Availability and Implementation of Guidelines in European Child Primary Health Care: How Can We Improve?

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Abstract

Clinical guidelines are important for providing high-quality child primary health care. We aimed to assess the availability, use and achieved delivery of guidelines and the European Union (EU). We used a case study design to ascertain expert views on the guideline availability and implementation in six countries representing the EU. The experts completed an online questionnaire (response 49%) on guidelines regarding three topics that represent prevention, physical and mental health care, i.e. vaccination, asthma care and assessment of mental health of children. All countries had guidelines available for asthma care. For vaccination and mental health assessment respondents less agreed that guidelines were available. Implementation of guidelines for vaccination was mostly as intended, but implementation of the guidelines for asthma care and mental health assessment was limited. Notable barriers were complexity of performance, lack of training of professionals or financial resources. Important facilitators for guideline implementation were the fit with routine practice, knowledge and skills of professionals and policy support. We found no clear relationship of guideline availability and implementation with the country's type of child primary health care system, though strong governance and sufficient financial resources seemed important for guideline availability.

Conclusion: Availability and implementation of clinical guidelines in child primary health care vary between EU countries. Implementation conditions can be strongly improved by adequate training of professionals, stronger governance and sufficient financial resources as facilitating factors. This can yield major gains in child health across Europe.

What Is Known

- Clinical guidelines contribute to standardized delivery of care.
- A wide variation in guideline uptake is found among child primary health care professionals.
- Implementation of guidelines depends on factors as daily practice of care professionals and the organizational and socio-political context.

What Is New

- Experts report use of guidelines and achieved delivery to be favourable for vaccination, but relatively poor for asthma care and mental health assessment.
- Implementation of guidelines is independent of the type of child primary health care systems that countries have.
- Improvements in governance, available financial resources and professional training facilitate implementation of guidelines.

Introduction

The importance of high quality primary care is vital, as it regards the first point of contact with health problems of children and young people [1–3]. A poor performance on quality indicators such as governance, accessibility and continuity of care by child primary health care in the European Union (EU), may be detrimental for the health outcomes of its young inhabitants [4].

Quality of care can be improved using clinical guidelines, which contribute to compliance with best care practices and to standardized delivery of care [5]. This e.g. holds for guidelines on measles vaccination and on monitoring of asthma in children, issued by professional organizations such as the American Academy of Pediatrics and the Global Initiative for Asthma ([6–10]. To affect outcomes in patients, guidelines need to be adopted or used by the professional health care workers, and carefully implemented with special attention to the achieved delivery in the intended way [11–15]. Use and delivery of guidelines is likely to differ between EU countries due to system factors which relate to implementation theory, such as the varying compatibility with values and daily practice of local care professionals, and the organizational and socio-political context [15–17].

Evidence is lacking on the implementation of guidelines in the practice of Europe's child primary health care systems, characterized by the lead professional, i.e. General Practitioner (GP) or Pediatrician, and regulation of access to specialized services [4, 18]. We therefor aimed to assess the availability, use and achieved delivery of three of its guidelines regarding vaccination, asthma care and mental health assessment, and the factors affecting their implementation across the EU. The study was part of the Models of Child Health Appraised (MOCHA) project that systematized and appraised the types of models of child primary health care in all 30 EU/EEA countries (http://www.childhealthservicemodels.eu/) [4].

Materials And Methods

We used a case study design to ascertain multiple stakeholders' perspectives on the topics of study, i.e. availability, use and delivery of guidelines [19, 20]. The study was reviewed and approved by the ethical committee of the Faculty of Behavioural, Management and Social Sciences of the University of Twente under file number BCE 17613, September 19, 2017.

Selection of guidelines

We selected guidelines on three differing topics based on the following criteria that they: 1. were pivotal for child health in the European context, 2. covered the different stages of childhood from early age to adolescence, 3. represented the full range of the functions prevention, surveillance and diagnosis in primary care, including somatic and mental health care. Experts working in the MOCHA project eventually selected: 1) vaccination of children, 2) asthma care in children aged 6 to 18 years, and 3) identification or assessment of mental health problems in adolescents aged 10 to 18 years. For these topics we searched for international standards and guidelines using literature and consultation of experts. Guidelines could also be formal procedures, laid down in documents by governmental bodies or expertise centres.

