over a period of 19 months. In comparison, the development of decentralisation, particularly in the field of health, in The Netherlands had been gradually prepared over a period of 30 years. In Indonesia, decentralisation has been linked to the economic crisis of the 1990s.

In general, efforts to implement decentralisation in Indonesia have been different from the strategies pursued in most other developing countries. In fact, any attempt to introduce structures of regional autonomy has to take into account the great diversity of *i.a.* ethnicity, culture and geography in order to avoid potential dissatisfaction and disunity. In order to be effective, Act No. 21 of 1999 had to be applicable to over a hundred government rules. Since only about 20 Government Acts, *Peraturan Pemerintah (PP),* have been published, each local government makes its own interpretation on the existing provisions. In other words, interpretation of the law of decentralisation and regional autonomy can differ from region to region. Consequently, the different interpretations often cause confusion, particularly in the public service sector including health care services, and can hereby have a negative impact on the strategies to improve the lives of the poor.

The process of implementing decentralisation in Indonesia has been divided into three phases: 1) the introductory phase between 2001 and 2003, in which all districts have been expected to have started to enforce decentralisation according to the regulations and in which the central and local governments planned to carry out capacity building programmes without leaving the continuity of service delivery to the communities; 2) the consolidation phase between 2004 and 2007, in which the governance and fiscal reforms continued with intensive assistance to local governments while organisations or local councils had to be established; and 3) the stabilisation phase which started in 2007 and in which the central government as well as local governments and organisations have achieved maturity, although capacity building to strengthen local governments has been maintained.

7.2.2 Community Health Education and Promotion in Sukamiskin

According to Law No.22/1999 concerning Regional Autonomy, and the Amendment by Law No.32/2004 on Regional Government, the responsibilities of the central government have been transferred to the local government which hereafter has the lawful authority and mandatory duty to address and manage the health problems. Issued by the Ministry of Health, the decrees No.004/2003 concerning Policies and Strategies of Decentralisation of Health and No.1457/2003 concerning the Minimum Service Standard (MSS) are moreover directives on the implementation of health programmes which have been adopted by local governments (*cf.* Ministry of Health 2005). In general, the aim of these efforts is to decentralise national development initiatives in the health sector according to the aspirations of the local communities by means of empowering, accumulating and optimising local potential, and to hereby generate regional benefits and achieve the national goal of 'Healthy Indonesia in 2010'.

In this context, the government of Bandung introduced the community empowerment Programme *Bandung Bersih* ('Clean Bandung'), which urges the people to be concerned about the cleanliness of the city. In this way, efforts have been taken to provide comfortable spaces and public parks throughout the city. The region of Sukamiskin became one of the main targets of the programme since it provides sports facilities which are also used during national events. Similarly, a 'Pick up Garbage' movement is organised every Monday, Wednesday and Friday involving all community members including students (*cf.* Figure 7.5).

Illustration 7.3 a & b Posters of the *Bandung Bersih* Programme in the Bandung City Campaign 2017.

Decentralisation of the health sector is normally achieved as part of the overall strategies of political and economic decentralization. Accordingly, Segall (2003) concludes that decentralisation is likely to have a most positive impact on the health care system provided the concept is chosen and implemented carefully and gradually on the basis of a detailed plan of action. Wang *et al*. (2012) and Martineau & Buchan (2001) agree that one of the key elements in the success of decentralisation refers to the selection of actors, who demonstrate the ability to deal with change. The introduction of changes in structures of authority, responsibility and duties as a result of the implementation of decentralisation, can lead to conflicts among health workers, managers and decision-makers, particularly in countries such as Indonesia which have enforced decentralisation in a relatively short period of time. Decentralisation aims at stimulating health care services to be effective and efficient while encouraging the health information systems to act professionally (*cf.* Adisasmito 2007).

In general, community members are no longer objects but subjects, who can participate in the process of health care development. Decentralisation of the health care services primarily focuses on strategies of disease prevention and health promotion and seeks to adopt a 'bottom-up' approach which not only relies on local resources, but also supports the development of a diverse sector of health (*cf.* Adisasmito 2007). Furthermore, decentralisation of services within the health sector also involves the transfer of responsibilities regarding the dissemination of health information and communication among the local authorities and community members. Nevertheless, the implementation of decentralisation of health care development is also subject to a number of difficulties, such as unprepared professionals, a lack of continuity between primary and secondary health care services and discrepancies in ideas between the local government and national health care planning (*cf.* Adisasmito 2007). Essentially however, decentralisation and regional autonomy provide greater authority to local governments, including the local governments of urban districts, in a way to improve welfare and to promote the health of people, especially of the poor and marginalised members of the community.

The activities of information and communication involve a communicator and a communicant as well as media delivering messages between the former. In view of this general outline, messages can be delivered by government institutions, such as the Agency of Communication and Informatics in Bandung which adopts government programmes designed for the public and provides its content to the community. The spread of information from the government of Bandung to the communities regularly involves printed material in the form of *i.a.* leaflets, brochures or booklets which are used as media to accompany programmes which have been or will be implemented. The media are usually tailored to the information needs of the target population and adapt to the local standards of time and speed at which the information should be delivered.

