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ORIGINAL ARTICLE

Evaluating comprehensive cancer networks; a review of standards and evaluation methods for care networks to inform a comparison with the OECI comprehensive cancer network standards

Anke Wind[a], Simon Oberst[b], Willien Westerhuis[b,c], Harriet Blaauwgeers[b,c], Gunnar Sæter[b,d], Paolo de Paoli[b,e], Péter Nagy[b,f], Jean-Benoit Burrion[b,g], Eva Jolly[b,h], József Lovey[b,f] and Wim van Harten[a,b,i]

[a]Rijnstate Hospital, Arnhem, The Netherlands; [b]Accreditation and Designation, Organisation of European Cancer Institutes, Brussels, Belgium; [c]The Netherlands Comprehensive Cancer Organisation (IKNL), Utrecht, The Netherlands; [d]Division of Cancer Medicine, Oslo University Hospital, Oslo, Norway; [e]Alliance Against Cancer, Rome, Italy; [f]National Institute of Oncology, Budapest, Hungary; [g]Institut Jules Bordet, Brussels, Belgium; [h]Netherlands Cancer Institute, Amsterdam, The Netherlands; [i]Theme Cancer, Karolinska University Hospital, Stockholm, Sweden

ABSTRACT

Introduction: To ensure that all citizens have equal access to high-quality cancer diagnosis and care, the EU4Health Programme, Europe's Beating Cancer Plan, and Horizon Europe's Cancer Mission propose Comprehensive Cancer Infrastructures in every European Union Member State. It is therefore important to establish the basic principles for high-performing cancer networks and a methodology for evaluating their quality and effectiveness. This article describes methods and standards/indicators for network evaluation found in literature, gives a comparative overview of the new OECI European Cancer Network Quality standards, and proposes principles for evaluating the performance of Comprehensive Cancer Networks as a basis for continuous improvement.

Materials and Methods: We performed a scoping literature review on methods and standards/indicators for care-network evaluation. We then compared the OECI set with literature findings, categorised standards that were similar, reflected on standards that were different, and deduced principles for quality standards for cancer networks.

Results: Of 1002 articles identified, 17 reported on evaluation methods and/or (mostly) qualitative indicators. Sixteen studies described indicators/standards for evaluating care networks, critical success factors or desirable outcomes. Of the 54 present OECI standards, 32 had a literature equivalent. No literature equivalent was found for 22 standards, especially on those related to the combination of care and research. The proposed OECI evaluation methods (survey, document review, and interviews) were all reported in the literature. From the conformity of these results, we deduced 8 principles for standards evaluating the effectiveness of Comprehensive Cancer Networks.

Conclusions: Research on the evaluation of the effectiveness of care networks is scarce. Evaluation methods vary and are often single time-point assessments. The OECI set contributes to establishing clear principles and standards to evaluate the effectiveness of Comprehensive Cancer Networks.

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Introduction

In 2018 there were 3.91 million new cases of cancer in Europe (excluding non-melanoma skin cancer) and 1.93 million patients died [1]. In Europe, patients are treated in general hospitals, university hospitals, and in institutions specialised in cancer management, for example, Comprehensive Cancer Centres (CCC's) [2]. In light of differences in outcomes related to numbers treated per centre or team, volume is increasingly used as an argument to centralise services [3]. In 2020 the European Union (EU) launched a Cancer Mission as part of Horizon Europe recommending EU Member States establish Comprehensive Cancer Infrastructures, including 'existing Comprehensive Cancer Centres or Care Networks' [4]. This initiative aims to increase the integration of research with care, and reduce inequalities in cancer treatment. The European Commission has also launched Europe's Beating Cancer Plan [5] which proposes a Network of Comprehensive Cancer Centres. The EU4Health Programme [6] implements Europe's Beating Cancer Plan, and also proposes the development of Comprehensive Cancer Infrastructures.

In general, networks are promoted as organisational structures enabling integrated care and more consistent patient outcomes [7]. There are many definitions, but at a minimum a network consists of three or more organisations consciously

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CONTACT Anke Wind ankewind@gmail.com Rijnstate Hospital, Arnhem, The Netherlands

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formed, organised, and directed in ways to achieve a common goal [8]. The 1995 Calman-Hine report [9] was the first to suggest that cancer services should be organised in networks, proposing locally-managed Cancer Networks [9] to remediate poor outcomes and inequalities between regions in the UK (United Kingdom). These networks emerged in the late 1990s and were formally mandated in the NHS (National Health Service) Cancer Plan 2000 [7]. Ferlie et al.[10] noted methodological difficulties in assessing network performance and identified the need to complement qualitative data with more quantitative or clinical outcome data. Before these formal UK networks were superseded in 2011 no official evaluation was published. Since the mid-1990s other countries started to promote networks [11]. A study mapping the existence of care networks for rare cancers found a large variety between EU Member States, ranging from national networks ($n=6$), regional networks ($n=2$) [12], a combination of both ($n=7$), to no networks ($n=8$) [13].

Implementing networks is complex because of the number of actors with often competing priorities, the multiple levels of governance, and varying care processes across organisations [14]. It is also unclear whether networks actually improve outcomes of care [15]. Against this backdrop, it is important to evaluate the effectiveness of networks [16].

Complementary to the development of quality standards and indicators as part of the Innovative Partnership of Action Against Cancer (iPAAC) [17] and based on its existing standards and accreditation programme for cancer centres, the Organisation of European Cancer Institutes (OECI) has formed an accreditation programme for Comprehensive Cancer Networks [18] (see box 1).

To inform this development there was a need to establish the status quo in this field. As almost no publications are available on cancer network evaluation, for the status quo we decided to focus on healthcare networks in general and take a wider view of evaluation. This study aims to:

i. describe methods and standards/indicators for the evaluation of healthcare networks found in the literature;
ii. to compare the new OECI European Cancer Network Quality standards with the standards found in the literature;
iii. propose principles for evaluating Comprehensive Cancer Networks.