Two-stage sampling: countries and experts within countries

Experts were sampled following a two-stage procedure. First, we selected six countries more or less exemplary of the types of primary care systems in the EU based on variation in: 1) the lead practitioner who is responsible for the primary care for the child and 2) the way the system can be accessed by the patient, i.e. gatekeeper or open access systems [4]. Combining these two characteristics led to the following types of country systems: a) gatekeeper-GP led: countries with a gatekeeper, and a GP led primary care, i.e. Sweden and the Netherlands; b) gatekeeper-mixed led: countries with a gatekeeper and either a paediatrician led primary care, or a mixed paediatrician and GP led primary care, i.e. Poland and Italy; c) open access care: countries with care use without gatekeeping and lead practitioner, i.e. Germany and Cyprus [4, 18]. Countries with the three system types vary regarding central or decentral regulation of the primary care system [21].

Second, we selected experts regarding the topics of the selected guidelines who also had a general view on child primary health care in the country concerned. We aimed at inclusion of experts from care practice, policy making, expert and science centres, and end users, i.e., patients or interest groups. The experts were recruited via members of the External Advisory Board of the MOCHA project or country agents [22]. The latter regarded a network of one agent per country who acted as informant for obtaining data from country sources. To ensure inclusion of a wide variety of professionals, we asked the agents and board to identify at least two experts in each country per field of the guidelines.

Procedure and measures

Data were collected end of 2017. The experts filled in an online questionnaire. Participation was on a voluntary and anonymous basis. We used the following measures.

Availability

we asked about availability of the guidelines and procedures for each topic, i.e. 1) under-vaccination of children, 2) asthma care in children aged over 6 years, and 3) identification or assessment of mental health problems in adolescents aged 10–18 years (see Table 2).

Table 1
Characteristics of the primary care systems of the selected countries

	Lead practitioner[1]	Gatekeeper/open access[2]	Governmental regulation[3]
Sweden	General Practitioner	Gatekeeper[$]	H
Netherlands	General Practitioner	Gatekeeper	H
Poland	Mixed	Gatekeeper	H
Italy	Mixed	Gatekeeper	NH
Germany	Paediatrician	Open access	NH
Cyprus	Paediatrician	Open access	NH

[1] Mixed = GP and Paediatrician jointly.

[2] Gatekeeper = patients cannot access specialized care and need a referral by a primary care professional. Open access = patients can directly access specialized care without referral.

[$] In Sweden sometimes partial gatekeeper. The General Practitioner not always acts as gatekeeper and access to specialized care is sometimes allowed.

[3] H = Hierarchical professional model of the care organization with an accent on state regulation. NH = Non-hierarchical professional model with an accent on a care organization in which healthcare professionals can act more autonomously than in a hierarchical professional model.

Table 2
Questionnaire items to measure guideline availability, use, achieved delivery and implementation

Constructs	Questionnaire item
Guideline availability, use and delivery	
Availability	In your country, is a guideline or formal procedure formulated for [best practice[1]]? Yes, at an international level, yes, at national level, yes, at regional level, yes, at international and national level, yes, at international and regional level, yes, at national and regional level, yes, at international, national and regional level, no
Use	In your country, how often do primary care practitioners use a guideline or formal procedure for [best practice]? Often, the guideline or formal procedure is used with nearly all children who have a significant likelihood of having [health theme]. Sometimes, the guideline or formal procedure is used with a number of children who have a significant likelihood of having [health theme]. Hardly, such guideline or formal procedure is not used at all. I do not know.
Achieved delivery	In your opinion, to what extent do primary care practitioners implement the actions of the guideline or formal procedure in the intended way? To a great extent, somewhat, very little, not at all.
Implementation barriers and facilitators	
	The statements below relate [action of guideline or formal procedure] by primary care practitioners. If [action of guideline or formal procedure] is not performed by primary care practitioners in your country, then please also indicate what your opinion is. If you have comments, please feel free to write them down in the open space next to the answer question
Characteristics of the guidelines	
• Procedural clarity	The guideline or formal procedure in my country clearly describes the subsequent actions to be taken by primary care practitioners for [action of guideline or formal procedure]. Strongly disagree (1) to strongly agree (5)
• Correctness	The inclusion of [action of guideline or formal procedure] in the guideline or formal procedure in my country is based on factual correct knowledge. Strongly disagree (1) to strongly agree (5)
• Complexity	The [action of guideline or formal procedure] is too complex to perform by [primary care doctors or practice nurses] in my country. Strongly disagree (1) to strongly agree (5)
• Compatibility	The [action of guideline or formal procedure] fits well within the routine practice of primary care practitioners in my country. Strongly disagree (1) to strongly agree (5)
Characteristics of the primary care practitioner	

[1] Guidelines address vaccination of children, diagnosis of asthma in children aged over 6 years, identification or assessment of mental health problems in adolescents aged 10–18 years.