The Office of Information & Communication in Bandung has identified a number of steps as part of a long-term development plan which is integral to activities related to Health Information Systems (HIS). Bulgan (2009) presents the plan of *Rencana Pembangunan Jangka Menengah Daerah* (*RPJPMD*) as follows: '*The local government breakthrough from Bandung city is RPJPMD, i.e. a long-term development plan in secondary areas. The RPJPMD already compiled the various dynamics of information substances to be conveyed to the public through the media of television, Internet, radio and others. It always tries the dynamics of the actual position on the substance of the information submitted to the public*.'

In view of the development plan, the selection of media which are appropriate for the dissemination of health information is considered an important step in delivering the desired health information to the public. In this way, it appears that health information reaches a wider audience and provokes a quicker response if it is disseminated through an integrated system

supported by information technology. Since the spread of information in print requires a rather long time from the moment the information is created, television and Internet indeed appear to be more effective in the dissemination of information. Nevertheless, the different types of media have their respective advantages and disadvantages which both play a substantial role in the delivery of information. Although electronic media operate faster than printed media, the substance of the information delivered remains the same whereupon health information is commonly delivered through a mix of electronic and printed media.

The media remain the major supporting tools in achieving the ultimate goal of enhancing the understanding of health information among members of the society.

7.2.3 Partnerships in Health Information & Communication

According to Rafei (2007), a health care partnership is currently based on the involvement of all sectors which are needed to improve the health and quality of human life. The three main counterparts within any health care partnership refer to the government, the public and the private sector. As such, these sectors cooperate towards achieving a common goal, gaining a basic commitment and creating understanding among each other. The partnership creates synergy and provides reinforcement to each partner involved for the achievement of the goal. Provided the partnership is not misinterpreted as an opportunity for funding or sponsorship, it can indeed have beneficial effects on the health sector. In this way, Rafei (2007) highlights that partnerships can, for example, help to reduce disparities in health care by means of advancing empowerment and public health development. The realisation of partnership programmes is dependent on the socio-cultural environment in which people live. Religious leaders, for example, can enter into partnership with mothers, who are involved in a variety of communal activities and youth organisations. Partnerships generally aim at advancing solidarity and at accelerating information distribution while upholding socio-cultural structures, such as the family unity.

On the basis of a partnership between the health centre and elementary schools in the research area, the so-called 'Little Doctor Programme' (*Dokcil*) was implemented with the aim of teaching students about health issues within the school and distributing health information directly to the students. Students are taught how to comprehend and how to address not only personal health matters, but also health problems of friends and others. At the level of junior high school, health promotion strategies include a number of extracurricular activities, such as the *Palang Merah Remaja* (*PMR*) ('Youth Red Cross'). The programme of *PMR* is presented in class by the staff of the health centre, students of higher education or *PMR* Indonesia and usually offers health information on *i.a.* how to deal with accidents and how to stay healthy.

Throughout the research area, health care partnerships usually involve a number of community institutions, agencies and organisations, such as: the Village Medical Post, *Pos Obat Desa* (*POD*); the Occupational Health Post, *Pos Upaya Kesehatan Kerja* (*UKK*); the Health Post of the Islamic Boarding School, *Pos Kesehatan di Pondok Pesantren* (*Poskestren*); the Village Delivery Facility, *Pondok Bersalin Desa* (*Polindes*); Civil Society Organisations, *Lembaga Swadaya Masyarakat* (*LSM*); as well as private and non-governmental organisations including hospitals, maternity hospitals, Maternal and Child Health (MCH) centres, treatment centres, 24-hour clinics and medicine stores. Health care partnerships address a variety of topics culminating in the implementation of several health care programmes, such as: Sexual Diseases Eradication with Rural Public Health Maintenance Approaches (*P2M-PKMD*); a Housing Sanitation Programme with Rural Public Health Maintenance Approaches (*PLP-PKMD*); *Saka Bakti Husada* ('Health Service Scouts Troops'); *Tanaman Obat Keluarga* (*TOGA)* ('Household

Medicinal Plants'); Integrated Elderly Care, *Pos Pembinaan Terpadu* (*Posbindu*)*; Pos Pelayanan Terpadu (Posyandu*) ('Integrated Health Post'); *Pemantauan dan Stimulasi (*'Monitoring and Stimulation of Toddlers' Development'); *Perkembangan Bayi* (*PSPB*) ('Toddlers' Family Building'), as well as environment clean-up movements. Funding for partnership agreements is provided by *i.a.* rural community health development funds; health school unit funds; funds of the Islamic boarding school; funds of local village cooperatives; funds from NGOs and other civil society organisations; and health insurances. In the Arcamanik district, the Modern Health Information & Communication Systems (MHICS) generally involve the exchange of information between a number of health care institutions and providers as well as patients. In Sukamiskin, a number of partnerships of health information & communication have been established, and include the following:

1. *Doctor and Patient Relationships*
   In the event of a patient's visit to the doctor which may regard a personal health issue or an issue of someone else such as a child, the doctor and the patient establish health communication, primarily in the form of questions and answers. The content of the conversation usually addresses thd causes of illness as well as examples of preventive and curative action. In this way, the doctor generally asks the patient to reveal information on topics such as family background and lifestyle, as they are important factors in making the diagnosis and determining the type of medical treatment and advice. The patient usually expects the doctor to share information about the recovery process and disease prevention.

