



The Covid-19 Pandemic Changes the Community and Government Communication Patterns in the New Normal Era

Kisman Karinda¹, Ichwan Muis², and Falimu³(✉)

¹ Departement of Sosiologi, Faculty Social Science, Universitas Negeri Makassar, Makassar, Indonesia

² Universitas Cokroaminoto Palopo, Palopo, Indonesia

³ Universitas Muhammadiyah Luwuk, Luwuk, Indonesia

falimuimu77@gmail.com

Abstract. Communication is an important aspect in the interaction between individuals or groups as well as an environment. During the current pandemic, communication that occurs follows new rules according to government regulations. The new communication pattern requires that every individual in society cannot communicate as before the pandemic by face to face but with a virtual concept in the new normal era to suppress the transmission of the Covid-19 virus. This study discusses how the government and society change the concept of existing communication patterns and then replace them with a method using technology to communicate. The research method using descriptive qualitative systematically through interviews, observations, and documentation, by organizing the data found by describing it into units, and choose which data are important and which will be studied, and make conclusions so that they are easy to understand. From the results it was found that the application of communication patterns as a new style required adaptation to society, when the new normal era was applied, so that people could accept and carry out communication patterns in accordance with the rules set by the government in preventing the spread of covid-19.

Keywords: Pandemic · Communication Pattern · Society · Government · New Normal

1 Introduction

The Covid-19 pandemic is a virus that greatly disrupts all lines of people's lives, both in terms of economic, social and communication patterns [1]. Changes that occur in all aspects of life bring us to a new era known as the new New Normal Life, that is, we are entering a condition to make peace with the Corona virus pandemic [2].

The Covid-19 pandemic, which is rapidly spreading throughout the world, has disrupted many activities, starting with public services carried out by the government, schools, and business managers. This also shifts people's habits where there are no more crowds, getting used to a healthy lifestyle by washing hands, wearing masks and keeping distance and implementing work from home policies [3].

© The Author(s) 2023

S. Saputra et al. (Eds.): InCCLuSi 2022, ASSEHR 682, pp. 345–356, 2023.

https://doi.org/10.2991/978-2-494069-07-7_39

The pattern of communication in society has been built through mutual cooperation by helping others. Today's society has entered a transition period from the Covid 19 pandemic to the new normal [4]. However, with the current COVID-19 pandemic situation, communication patterns have undergone a very significant change with the regulations imposed by the government in breaking the chain of the corona virus. The effects of this pandemic then changed the pattern of people in communicating with other people, changing all the habits of the community that were carried out before which resulted in disrupted many activities ranging from schools, government, economy and also business [5].

Observing the communication patterns of the community and the government that developed in the midst of the community during the current covid-19 pandemic has changed the way people work, socialize, community gatherings in holding an event, which previously involved many people and now no longer because there are currently rules. Health protocols and other rules that have limitations in society.

Communication attracts attention through the interactions that occur between people by creating meaning through symbols [6]. Also released by Clifford Geertz that culture is a research behavior and mental phenomenon. Meanwhile, communication is a learning tool and the embodiment of psychology as a symbol (Andrik Purwasita: 2003) in [7].

In addition, communication is not only a process of delivering information or symbols that can be seen, heard and understood, but also as a process of delivering information as a whole, including the feelings and attitudes of the person who conveys the message [8]. In general, the information received by a person only captures the information, and forgets how the feelings and attitudes of the person receiving the information are.

This is what causes the obstacles that we encounter in the practice of communication. As explained that information comes from a person's thought process, and in that person's thinking will involve his taste. The same opinion as expressed by communication scholars who are more specialized in the study of communication between humans (human communication) by providing a definition that communication is a transaction that requires people to regulate their environment through: (1) building relationships between human beings; (2) through the exchange of information; (3) to strengthen the attitudes and behavior of others; and (4) trying to change those attitudes and behaviors" [8].

By looking at what has been explained above, the communication pattern is a process or pattern of relationships carried out by two or more people in order to convey messages/information as desired. Where the communication pattern during the Covid-19 pandemic between the community and the community and the community and the government in the new normal era began to be applied. New normal itself refers to new situations by forming new habits that encourage everyone to accept unusual circumstances into ordinary things. Although uncomfortable, all of this is done to protect themselves from the risk of transmitting the disease for which a cure has not been found [9].