[2] Health themes: parents who do not have their child vaccinated, children with asthma, adolescents with mental health problems

[3] Actions of guidelines: communication with parents who are not inclined to vaccinate their child, performance of spirometry for diagnosing asthma in children aged over 6 years, conduct of a risk assessment for mental health problems in adolescents aged 10–18 years

Constructs	Questionnaire item
• Outcome expectations	Primary care practitioners in my country think it is important to use [action of guideline or formal procedure]. Strongly disagree (1) to strongly agree (5) Primary care practitioners in my country expect that [action of guideline or formal procedure] will lead to identification of [health theme]. Strongly disagree (1) to strongly agree (5)
• Professional obligation	Primary care practitioners in my country feel it as their responsibility to [action of guideline or formal procedure]. Strongly disagree (1) to strongly agree (5)
• Knowledge	[Primary care doctors or practice nurses] in my country have the knowledge to [action of guideline or formal procedure]. Strongly disagree (1) to strongly agree (5)
• Descriptive norm	The [action of guideline or formal procedure] is generally accepted by primary care practitioners in my country. Strongly disagree (1) to strongly agree (5)
• Self-efficacy	[Primary care doctors or practice nurses] in my country have the skills to [action of guideline or formal procedure]. Strongly disagree (1) to strongly agree (5)
Organizational context	
• Financial resources	There are enough financial resources available in my country for primary care practitioners to [action of guideline or formal procedure]. Strongly disagree (1) to strongly agree (5)
• Time available	[Primary care doctors or practice nurses] in my country have sufficient time to [action of guideline or formal procedure] as intended in their routine practice. Strongly disagree (1) to strongly agree (5)
• Material resources and facilities	Primary care practitioners have access to materials and other resources or facilities necessary to [action of guideline or formal procedure] as intended. Strongly disagree (1) to strongly agree (5)
Socio-political context	
• Legislation and regulations	The [action of guideline or formal procedure] fits in well within the legislation and regulations in my country. Strongly disagree (1) to strongly agree (5)
• Policy support	Health care policy makers in my country support [action of guideline or formal procedure]. Strongly disagree (1) to strongly agree (5)
• Financial costs	The financial costs for conducting [action of guideline or formal procedure] by primary care are payed by the insurance refund system in my country. Strongly disagree (1) to strongly agree (5)
[1] Guidelines address vaccination of children, diagnosis of asthma in children aged over 6 years, identification or assessment of mental health problems in adolescents aged 10–18 years.	
[2] Health themes: parents who do not have their child vaccinated, children with asthma, adolescents with mental health problems	
[3] Actions of guidelines: communication with parents who are not inclined to vaccinate their child, performance of spirometry for diagnosing asthma in children aged over 6 years, conduct of a risk assessment for mental health problems in adolescents aged 10–18 years	

Use and achieved delivery

we asked how often primary care practitioners used the guidelines, ranging from use for all children with a significant likelihood of having the health problem concerned, to for hardly any children. This can also be understood as asking about coverage of the guideline, i.e., whether all the people who should be receiving the benefits of the guideline actually did so [15]. Next, we assessed the achieved delivery of the guidelines [15]. We did so by asking the extent to which the following guideline actions were implemented in the intended way 1) communication with parents who are not inclined to vaccinate their child [23], 2) performance of spirometry for diagnosing asthma in children aged over 6 years [9] 3) conduct of a risk assessment for mental health problems in adolescents aged 10–18 years [24] (see Table 2).

Barriers and facilitators

a total of sixteen statements on barriers for and facilitators of implementation of the guidelines were asked per specific action mentioned above, i.e. communication with parents about having their child vaccinated, spirometry, and risk assessment for mental health problems (see Table 2). They were grouped into four categories of facilitating or hindering factors [16] i.e. characteristics of the guidelines, the primary care practitioner, the organizational context, and the socio-political context. Next we determined summary scores for each of the categories of facilitating or hindering factors. This was done by three researchers (NvK, RvZ, PK) who discussed the experts' answers and scored them as positive, neutral or negative, with the totals per category classified as positive (facilitator) or negative (barrier).

Background characteristics

the questionnaire included questions on the type of organization where the experts were employed, their current position, their highest level of education, and their field of expertise.