2. *Nurse and Patient Relationships*
   The relationship between the nurse and the patient is established during the process of medical treatment. The nurse usually also facilitates communication with the patient in order to collect the patient's data, such as *i.a.* body weight and height, and offers more detailed information about the treatment process to the patient.

3. *Medical Assistant and Patient Relationships*
   The patient generally builds a relationship with a medical assistant during the process of treatment of an illness which is often less severe and does not require intensive special treatment and observation, hence the intermediary of a doctor.

4. *Midwife and Patient Relationships*
   In the medical field of reproduction, pregnancy, as well as Maternal and Child Health (MCH), communication between the midwife and the patient is established during pregnancy examinations, the delivery process, the course of recovery after the delivery and the infant immunisations. In general, the midwife also provides information to married couples on topics such as contraception and reproduction, as well as to mothers, on matters such as *makanan pendamping ASI* (*MPASI*) ('food supplements') which can be given to the child in addition to breast-feeding.

5. *Pharmacist and Clients/Patient Relationships*
   In general, the pharmacist provides medicines with or without prescription to the community members. In this way, the pharmacist also represents a source of health information and communication regarding the choice of medicine, their potential benefits and the instructions about the proper consumption of the medicine.

6. *Doctor and Health Representative Relationships*
   Doctors employed in public health centres also have the responsibility to provide health care training and information directly to different categories of the health personnel. They include community members who willingly choose to become the liaison between doctors and the community and who are directly involved in family welfare activities and family planning programmes. The partnership involves a two-way communication which usually addresses topics relevant within the community, such as particular health conditions and family planning.

7. *Inter-Organisation Partnerships*
   In Sukamiskin, an inter-organisational or inter-institutional partnership regarding the exchange of health information & communication is normally established between local organisations and institutions, such as between the health post and the *Pembinaan Kesejahteraan Keluarga (PKK)* ('Empowerment of Family Welfare Movement').

8. *Health Department and Public Health Centre Partnerships*
   Partnerships formed between the Health Department of Bandung and the Public Health Centres involve a mutual exchange of information & communication. In other words, health information & communication are distributed through both a 'top-down' and a 'bottom-up' approach.

9. *Companies, Schools, PKK and Youth Organisations (Karang Taruna) Partnerships*
   The objective of partnerships between companies, schools, the *Pemberdayan Kelompok Keluarga (PKK)* ('Empowerment of Family Welfare Movement') and youth organisations usually relates to the provision of materials, such as *i.a.* milk, healthy food and toothpaste, to the community members. In this way, companies may create partnerships as part of their Corporate Social Responsibility whereby partnerships may also create opportunities to promote products. Within the scope of these partnerships, the Bandung Police Department, for example, has established a partnership with youth organisations in order to provide counselling in the event of abuse.

10. *Universities and Schools Partnerships*
    University students and lecturers often engage in community service activities offering health checks and health counselling in schools to students and teachers, as well as observing the level of health and sanitation maintained at the schools.

11. *Universities, Public Health Centres, PKK and PAUD Partnerships*
    In the research area, university students, particularly from the Medical Faculties of General Medicine, Dentistry and Nursery, follow internships as co-assistants at the Public Health Centres. The students are trained to socialise with the community members and to provide services of health promotion, disease prevention and medical treatment to the local population by means of designing and putting up posters for dental care. Universities moreover cooperate with local institutions such as in the provision of health counselling and training of members of the *Pemberdayan Kelompok Keluarga (PKK)* ('Empowerment of Family Welfare Movement'). The Faculty of Education collaborates with the *Pendidikan Anak Usia Dini (PAUD)* ('Pre-School'), in the design and implementation of pre-school activities.

Moreover, in addition to the relationships and partnerships presented above, local authorities as well as academic institutions in the area organise a number of international health extension programmes (*cf.* Illustration 7.4). Usually, these partnerships are established between community members and the male, female and juvenile residents of the Sukamiskin Penitentiary Institution. Within the scope of this partnership, UNPAD participates in various community service activities which are directed at the residents of the penitentiary and are related to health, such as health examination, counselling and health product delivery as well as health information distribution through books.

Illustration 7.4 International Symposium on *Jamu*, organised through the Partnership between WTT, UL, UNPAD, and MAICh at UNPAD, MTF in 2005.
Photograph by Humas, UNPAD (2005).