However, this understanding of the new normal does not seem to be fully understood by our society today. The majority of people understand the new normal as a recommendation to return to activities as usual, the same as before the Covid-19 pandemic occurred. Negative sentiment about the new normal which could be a form of netizens'

anxiety about the condition of the Indonesian state which was hit by the Covid-19 pandemic tsunami. As with the new normal policy which is mostly understood as a back to normal or a return to normal conditions.

If you pay attention, there are still many people who don't care and obey the government's advice in the current new normal era. Many people clustered on the side of the road after cycling together without keeping their distance. Even cafes, shopping centers, and tourist attractions are flooded with visitors who often ignore health protocols.

This shows the government's unpreparedness in dealing with the Covid-19 pandemic in preparation for implementing the new normal. In fact, the communication pattern in the midst of the current disaster must be carried out carefully so as not to cause misunderstandings, namely the communication pattern between the community and the government in the new normal period. Based on the above background, the author is interested in raising the issue of the Covid-19 Pandemic Changing the Communication Pattern of the Public and Government in the New Normal Era. Based on the description of the problems above, the purpose of this study is to find out how the Covid-19 Pandemic Changes the Communication Pattern of the Public and Government in the New Normal Era in Luwuk District, Banggai Regency.

2 Methods

This research was carried out in the Luwuk District, Banggai Regency with a research time of three months from December 2020 to March 2021.

Data is the most important part of a study, because with data researchers can find out the results of the study. In accordance with the characteristics of the data needed in this study, the data collection techniques carried out were through observation, interviews, documentation.

Data Analysis Technique

According to [10], data analysis is the process of systematically searching and compiling data obtained from interviews, observations, and documentation, by organizing the data into categories, describing them into units, synthesizing, compiling into patterns, choosing which ones are important and what will be studied, and make conclusions so that they are easy to understand.

Data analysis in qualitative research is carried out before going out in the field, while in the field and after finishing in the field. Miles and Huberman in [11] argues that data analysis in qualitative research is carried out during data collection, and after data collection is completed after data collection is completed within a certain period.

At the time of the interview, the researcher had analyzed the answers of the interviewees. If the interviewee's answers after being analyzed feel unsatisfactory, then the researcher will continue again to a certain stage until data that is considered credible on the Covid-19 Pandemic Changes Community Communication Patterns, Government in the New Normal Era is obtained.

This study uses quantitative analysis techniques obtained through respondents’ statements contained in the questionnaire data and furthermore to check the accuracy of the data interviews, observations and documentation are also carried out. Meanwhile, in describing the data obtained quantitatively descriptive statistics are used, this is done in this study to obtain correct information results.

The first step taken by the researcher before processing the data is in the form of checking or correcting the questionnaire data that has been collected, the aim is to eliminate errors found in field recording and are corrective. Meanwhile, the steps taken are as follows:

- a. Checks whether all respondents can fill out the distributed questionnaire.
- b. Check all the questions in the questionnaire to make sure the answers match the instructions given.
- c. Checking whether the collected data is suitable for processing.

Furthermore, after selecting the data, classifying the data based on the indicators studied, then giving a weighted score for each alternative answer in scoring using a Likert scale which is one way to determine the score (Table 1).

The calculation of the data that has been scored is based on the type of data collected, namely qualitative data which is then converted into quantitative, then the technique used is statistical analysis, namely by using a statistical formula (percentage) which is used to describe the results of the study with the following formula:

$$p = \frac{f}{N} \times 100\%$$

Information:

- f* the frequency being searched for the percentage.
- N* Number of Cases (number of frequencies/number of *individuals*).
- p* Percentage figures.

In data processing is the most important thing in research. After the research is carried out, it is necessary to conclude the results of the research so that it can be concluded in depth, this is done so that it can answer the problems studied. Data processing is intended

Table 1. Score and Alternative Questionnaire Answers

Score	Alternative Answer	Realization
5	Strongly agree	100%
4	Agree	75%
3	Doubtful	50%
2	Do not agree	25%
1	Strongly Disagree	0%

so that the data studied can be meaningful, so that data processing must be carried out systematically so that researchers can use the processed data to conclude.

In this study the formula used is the Weighted Means Score (WMS). This technique is used to obtain the tendency of the scores given by the respondents on each question item according to the criteria or benchmarks used.