Analysis

First, we described the characteristics of the sample of experts participating in the study per country. Second, we assessed the availability of guidelines for each health topic in six EU countries using crosstabs, with country as independent variable. Then, we assessed the use and achieved delivery per guideline using crosstabs, with country as independent variable. Finally, we analysed facilitators and barriers for implementation per guideline by country. The SPSS package for statistical analysis was used [25].

Results

Characteristics of the sample

We invited a total of 94 experts, of which 46 participated (response 49%, varying from 35% in Italy to 89% in the Netherlands). The respondents identified themselves predominantly as experts from practice or science (Table 3). They considered themselves most knowledgeable on vaccination and asthma care. The respondents' most common affiliations were research institutes and universities or community types of primary care organizations.

Table 3
Characteristics of study participants

	Sweden (N = 5)	Netherlands (N = 8)	Poland (N = 10)	Italy (N = 16)	Germany (N = 4)	Cyprus (N = 3)
Expertise best practice						
Vaccination	2	5	3	6	2	2
Mental health	2	5	7	3	2	2
Asthma	2	5	2	9	2	1
Field of expertise						
Policy	-	-	-	2*	-	1
Practice	1	5	6	5	2	2
Knowledge and science	4	2	3	8	2	-
End user	-	1	1	-	-	-
Type of organization						
Hospital	1	-	1	1	2	1
Research institute / university	2	2	2	7	2	-
Expert center	1	1	-	-	-	1
Other	1[@]	5[^]	7[&]	8[$]		1[#]
Education						
Associate degree	-	-	-	3	-	-
Master's degree	-	1	4	2		1
Professional degree	-	3	1	2	-	1
Doctorate degree	5	3	3	2	4	1
Other	-	1	2	6	-	-

* One respondent unknown

[@] Government agency (n = 1)

[^] (Local) public health/primary care organizations (n = 5)

[&]Mental health services (n = 3), NGO (n = 1), outpatient center (n = 2), unknown (n = 1)

[$] Primary care/family pediatrics/community based (n = 5), patient organization (n = 1), local health care company (n = 1), Ministry (n = 1)

[#]Private organization (n = 1)

Availability, use and achieved delivery of guidelines

For three countries the experts agreed about the availability of guidelines for vaccination, for all six countries about guidelines for asthma care, and for three countries about those for mental health assessment (see Table 4). Guidelines for vaccination

were used for nearly all children and achieved delivery was as intended in most countries. Guidelines for asthma care were available according to most experts, but they were only used for all children at risk in Sweden and Poland. Implementation as intended of the asthma guideline, i.e. performance of spirometry, was poor in all countries, except Sweden. Countries differed largely regarding use and achieved delivery of mental health assessment guidelines.

Table 4
Availability, use and achieved delivery of guidelines per country

	Availability of guidelines*			**Use of guidelines#**			**Achieved delivery ^**		
	Vaccination	Mental health	Asthma	Vaccination	Mental health	Asthma	Vaccination	Mental health	Asthma
Sweden	+	+/-	+	-	$	+	-	+	+
Netherlands	+/-	+	+	+	+	-	+	-	-
Poland	+	+	+	+	-	+	+	+/-	-
Italy	+	+/-	+	+	-	-	+	+	-
Germany	+/-	+	+	+	+	-	+	+	-
Cyprus	+/-	-	+	+	$	-	-	$	-
* + available, - not available, +/- answers varied									
# + use for nearly all children, - sometimes or hardly for any children									
^ + to a great or certain extent implemented as intended, - somewhat or very little implemented as intended, +/- answers varied									
$ missing value									

Facilitators and barriers

Important facilitators in communicating with vaccination hesitant parents were the characteristics of the guideline e.g. not too difficult to perform and fitting well within routine practice (Table 5). Also, the general acceptance by primary care practitioners and the socio-political context of support for vaccination from health care policy makers were mentioned as facilitators. Financial constraints and limited time available were mentioned as important barriers for use of vaccination guidelines. All country experts except those from Poland mentioned mainly facilitators for all implementation categories regarding this activity.