7.3 Modern Health Information & Communication Systems (MHICS)

7.3.1 Health Education through Institutions & Organisations

Health information and communication in combination with health education throughout the research area is provided by a number of formal and informal institutions and organisations. Health education is a government health extension programme which focuses on the distribution of information to neighbourhoods and communities on *i.a.* medical treatment of diseases, such as Filariasis, Avian Influenza or Dengue Fever. In Sukamiskin, the organisations and institutions which are providing public health information and communication in combination with health education include the following:

1 *Pos Pelayanan Terpadu (Posyandu*) ('Integrated Health Post'),
The *Pos Pelayanan Terpadu (Posyandu*) ('Integrated Health Post') is a health care delivery service unit which is found in every community unit in Sukamiskin. As such, the health post also provides health information to families and mothers about topics, such as a healthy

lifestyle, the provision of nutritious food to infants, breastfeeding and how to routinely fill the book on Maternal and Child Health (MCH), '*Kesehatan Ibu dan Anak*' (*KIA)*, which records the growth of the infant. In addition to offering health education, health posts administer immunisations and nutritious food *(cf.* Illustration 7.5).

2. *Public Schools*
   The health education in schools covers the subjects of biology, chemistry, physics and health, which are taught directly or indirectly to the students. In general, the process of communication between teachers and students takes place in an interactive setting, which offers the opportunity for questions and answers and hereby generates a two-way channel of communication. Schools moreover serve as institutions for the implementation of the Clean and Healthy Life Patterns Programme, *Perilaku Hidup Bersih dan Sehat* (*PHBS*), through which children are taught how to wash their hands thoroughly and in the right way. In collaboration with food companies, schools also adopt programmes which focus on the provision of nutritious food in the form of milk and green pea porridge. Furthermore, the dental health outreach programme, which involves the Faculty of Dentistry of UNPAD, educates teachers and students on how to maintain healthy teeth.

3. *The Empowerment of Family Welfare Movement* (PKK)
   The *Pembinaan Kesejahteraan Keluarga* (PKK) ('Empowerment of Family Welfare Movement') is facilitated by the central government as well as by local government and involves the provision and exchange of practical knowledge of housewives which is used in order to increase the level of family welfare and social care among the community members. Activities include training in the processing of nutritious food for the family, managing the neighborhood environment and maintaining a healthy lifestyle (*cf.* Figure 7.8).

4. *Neighbourhood Youth Associations*
   The 'Neighbourhood Youth Association' is an organisation which allows young community members to associate and communicate with each other in a way to address common problems, including health issues. The health education offered to the 'Neighbourhood Youth Associations' is tailored for the young community members, who are viewed as potential facilitators of change in the community, and addresses topics such as drug use, free sex and HIV/AIDS.

5. *Mosques*
   The mosque is not only a place of worship, but also the centre of Muslim education, and hereby accommodates religious institutions and organisations, such as the *tadzkir* assembly. The *tadzkir* assembly functions as a religious centre of health education, where members can exchange information and conduct studies on Islamic doctrines related to health and healing.

6. *Pendidikan Anak Usia Dini* (*PAUD*) ('Pre-School')
   Health education offered at pre-schools meets the need for educational activities which are directed at children below the age of five, serving as preparation for school. In this way, psychomotoric training is offered to children while parents are taught how to develop skills in guiding and educating their children. Parents are moreover provided with information about specific topics of interest, such as nutritional counselling for families (*cf.* Figure 7.8).

7. *Pesantren (*'Islamic Boarding School')
   The students of the Islamic boarding school play an active role in the distribution of health information which is based on Islamic doctrines and includes religious forms of medical treatment, relevant to the communities.

8. *Taman Bacaan Masyarakat (TBM)* ('Community Reading Corner')
   The *TBM* provides health information to the community in the form of magazines, books, newspapers and leaflets [1&2]. Furthermore, the facility issues a *berwarna* ('newsletter') containing information on various health activities.

Illustration 7.5 The Provision of Nutritional Information to Parents and Children at the Pre-School.
Photograph by W. Erwina (2009).

Illustration 7.6 The Programme of *Pembinaan Kesejahteraan Keluarga (PKK)* ('Empowerment of Family Welfare Movement') in Sukamiskin.
Photograph by W. Erwina (2013).

Apart from the local institutions and organisations listed above, activities of Health Information & Communication (HIC), such as counselling in schools, usually involve representatives of the Department of Health as well as other agencies, institutions, organisations, companies and private organisations. Furthermore, health education at the local level is offered through the joint efforts of the villages, the hamlets and the neighbourhoods. In this way, activities are always integrated and regulated by the community, while the facilitators of health education are required to notify the Village Head about the progress of the activities. All engagements in health activities, usually related to personal health conditions within the community or the environment, rely on complex Health Information & Communication Systems (HICS).