According to [12] Weighted Means Score (WMS) technique is to calculate the tendency of respondents' answers to research variables while the steps taken in data processing in this study are as follows:

- a. Giving weight value to each alternative answer is given by the respondent, in accordance with the questions given. The questionnaire used is a Likert scale with a choice range of 1 to 5.
- b. Counting the frequency of respondents' alternative answers on each question item.
- c. Finding the number of answer values that are chosen by the respondents in each question, by calculating the frequency of respondents who choose the alternative answers given, then multiplied by the weight of the alternative value itself.
- d. Calculating the average value for each question item in the questionnaire, using the Weighted Means Score (WMS) formula is as follows:

Information:

X = Average score sought

X_i = The sum of the combined scores (the result of multiplying the frequency with the weighted value for each alternative answer)

N = Number of respondents

- e. Determining the variables measured based on the indicators studied, the rating scale used by Riduwan (2010:15), is shown in Table 2.

From the results of further quantitative analysis in deepening the accuracy of these results, interviews, observations and documentation were carried out at the research location.

Table 2. Assessment criteria

Value Range	Criteria
86–100%	Very high
71–85%	Tall
51–70%	Enough
35–50%	Low
0–34%	Very low

3 Result and Discussion

From the table of research results, it can be concluded that the pandemic can change the communication patterns of the community and the government in the new normal era. In the new normal era, there will be changes in the pattern of life in society so that communication patterns are needed to be able to provide an understanding of these lifestyle changes in order to avoid the widespread spread of COVID-19 in society.

Information:

F = Frequency of respondents who answered according to the answer category

X = Frequency multiplied by the weight of the answer category value

Likewise, the government also has a role in suppressing the spread of COVID-19 in order to face the new normal era by always conveying wearing masks, maintaining distance and washing hands. This message is always conveyed to the community so that the community can implement it in the implementation of the new normal.

The Covid-19 Pandemic has Changed the Communication Patterns Between the Public and the Government in the New Normal Era

The implementation of the latest government policy is to “make peace” with Covid-19 by echoing a new pattern of life called the new normal era or a new lifestyle which of course cannot be separated from the efforts made by the government so far in dealing with the spread of Covid-19.

The government has made various efforts, such as many activities that have been carried out face-to-face, have changed with a social distancing or physical distancing system, rapid tests, to the policy of Enforcement of Emergency Community Activity Restrictions (PPKM) to tighten community activities to prevent the spread of Covid-19 from getting wider (Table 3).

In addition, the efforts that carried out by the government in building relationships with the community through communication patterns between the community and the government in providing information on the implementation of public services during the pandemic and opening access to information to the public and evaluating the information submitted in order to maintain good relations between the government and the community during the current pandemic towards a new pattern of life in the new normal.

The disclosure of information consumed by the public is currently increasing through broadcasting on television mass media related to the development of the increasing spread of the COVID-19 virus. Dissemination of information is also widely accepted through social media and is increasingly widespread and the unclear validity of the news that the public reads has even further extended the distance between the government and the public.

Disclosure of data information is important to convey to the public so that people are more aware and understand the current situation, related to the development of the spread of the Covid-19 virus, so that the community can assist in making rational decisions by minimizing the risks that will occur when implementing a new lifestyle in Indonesia the new normal.

Understanding of information is subjective and contextual. Subjective means, each party has the capacity to understand the information disseminated or received based on how he feels, based on the level of knowledge of both parties. While contextual is that

Table 3. The results of the calculation of the percentage of respondents’ answer scores about the Covid-19 Pandemic Changing the Communication Pattern of the Public and Government in the New Normal Era