Table 5
Overall scores for facilitators of and for barriers of implementation of guidelines per country

	Sweden	Netherlands	Poland	Italy	Germany	Cyprus
Communication to vaccinate child						
Characteristics guideline	+	+	0	0	+	+
Characteristics practitioner	+	+	-	+	+	+
Organizational context	-	-	-	0	+	+
Socio-political context	+	+	-	+	+	0
Risk assessment mental health						
Characteristics guideline	-	+	0	0	+	-
Characteristics practitioner	-	+	0	0	+	0
Organizational context	-	0	-	0	-	-
Socio-political context	0	+	0	0	-	-
Spirometry						
Characteristics guideline	+	0	+	0	0	0
Characteristics practitioner	+	-	+	-	0	0
Organizational context	0	-	-	-	0	+
Socio-political context	+	+	0	+	0	0
+ facilitator						
- barrier						
0 facilitator and barrier						

Concerning implementation of the asthma guideline, in particular spirometry, experts from almost all countries identified barriers related to practitioners' characteristics such as lack of knowledge and self-efficacy of doctors and nurses, and at organizational level such as limited financial resources and time available. Moreover, barriers existed at the level of the socio-political context, namely lack of fit with legislation and regulations and lack of policy support. Facilitators regarded a foundation in correct knowledge as characteristic of the guideline and its fit with legislation and regulations.

For conducting a risk assessment of mental health problems in adolescents the experts brought forward the barriers lack of knowledge or skills of professionals, lack of time and funds, and lack of dedicated policies. Facilitators were training of professionals, options for referral, financial resources and legislation. Experts from the Netherlands mentioned almost only facilitators, whereas experts from Sweden and Cyprus mentioned mainly barriers, and experts from Germany, Italy and Poland both barriers and facilitators.

Availability, use and achieved delivery of all three guidelines seemed to be fairly independent from the type of primary health care system. The experts from the Netherlands and Sweden, countries with gatekeeper GP-led systems, experienced facilitators for guideline implementation to a slightly greater extent and some less barriers, in Sweden particularly in use of spirometry and in the Netherlands in risk assessment of adolescent mental health problems.

Discussion

We conducted a case study on the availability of clinical guidelines, their use and achieved delivery by child child primary health care professionals, and the facilitators and barriers of implementation of the guidelines in six European countries. According to most countries' experts, guidelines were generally available. Use of guidelines and achieved delivery as intended were favourable for vaccination but relatively poor for asthma care and mental health assessment. Factors affecting the implementation of the guidelines differed, but barriers were notably found regarding asthma care, i.e. performing spirometry, and risk assessment for mental health problems. We found no clear relationship of use and achieved delivery of the guidelines with type of child primary health care system.

We found ample availability of guidelines for primary child health care which may be explained by strong governance, e.g. either state governance in centrally led countries such as observed in Sweden or the Netherlands, or strong clinical governance manifest in professional and organizational accountability as observed in less centrally led countries, such as Germany [26]. Another explanation for guideline availability may regard a country's financial resources and associated expenditures on health care. This could explain the advantaged position of Germany in guideline availability in comparison to Cyprus with a much lower Gross Domestic Product (GDP) per capita, which both regard countries with open access care. Both governance and financial resources may thus be important factors for the availability of guidelines for child health care.

We found use and delivery of the guidelines for asthma care and mental health assessment to be much poorer than for vaccination. A first explanation for this difference may regard the characteristics of the guideline. For vaccination the good fit of the guidelines with daily routines added to the uptake in most countries according to the experts, whereas the complexity of carrying out the guideline for asthma care [27] may explain its poor delivery. This wide variation in guideline uptake per targeted health problem confirms previous findings, with uptake ranging from 28% for a guideline regarding sudden infant death to 100% for a guideline on congenital heart disorders [12]. These findings show that use and delivery of a guideline depends on the type of health problem addressed combined with characteristics of the guideline such as its complexity.

A second explanation for the differences in use and delivery of guidelines as found may regard the characteristics of practitioners in a specific country, like their attitudes, knowledge and skills. The general acceptance of the vaccination guidelines explains its favourable implementation. The practitioners' knowledge and skills seemed to be important for the use and delivery of the high uptake of the asthma care guideline in Sweden. Research has showns the presence of specialized asthma nurses in primary health care clinics to add to performing spirometry tests in Sweden [27]. The large investment in obtaining evidence for best psychosocial assessment by primary health care physicians and nurses in the Netherlands, resulting in a broadly used guideline since 2000, is another example of the practitioners' role in guideline implementation [28, 29]. However, the Dutch experts were still critical about the delivery as intended of that guideline. Our study thus shows the importance of practitioners' characteristics attitude, knowledge and skills for use and delivery of guidelines.