Regarding the establishment of Health Information Systems (HIS), the government draws on legal regulations by taking into account the principle of appropriateness. In this way, attention is paid to the norms of respectability in the society which often tend to remain narrowly defined. Within the Agency of Communication and Informatics in Bandung, for example, decisions can in principle be made without reference to the Mayor, since it is the Agency's basic task to communicate information and to facilitate dialogue between the government and the public. The agency which was part of the Public Relations Office of the Department of Information until 2000 was subsequently established as a more independent information & communications service agency, and as such was identified as having the best government website in Indonesia.

Although the media generally tend to overlook the hierarchy of local governments, local governments continue to work with the media in disseminating information provided by the government to the public. The local governments within the area of Bandung, for example, have implemented programmes which are tailored to the needs of the health information of the communities and focussed on the direct communication between government agencies and the public through *i.a.* television programmes. Hereby, the vertical integration of different levels of systems of communication and the mass media appears to be an adequate means of identifying information needs as well as addressing complaints and resolving them properly. In this way, the Ministry of Communication and Informatics can react to complaints filed by the community and respond to them through *e.g.* the engagement of the related work units.

The integration of communications systems and the mass media relates to the facilitation of communication and does not involve an interference in the work performance of the institutions and services involved. Systems of information and communication are dynamic constructs which operate between the government and the communities by means of drawing on the communal legislature. In the light of these considerations, the main task of the Agency of Communication and Informatics in Bandung is to develop an Information & Communication System (ICS) which encourages the inhabitants of hamlets and neighbourhoods to become active and to obtain information through the media, such as the Internet, as quickly as possible. For the purpose of implementing an integrated system of information & communication and of disseminating information to the public, Internet facilities, such as cybercafés and ID cards which are available against cash at the coffeehouses, are locally provided by the city government.

7.3.2 New Channels of Modern Health Information & Communication

Modern Health Information & Communication Systems involve several elements, *i.e.* a message; the communicator, who communicates the message to others; the communication media; and the receiver of the message. Within the Modern Health Information & Communication System (MHICS), the message can refer to various issues of health promotion, disease prevention and treatment. Moreover, the message usually focuses on the health demands, wants and needs of the person receiving the message, known as the 'communicatee'.

Throughout Indonesia, messages are on the one hand conveyed directly through the intermediary of a communicator. In detail, communicators of health information can be found in different social settings and can refer to: government communicators such as the President or the Ministry of Health; public institution communicators including cities, districts, villages, hamlets and neighbourhoods; health institution communicators such as *i.a.* hospitals, health centres, health posts and the *Pemberdayan Kelompok Keluarga (PKK)* ('Empowerment of Family Welfare Movement'); other institution communicators including schools, colleges, Islamic boarding schools, public reading corners and public libraries; and family communicators, namely parents, relatives and neighbours. On the basis of face-to-face or mouth-to-mouth communication, messages are hereby passed on either within a formal context such as studies, seminars, conferences or government statements, or within an informal context such as family gatherings or activities organised by the local health post.

On the other hand, messages are conveyed through the use of communication media such as: printed media, *i.e.* books, newspapers, magazines, tabloids, newsletters, posters and leaflets; audio and audio-visual mass media including radio, television and films; and new or electronic and convergent media such as the Internet, e-books, e-journals, e-radio and e-TV. Finally, the communicatee can be the head of the family, the husband or wife, a child, a family relative, a teacher or a student. Communicatees could also include community members, who participate in health programmes such as *i.a.* The *Pemberdayan Kelompok Keluarga (PKK)* ('Empowerment of Family Welfare Movement'), or the *Pendidikan Anak Usia Dini (PAUD)* ('Pre-School').

Throughout Indonesia, modern health information & communication are indeed established in different community settings ranging from the family as the smallest unit up to the community as the biggest unit by means of sharing information involving two or more parties. In general, different channels, *i.e.* levels and scopes, of information & communication can be distinguished. Interpersonal communication, for example, accommodates personal beliefs, orientations, expectations and predispositions as well as suggestions. With respect to health, such underlying levels and scopes of information & communication can significantly affect the healing process as well as attempts towards disease prevention. In detail, Modern Health Information & Communication Systems involve the following information & communication channels:

Interpersonal Communication

Interpersonal communication is a form of communication which is established between individuals and involves more than one person. One example of interpersonal communication with regard to health is the communication between the doctor and the patient. In order to advance medical treatment and to promote health, this interpersonal channel of communication draws on the interaction between the doctor and the patient and on the exchange of relevant information, *e.g.* through a health care interview or anamnesis.

Health Group Communication

In Sukamiskin, the health post and the *Pemberdayan Kelompok Keluarga (*PKK) ('Empowerment of Family Welfare Movement') are groups which hold regular discussions, particularly on health issues. In detail, people gather and discuss health matters on the basis of their own experiences and needs and try to find possible solutions. In addition to health care institutions and organisations, health communication is facilitated by groups which do not specifically focus on health issues but nevertheless distribute health information indirectly through conversations. Mothers waiting for their children at the pre-school, for example, exchange health information through conversation between each other or with the teachers. In fact, health group communication can involve a variety of social groups.