Indicator	No item	Score Weight										Amount		% Score
		5		4		3		2		1		F	X	
		F	X	F	X	F	X	F	X	F	X			
The Covid-19 Pandemic Changes the Communication Patterns of Society and Government in the New Normal Era	1	11	55	16	64	5	15	3	6	0	0	35	140	80.00
	2	10	50	16	64	5	15	4	8	0	0	35	137	78.28
	3	8	40	17	68	6	18	4	8	0	0	35	134	76.57
	4	12	60	14	56	5	15	4	8	0	0	35	139	79.42
	5	9	45	16	64	7	21	3	6	0	0	35	136	77.71
	6	11	55	15	60	5	15	4	8	0	0	35	138	78.85
	7	10	50	14	56	5	15	6	12	0	0	35	133	76.00
	8	8	40	16	64	6	18	5	10	0	0	35	132	75.42
	9	9	45	16	64	6	18	4	8	0	0	35	135	77.14
	10	8	40	17	68	5	15	5	10	0	0	35	133	76.00
	11	9	45	16	64	5	15	5	10	0	0	35	134	76.57
	12	7	35	17	68	6	18	5	10	0	0	35	131	74.85
	13	8	40	15	60	6	18	6	12	0	0	35	130	74.28
	14	8	40	16	64	6	18	5	10	0	0	35	132	75.42
Average = 1076.51: 14 = 76.89%														

the meaning is closely related to the conditions of time and place where the information exists and where both parties are located.

As opinion who quotes Berelson and Steiner in their book Ethics and the Law of the Press states that communication “includes all procedures through which one person’s thoughts can influence another.” Understanding can be interpreted that the core of the understanding of communication in a simple way is the process of delivering messages from the communicator (the government delivering the message) to the communicant (the community receiving the message) until there is a feedback (feedback).

Meanwhile, information disclosure in terms of communication science, interaction is a process of delivering information/messages between humans in the perception of the communicator (message sender) and communicant (message recipient) delivered through language (verbal communication) and body language (body language). When the corona outbreak occurs, the interaction and communication patterns of the community also change the order of life, where people are required to follow the health protocols that have been proclaimed by the government.

The pattern of communication is usually done face-to-face, so with the onset of a pandemic, it will begin to be reduced to suppress the transmission of COVID-19. As an alternative, the use of communication patterns is carried out using virtual communication

media via the internet that is capable of accommodating the communication needs of communication actors. In simple terms, virtual communication media can be understood as a tool used to deliver communication messages with the help of the internet network related to the dissemination of information to the public.

New normal is a scenario carried out by the government to accelerate the handling of covid-19 by looking at new situations and forming new habits. The new normal is implemented to encourage everyone to accept unusual situations as ordinary things that are uncomfortable, but must be made comfortable for the sake of survival. Such as studying online at home, working from home, and refraining from traveling as long as the Covid-19 outbreak has not subsided. Although uncomfortable, all this is done to protect themselves from the risk of transmitting diseases that are very dangerous for human life [14].

Implementation of the new normal ('new normal'), case the spread of COVID-19 is increasing rapidly. However, this does not mean that all regions in Indonesia have experienced a spike in the number of COVID-19. It shows the Indonesian government's unpreparedness to face the impact of the Covid-19 pandemic [2].

So that it takes a pattern of community communication, the government in the midst of the current disaster must be carried out carefully so that it does not become a new problem where communication itself arises because of someone who wants to convey information to others. The information conveyed will make a person the same understanding as other people and there is also a possibility that it will be different, because the information communicated will make people have similarities and differences in understanding of the information they receive. This similarity or difference is caused by the perception of the people involved in the communication process.

According to [15] communication patterns can be interpreted as a pattern of relationships between two or more people in sending and receiving messages in an appropriate way so that the message conveyed can be understood. Whereas [15] said that the pattern of communication is a process designed to represent reality or the interconnection between the elements in it and their continuity in order to facilitate systematic and logical thinking. The pattern of communication is a simple description of the communication process by showing the relationship between one component of communication with other components [15].

Thus the communication pattern is a relationship pattern formed from several inter-related and complementary elements with each other and aims to provide an overview of the ongoing communication process. The communication process that occurs can be seen in the form of a distinctive pattern by looking at how the flow of the communication process is carried out, where the communication pattern emphasizes more on the information flow network, in conveying information both to the community and to organizations in receiving back the information. Communication patterns suggest that certain "who talks to whom" arrangements have major consequences for the functioning of the organization.

In the current Covid-19 crisis, the government needs to carry out effective communication in order to build a good image in the eyes of the public. However, until now the government seems to have not found an effective communication pattern, so it still

creates a number of negative sentiments among the public regarding the increase in the spread of COVID-19.