We found factors in the organizational and socio-political context to facilitate or hamper guideline implementation, without having a clear relationship with type of primary child health care systems of the six countries. The time and cost barriers in the guidelines' organizational context mentioned by the experts of our study have been reported before [30, 31] and similarly the importance of adequate training of professionals for guideline adherence [30, 32, 33]. Regarding the socio-political context, the experts frequently mentioned lack of policy support as barrier for guideline implementation, although this did not affect adherence to guidelines for vaccination. Such policy support for planned and structured guideline implementation will have to take into account the countries' epidemiological, socio-cultural, socio-economic, ethical, legal, and political circumstances [34, 35, 36]. Organizational context and policy support should thus be addressed in the implementation of guidelines for child primary health care.

Strengths and limitations

A strength of this study is its case study approach in which we compared three guidelines covering a broad range of age categories of children and adolescents, a range of service functions, i.e. prevention, surveillance and diagnosis in primary care, including somatic and mental health care, and a range of contexts and health care systems among EU countries. A second strength is our use of a validated scale measuring implementation in child primary health care [16], combined with qualitative

data on the availability and use of guidelines. A limitation is the small number of experts, mainly limited to practice, expert centres, and science with few end-users. The latter may have led to some overestimation of guideline use and achieved delivery.

Implications for practice

This study showed room for improvement of guideline availability, use and achieved delivery with variation in the health problem addressed and practitioners' characteristics. Education on the awareness of the usefulness of guideline recommendations and training of skills are advised to support the adherence to guidelines in routine daily practice, often tasks of great complexity [27]. Training of professionals, time and financial resources as part of the organizational context of primary child health care should facilitate guideline implementation. Furthermore, our research shows a clear demand for policy support for structured implementation of guidelines for asthma care and adolescents' mental health assessment. Our findings suggest that strong governance, i.e. state regulation or clinical leadership, and sufficient health care expenditures are associated with better guideline availability and use. This may evidently lead to major gains in child and youth health. We therefor strongly recommend support from national governments and paediatric associations for guidelines, embedded in a strong quality assurance system. Clear policy making and increase of resources could benefit such quality systems [37].

Implications for research

Availability, use and achieved delivery of guidelines varied largely, with variation only partially explained, showing a need for further research to better understand the way systems of child primary care influence the implementation of guidelines. First, this requires structured monitoring and evaluation of guideline implementation using standardized measurement instruments, such as the Measurement Instrument for Determinants of Innovation (MIDI) [16]. Second, we need further research to increase our understanding of the effects of external factors on perceived facilitators and barriers of implementation, such as the influence of the availability of guidelines and degree of experience with guidelines in practice.

Conclusion

This study shows varying degrees of availability, use and achieved delivery of clinical guidelines in child primary health care in six EU countries. Adequate training of professionals, strong governance and sufficient financial resources seemed important facilitators for guideline implementation, though implementation conditions in the countries can be strongly improved. This can yield major gains in child and youth health across Europe.

Abbreviations

DANS Data Archiving and Networked Service

EU European Union

GDP Gross Domestic Product

GP General Practitioner

MIDI Measurement Instrument for Determinants of Innovation

MOCHA Models of Child Health Appraised

Declarations

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Conflicts of interest

The authors have no conflicts of interest to declare that are relevant to the content of this article.

Availability of data and material

Data are accessible via DANS (Data Archiving and Networked Service) repository at DOI: https://doi.org/10.17026/dans-28v-cwcf

Code availability

N/A

Authors' contributions

Conceptualization: Paul Kocken, Nicole van Kesteren; Methodology: Paul Kocken, Menno Reijneveld; Formal analysis and investigation: Paul Kocken, Nicole van Kesteren, Renate van Zoonen; Writing - original draft preparation: Paul Kocken, Nicole van Kesteren; Writing - review and editing: Renate van Zoonen, Menno Reijneveld; Funding acquisition: Paul Kocken, Menno Reijneveld; Supervision: Paul Kocken, Menno Reijneveld.

Ethics approval

According to the criteria of the Dutch Medical Research Involving Human Subjects Act, this study did not need to be submitted for ethical approval by a Medical Ethical Committee. The study was reviewed and approved by the ethical committee of the Faculty of Behavioural, Management and Social Sciences of the University of Twente under file number BCE17583, on September 19, 2017.

Consent to participate

All experts consented to the request of the country agent to participate in the questionnaire and were informed about the objectives of the questionnaire, details about the MOCHA research project, confidentiality of provided information by the experts and anonymous report of data by the researchers.

Consent for publication

N/A

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