Health Communication Channels
Health information & communication are moreover facilitated by a considerable number of health communication channels, *i.e.* through different types of information technology and the mass media. In Sukamiskin, the communication channels which are normally used for transferring health information refer to:

1. direct communication between different parties such as doctors, patients, a health team or paramedics through various media such as phones, mail, fax or email whereby the media are primarily interactive and personal, generating a two-way channel of communication and allowing the involved parties to observe reactions and to give direct feedback;

2. the mass media communication through different media: radio, television, film or billboards;

3. new media communication on the basis of Internet use and media convergence [3]; and

4. communication on the basis of books and newspapers.

The next paragraph will further elaborate on these communication channels within the context of the recent progress of the process of digitisation.

7.3.3 The Progress of Digitisation: Radio, TV, Newspapers and the Internet

Until recently, radio broadcasts have had a loyal audience, not least reinforced by programmes, which are tailored to the interests of the listeners. Youth segments, for instance, offer programmes, which appeal to the interests of the young and accommodate music as well as information about religion, the news and political issues. Radio programmes have the advantage of allowing the audience to perform other activities, such as travelling or household work simultaneously while listening to the radio. In general, the radio represents a type of mass medium which can also play an important role in delivering health information to the public, in the form of community advertisements or special shows with interactive dialogue (*cf.* Table 7.5).

Table 7.5 Radio Stations with a Health Information Programme.

No.	Radio Station	Frequency	Name of Programme	Broadcast Time (WIB) & Length	Major Broadcaster
1	K-Lite FM	107, 1 FM	Healthy Life	Saturday, 09.00–12.00 180 Minutes	*Yani Radio Bisnis*
2	U-FM	104, 3 FM	Healthy Life	Thursday, 08.00–09.00 60 Minutes	*Imam RadioWanita*
3	MQ-FM	102, 7 FM	Healthy Clinic	Everyday, 10.00–11.30 90 Minutes	*Nasyid Radio Islami*
4	B-Radio	95, 6 FM	Fit Healthy	Tuesday, 19.00–20.00 60 Minutes	*Irwan Radio Dewasa*
5	Radio Mora	88, 5 FM	*MOTIF*	Monday–Saturday, 15.00–16.00 60 Minutes	*Wildan Radio Hukum dan Demokrasi Mora Interaktif*
6	Radio Zora FM	90, 1 FM	Morning Zone	Everyday, 06.00–09.00 180 Minutes	*Hida Radio Dewasa*
7	Radio Walagri	93, 3 FM	Enjoying Life	Everyday, 08.00–10.00 120 Minutes	*Naniek Radio Kesehatan*

In addition to the radio, health information is disseminated audio-visually through the medium of television, whereby the audio-visual distribution of information has been considered more effective than radio broadcasting. Health information, which is delivered through television media, appears to be easily comprehensible to the public. Table 7.6 presents an overview of the different national and regional television stations, which are also broadcasting health programmes in Indonesia and West Java.

Table 7.6 TV Stations with a Health Information Programme.

No.	TV Station	Name of Programme	Showtime (WIB)
National			
1	RCTI	*Jalinan Kasih*	Saturday, 09.30-10.00
2	Indosiar	*Sehati (Sehat Ala MbakTini*)	Saturday, 05.00- 05.30
3	SCTV	*Pundi Amal*	
4	Kompas TV	*Tanya Dokter*	Monday-Friday, 07.30-08.30
		Dapur Nutrisi	Tuesday, 11.00-12.00
5	Metro TV	e-Lifestyle	Sunday, 13.30-14.00
		Indonesia Cinta Sehat	Tuesday, 11.00-12.00
6	TVRI	*Yuk Hidup Sehat*	Monday-Friday, 09.30-10.30
7	Global TV	Spot On	Monday-Friday, 14.30-15.30
8	TV One		
(Continued) Table 7.6			
No.	TV Station	Name of Programme	Showtime (WIB)
9	ANTV	Clinic Secret Herbal *Ekstrak*	Saturday, 08.00-08.30
10	Trans TV	Dr. Oz Indonesia	Saturday-Sunday, 15.30-16.30
11	Trans 7	*Khazanah*	Monday-Sunday, 05.30-06.00
		Syafaat	Wednesday-Friday, 09.15-10.00
12	Net		
13	MNCTV		
Regional (West Java)			
14	TVRI Jawa Barat & Banten		
15	STV	*Dialog Kesehatan*	Monday-Sunday, 23.00-00.00
16	Bandung TV	*Dokter Kita*	Weekly
		Dialog Khusus	
		Alternatif Sehat Bersama Bandung TV	
		Klinik Totok Perut Mega Power	
		Klinik Teh Mayang	
		Mutiara Therapy	
17	PJTV		
18	IMTV		
10	NET Bandung		