Many people have questioned how the government's response in handling Covid-19. Starting from the clarity of policies for providing social assistance, the concept of the new normal, to what actions must be taken by the community in the midst of an overflow of information in the midst of the current spread of the Covid-19 pandemic. If we read through the mass media, what is echoed by the government in handling Covid-19 contains more threats. Where the government gives an appeal for people to wear masks in public places which if violated will be subject to sanctions in the form of a warning until they are forced to go home and pay a fine.

Even though the government should prioritize its concern and responsibility in handling the spread of Covid-19, let alone making policies for implementing the new normal. Empathic response is very important to show the government's concern for its people. If empathy is not shown, public distrust of the government will increase. In the end, it will be difficult for the community to work together to overcome the spread of Covid-19. Empathy is the government's ability to know what people are going through at any given moment. An empathetic government is able to understand, motivate, feel and their attitudes, as well as their hopes and desires for the future so as to communicate empathy, both verbally and non-verbally.

The government should also apply the best possible communication ethics by conveying transparent information regarding the handling of Covid-19. Tell me how things are right now, complete with warnings what not to do as long as the epidemic has not subsided [16]. The message must be conveyed as clearly as possible so that there is no misunderstanding of the interpretation of the information among the public. The message must be conveyed in a language that is universally understood by all parties as a manifestation of the application of the element of justice in communication ethics. If the message can be understood properly, it will be easier to prevent the spread of the virus and will increase public trust in the government. That is the importance of communication patterns during the COVID-19 pandemic.

Effendi [17], argues that a good communicator is a humanistic person, which is unique, autonomous, active in seeking information, has freedom of choice, is responsible, and is aware of involvement with the surrounding community. If you want to be successful in getting public compliance with the handling of COVID-19, the government as a communicator must be able to create effective and ethical communication patterns in conveying messages to overcome COVID-19 to the community to gain public trust in the messages conveyed in dealing with the Covid-19 pandemic outbreak. .

Trust is an important key in successful communication, especially in the midst of the current pandemic. So, one way to build trust in the community, an important component that must be considered is an effective communication strategy. Trust is related to a number of ethical standards, such as honesty, caring, and wisdom. When public trust increases, communication becomes easier, faster, and more effective.

Communication will be more effective when the communicator pays attention to one of the ethical elements, namely caring or empathy. Empathy communication is the highest form of communication, where the communicator first understands the character and role of the communicant. Explaining intentions and expectations is an important part

of building trust in empathetic communication. Communicators must state expectations explicitly, demonstrate personal integrity, and speak the truth under all circumstances. Because there is no cooperation without trust.

Respect, mutual respect, empathy, openness, and humility are the foundations of communication ethics that must be maintained. Empathy and mutual respect make it easier for communicators to convey messages to communicants according to conditions, including the covid-19 pandemic. In a pandemic situation, it is very important to know the condition of the communicant before communicating. Thus the message can be conveyed properly without any psychological barriers or rejection of the recipient [18].

When this is already happening in the community and in order to reduce it, the theory of reasoned action and theory of planned behavior initiated by [19] worth pondering. This theory basically formulates a combination of actions taken by the government and government attitudes, and norms that can be felt by others, as well as people's motivation to comply with all decisions taken by the government. This theory is also based on the value of the government's expectations in controlling attitudes caused by beliefs about behavior that can lead to certain consequences through handling the prevention of the spread of COVID-19. In this context, attitudes, beliefs, behavior and logical consequences of feeling can provide understanding to the public about the dangers of Covid-19 and need to be synergized together between the government as a communicator and the community as a communicant.

As opinion [20], the synergy can be pursued by changing the pattern of verbal and non-verbal communication at each level. The pattern of verbal communication conveyed by the government is not to create crowds even for the sake of photos or ceremonial events, so this must be done. As we can see, the influencers and buzzers of government programs on social media do not set an example that is contrary to health protocols and prefers correct diction that is easily understood by the public. This is important to do to reduce friction and noise in the community.

Public obedience and discipline will increase when the government is consistent with the verbal messages conveyed both in text and motion. This is because visual actions in the midst of the fact that people with low literacy and lack of understanding of communication tend to imitate. People really need protection or good examples in implementing health protocols in their daily activities.

The public and the private sector must also obey the rules that have been issued by the government and not take advantage of the weakness of a rule that has been issued by the government as a classic problem. Weak supervision, support and the existence of multiple interpretations of the rules issued by the government, the steps that must be improved are the communication pattern by providing reinforcement to the attitudes and behavior of the community in dealing with public communication disorders, it is important to be understood and agreed to by both the government and the community seriously control the spread of Covid-19.