Currently, a number of mobile companies are also launching their products in Indonesia at a rather affordable price, which is endorsed by the service provider companies offering telecommunication services such as *i.a.* Multimedia Message Services (MMS) and email. In general, the use of mobile phones allows for flexibility, since the medium can be adjusted to the capabilities and needs of the user. The online networks, which are provided on the mobile phones, include: the Global System for Mobile Communication (GSM); the Code Division Multiple Access (CDMA); and the Third-Generation Technology (3G). Activation of a mobile phone in Indonesia usually requires the purchase of a starter pack, which costs between 3,500

and 10,000 rupiah, and can be done by the customer. The mobile phone is subsequently registered by the respective service provider company, which records the customer data. *Telkomsel* represents a service provider company in Indonesia, which offers telecommunications services along with different products such as *Kartu Halo, Simpati* and *Kartu As*.

Apart from these mass media and new media communication channels, books represent a vital source of health information. Health information is not only found in books, which are written specifically on health-related subjects, but also in books covering other genres. In other words, the health information seeker can find information on both traditional and modern medicine in *i.a.* novels, short stories and handbooks. In addition to books, newspapers are a medium which is affordable for most people and through which health information can easily reach the public. As such, newspapers deliver health information to people living in big cities as well as in suburbs and rural communities (*cf.* Illustration 7.7 a & b). Table 7.7 provides an overview of the different newspapers available in Indonesia, which offer a column on health information.

Illustration 7.7 (a & b) Books on Traditional Medicine in a Bookstore in Bandung (left) & a Kiosk selling Newspapers and Magazines in Sukamiskin (right). Photograph by W. Erwina (2014)

Furthermore, magazines and tabloids usually target specific groups of readers, which are identified on the basis of particular characteristics, such as age and gender, and can be easily reached. Throughout Indonesia, there are various types of magazines and tabloids, which specialise in delivering health information, as shown in Table 7.18.

Table 7.7 Newspapers with a Health Information Column.

No.	Name of Newspaper	Issued
National		
1	Kompas	Daily
2	Koran Sindo	Daily
3	Republika	Daily
4	The Jakarta Post	Daily
5	Koran Tempo	Daily
6	Media Indonesia	Daily
7	Rakyat Merdeka	Daily
Regional (West Java)		
5	TribunJabar	Daily
6	Pikiran Rakyat	Daily
7	Radar Bandung	Daily
8	Galamedia	Daily
9	Bandung Ekspres	Daily

Table 7.8 Magazines and Tabloids with a Health Information Column.

No.	Name of Magazine	Name of Column	Issued
1	Intisari	Health (*Kesehatan*)	Monthly
2	Readers Digest		Monthly
3	Kartini	Sex and Health (*Kesehatan dan Seks*)	Monthly
4	Nova	Health (*Kesehatan*)	Weekly
5	Nirmala	Nutrition, Herb, Therapy, Bodywork	Monthly
6	Men's Fitness	Health (*Kesehatan*)	Monthly
7	Muslim	Islamic Guidance, Diseases	Monthly
8	Ayah Bunda	Health	Once in two weeks
9	Oto Digest	Medical	Monthly
10	Mother & Baby	Pregnancy and Birth, Your Life, Your Baby	Monthly
11	TumbuhKembang	Around Us	Monthly
12	Parents Guide	Ask The Expert, Parenting, Pregnancy, Growing Up	Monthly
13	Trubus	Traditional Remedies	Monthly
14	Bestlife	Good Life	Monthly
15	Femina	Diet	Monthly
16	Sekar	Beauty, Diet	Monthly
17	Noor	Life Style	Monthly
18	Kartini	Sexual and Reproduction Health	Monthly
19	Mom & Kiddie	Health (*Kesehatan*)	Once in two weeks
20	Aura	Health (*Kesehatan*)	Weekly
21	Wanita Indonesia	Sex and Health (*Seks dan Kesehatan*)	Weekly
22	Bintang	Health Reflection (*Cerminan Kesehatan*)	Weekly
23	Kecantikan	Beauty (*Cantik*), Healthy (*Sehat*)	Monthly
24	Nurani	Health (*Kesehatan*)	Weekly
25	Tabloid Bekam	Treatment (*Pengobatan*), Health (*Kesehatan*)	Weekly
26	Nyata	Sex Consultation (*Seks*), Psychic (*Kejiwaan*)	Weekly
27	Nakita	Experts Consultation (*Konsultasi Ahli*),	Weekly
		Baby's World (*Dunia Bayi*)	Weekly

Table 7.9 Online Media Providing Health Information in Indonesia.

No.	Online Medium	Name of Programme	URL
1	Kompas.com	Kompas Health	http://health.kompas.com/
2	Detik.com	Detik Health	http://health.detik.com
3	Intisari-online	Mind Body and Soul	http://www.intisari-online.com/
4	ReadersDigest		http://www.readersdigest.co.id
5	Tabloidnova.com	Health (*Kesehatan*) Beauty (*Kecantikan*)	http://www.tabloidnova.com
6	Men's Health	Health (*Kesehatan*)	http://www.menshealth.co.id
7	MajalahMuslimsehat Healthy (*Bugar*)	Diseases (*Penyakit*) Herbal and Nature (*Herbal dan Alam*) Body (*Jasmani*) Nutrition (*Nutrisi*)	http://majalahmuslimsehat.com/
8	Mother & Baby	Health Tips (*Tips Kesehatan*)	http://www.motherandbaby.co.id/
9	Parents Guide	Ask the Expert Parenting, Growing Up, Pregnancy	http://www.parentsguide.co.id/
10	Trubus Online	Health Information (*Info Sehat*) Herbal Clinic (*Klinik Herbal*)	http://www. Trubus-online.co.id/
11	Bestlife	Lifestyle	http://www.bestlife.co.id/
12	Femina	Beauty (*Cantik*) Diet, *Kuliner*	http://www.femina.co.id/
13	Majalah Sekar	*Sekar Info* Fashion and Beauty (*Gaya dan Cantik*)	http://www.majalahsekar.com
14	Noor	Health Information (*Info Kesehatan*)	http://www.noor-magazine.com/
15	Tabloid Bintang	Lifestyle (*Gaya Hidup*)	http://tabloidbintang.com
16	Tabloid Nakita	Pregnancy New Parent Our Toddlers (*Balita Kita*) Consultation (*Konsultasi*)	http://www. Tabloid-nakita.com/
17	AndrieWongso	Tips Health Corner	http://www.andriewongso.com/
18	Antara News	Lifestyle (*Gaya Hidup*)	http://www.antaranews.com/
19	Astaga!	*Seks* Articles (*Artikel*)	http://www.astaga.com
20	AyahBunda	*Prakonsepsi*	http://www.ayahbunda.co.id/
21	Chic Magazine	Health	http://www.Chicmagz.com/
22	Cumi-Cumi.com	Cumix	http://www.cumicumi.com/
23	Dunia Fitness	Fat Loss Training, Sixpack, Health, Nutrition	http://duniafitnes.com/
24	Gatra	Life & Health	http://www.gatra.com/
25	Ghiboo	Beauty	http://www.ghiboo.com/
26	Inilah.com	Lifestyle (*Gaya Hidup*)	http://www.inilah.com/
27	Kumpulan Info	Health (*Kesehatan*) Beauty (*Kecantikan*)	http://kumpulan.info/
28	Lintas Berita	Lifestyle	http://www.lintasberita.web.id/
29	Merdeka	Health (*Sehat*)	http://www.merdeka.com/
30	MSN News	Lifestyle (*Gaya Hidup*) Sports (*Olahraga*)	http://plasa.msn.com
31	Okezone	Health	http://www.okezone.com/
32	Sahabat Nestle	Anak Sehat Gaya Hidup Sehat	https://www.sahabatnestle.co.id
33	Viva News	Life	http://www.viva.co.id/
34	Wolipop Lifestyle	Beauty	http://wolipop.detik.com/

New media communication allows for the distribution of health information through the Internet. Today, a number of online media are available in Indonesia, which specifically offer health information which is appealing to users interested in the most recent information on health and healing (*cf.* Table 7.9).

The important role of the Modern Health Information & Communication Systems (MHICS) which are disseminated through the various media as mentioned above to the local communities will also be further documented and measured in the household surveys among the respondents in Sukamiskin, analysed in the following chapter (Chapter VIII).

Notes

[1] A magazine is a popular periodical serving the peoples' interest which usually contains articles on a variety of topics written by various authors in a non-scholarly style. Primarily printed on glossy paper, most magazines are richly illustrated and also contain advertisements. These magazines offer short articles which are usually less than five pages long, and are frequently unsigned and do not include a bibliography or list of references for further reading. Most magazines are issued weekly or monthly and are available at newsstands, in bookstores and on subcription (*cf.* Reitz 1993).

[2] A newspaper is a serial publication which is usually printed on newsprint and is issued daily, or on certain days of the week or weekly. Newspapers normally contain news articles, editorial comments, regular columns, letters to the editors, cartoons, advertisements and other pieces of writing which are of current and often local interest to the general public (*cf.* Reitz 1993).

[3] The Internet refers to high-speed fiber optic networks which use Transmission Control Protocols (TCP) or Internet Protocols (IP) to interconnect computer networks around the world, thereby enabling users to communicate via email, to transfer data and files via File Transfer Protocols (FTP), to find information on the World Wide Web and to access remote computer systems, such as online catalogues and electronic databases, easily and effortlessly, using an innovative technique called packet switching. The Internet was first introduced in 1969 as APRA net, a project of the United States Department of Defence, and has rapidly been developed and extended up until today (*cf.* Reitz 1993).