4 Conclusion

Based on the description above, it can be concluded that the communication pattern carried out by the government by building relationships between fellow human beings there

are communication barriers because when the communication process is running, not all people can have the same goals and objectives, or in other words the occurrence of communication that is not unidirectional, causing obstacle. Barriers in the communication process will always occur anywhere.

References

1. Yulianto. (2020). Meningkatkan Kompetensi Aparatur Sipil Negara Dalam Pelayanan Publik Menuju Era New Normal. *Prosiding Seminar Stiami*, 7(2).
2. Silviani, I., Pardede, I. F., & Sembiring, D. C. (2020). Komunikasi Krisis Dalam New Normal. *Journal of Massage Komun*, 9(1), 82–87.
3. Noor, M. (2020). Transformasi Dan Tantangan Dalam Urusan Publik di Era New Normal. *Maj Ilm FISIF UNTAG Semarang*, 1(21), 40–60.
4. Arafah, M. (2020). Pola Transformasi Pelaku Ekonomi Di Era Transisi Pandemi Ke New Normal. *Al-Tsarwah*, 3(2), 164–181. <https://doi.org/10.33758/mbi.v14i4.342.1>
5. Martinloi, M., Tangkudung, J. P. M., & Harilama, S. H. (2020). Pola Komunikasi Sosial di Masyarakat Pada Masa Pandemi Covid-19 di Kelurahan Teling Atas, Kecamatan Wanea.
6. Cangara, H. (2018). *Pengantar Ilmu Komunikasi Edisi Ketiga*. PT Raja Grafindo Persada.
7. Saleh, M. (2016). Pola Komunikasi Sosial Pada Masyarakat Pemukiman Tanean Lanjang Di Kabupaten Sumenep Madura Akh. Muwafik Saleh Dosen Jurusan Ilmu Komunikasi FISIP UB (pp. 1–13).
8. PT Remaja Rosdakarya. (2010). *Dedy Mulyana, ilmu komunikasi suatu pengantar*.
9. Jazilah, S. (2014). Artikel Ilmiah Artikel Ilmiah. *STIE Perbanas Surabaya* (pp. 1–11).
10. Pane, D. N., EL Fikri, M., & Ritonga, H. M. (2018). *Metode Penelitian Kuantitatif Kualitatif dan R&D* (vol. 53, no. 9).
11. Sugiono, M. (2010). *Metode Penelitian Pendidikan Pendekatan Kuantitatif, kualitatif, dan R&D*. Alfabeta.
12. Aimang, H. (2018). Persepsi Kepala Sekolah Terhadap Kinerja Pengawas Sekolah. *Journal of Pendidikan Glas 1*(1). <https://doi.org/10.32529/glasser.v1i1.6>
13. Hidayat, D. (2007). *Komunikasi Abtarpribadi dan Medianya*. Graha Ilmu.
14. Kusumadhani, Y. (2017). *Administrasi Publik* (vol. 53, no. 9).
15. Austin Ernst Antariksa Tumengkol. (2020). Suprapti Indah Putri, and Gita Audina Borneo, “Pola Komunikasi Orang Tua Dalam Membentuk Perilaku Anak,” *Talenta Conference Series. Local Wisdom, Social, and Arts* (vol. 3, no. 1, pp. 161–167). <https://doi.org/10.32734/lwsa.v3i1.813>
16. Chelin Indra Shusmitha. (2020). <https://www.solopos.com/buruknya-etika-berkomunikasi-di-tengah-krisis-covid-19-1067166>.
17. Effendi, O. U. Ilmu Teori dan Filsafat Komunikasi. Bandung: Citra Aditya Bakti.
18. Fay, D. L. (1967). *Angewandte Chemie International Edition*, 6(11), 951–952.
19. Ajzen, I. (2016). Theory of planned behavior. *Organizational behavior and human. Decision Processes*, 50(2), 179–211.
20. Bajari, P. A., & Si, M. (2020). Komunikasi Publik pada Masa Pandemi Kajian Implementasi Model Paket Arah Kebijakan Bidang Komunikasi Pemerintah Provinsi Jawa Barat Pada Masa Pemulihan Ekonomi.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