Comprehensive Cancer Care Networks (CCCNs) is defined as: 'multiple units belonging to different institutions dedicated to research, prevention, diagnosis, treatment, follow-up, supportive and palliative care and rehabilitation for the benefit of cancer patients and cancer survivors' [7]. Although this definition fits the type of network we are looking at, the term 'Care' emphasises care but not research. For this reason, this article uses the same definition but uses the term 'Comprehensive Cancer Network (CCN)'.

Materials and methods

Literature review

Search methods

A scoping review according to PRISMA-ScR [27] was performed using Pubmed and Scopus regarding healthcare network evaluation. Scoping reviews map the existing literature or evidence base without a quality assessment or extensive data synthesis [28]. We conducted Boolean searches using truncated combinations of two groups of keywords and free text terms in the title/abstract. The first group, consisting of keywords concerning healthcare organisation, was combined with the second group, consisting of keywords on quality assessment and improvement. The full search strategies are presented in Supplementary file 1.

Inclusion and exclusion

Using titles, we excluded all articles that clearly did not cover a topic related to care network evaluation. We reviewed the remaining abstracts and selected those that contained the evaluation of a formal care network either in theory or in practice and/or discussion of the development of a care

Box 1. The OECI process for developing network quality standards

The OECI European Cancer Network Quality standards are based on the OECI Accreditation and Designation Programme (A&D) standards and the Joint Action on Rare Cancers (JARC) network standards.

OECI A&D standards

The A&D Programme was launched in 2008[19] and so far there have been more than 50 accreditations of European Cancer Centres in 17 Member States [20], and two major revisions of the quality standards and manual. The Manual 2.0 Standards [21] were accredited by the International Society for Quality in Healthcare (ISQua) in 2017 and the Manual 3.0 Standards in 2022 [18].

The OECI standards apply to care delivery and cancer research for patients within individual hospitals and institutions. The increasing push towards networks in some EU countries, and the challenge for consistent high quality care for rarer cancers called for the development of cancer network standards for Europe.

JARC standards

JARC (Joint Action on Rare Cancers) was launched in 2016, with the founding premise that care for rare cancers is best delivered using networks of reference centres [22], European Reference Networks (ERNs) [23].

The purpose was to propose consistent and Europe-wide standards for rare cancer networks 24]. The resulting standards (qualitative $n=51$ and quantitative $n=18$) for rare cancer networks are published online [25]. The standards consist of an indicative statement, the compliance with which can be scored in a graded system according to the Deming cycle [26].

The intent behind the OECI European Cancer Network Quality standards is that they can be used for the framework of Comprehensive Cancer Networks (CCNs)[7]. Therefore, the Network standards should be complementary to the standards applied to individual healthcare providers (HCPs) within the network. The focus of the chosen standards was, amongst others, the connectivity between HCPs in the network, continuity and timeliness of patient care pathways, and overall governance. Quantitative data sets were selected to ensure that data were consistently collected in the network.

network evaluation tool. Networks only focussed on research were excluded. At least a description of theory or methods on how to develop and/or evaluate networks or some empirical material on networks had to be present. Given our aim to provide an overview that could be generalised, the evaluation had to be of organisational and not merely clinical nature. The full texts were reviewed and processed by the first author. To retrieve other relevant publications, reference lists of the selected papers were used for snowballing. Only papers written in English between 2009 and 2019 were included. The last author checked 10% of the studies to determine inter-rater reliability.

Data extraction

General information was extracted in order to provide an overview of the literature on care network evaluation, including first author and year of publication, aim, and geographical region. The analytical data were chosen according to our review objective and covered network setting, assessment type, assessment results, evaluation methods, and standards/indicators used in the assessment or outcomes that could be translated to standards.

Comparison of literature standards and OECI European Cancer Network Quality standards

As the OECI network standards are the most extensive known for cancer care networks to date, standards in the literature were first grouped into the OECI domains (see Supplementary file 2) 1: Governance; 2: Organisation; 3: Patient involvement and empowerment; 4: Multidisciplinarity; 8: Research; 9: Education and training. OECI standards within chapters 5 (Prevention and early detection), 6 (Diagnostics) and 7 (Treatment) are aimed at individual HCP level and are therefore not included in this article. The content of standards in the literature was then compared to the OECI set of European Cancer Network standards to assess similarities and differences.

Results

Literature review

The search strategies identified 1002 unique publications. Application of the first review eligibility resulted in 73 publicationss, which were subjected to full text review. This led to 16 publications that met all eligibility criteria. Snowballing identified 1 new publication, resulting in a total of 17 articles that were included in this study. The PRISMA flow diagram is presented in Figure 1.

Article overview

Supplementary file 3 presents an overview of the 17 studies including details of context, research aim, assessment design and outcomes. Most studies ($n = 7$) were undertaken in Australia [29–32,40,44,45], six in Europe [39,41,43], the US [37] and Canada [34,36], and four in Brazil [38,42] and India [33,35]. Five studies [29,31,32,40,45] described clinical networks without specifying the specific healthcare field or diagnoses. Studies that described the network in more detail covered diverse healthcare fields including cancer [37,42,44], community health [33,35], primary care [34,43], mental health [38,42] and stroke care [36,41]. One study [41] mentioned integrated care practices instead of networks.

Five studies described the development or testing of an evaluation method for care networks [34,37,38,40,42]. Five studies [29,31,33,42,43] assessed how to successfully establish a care network. Four studies assessed the effectiveness [30,35,44] and impact of networks [43] and two studies assessed the outcomes of networks and described network success factors [32,36]. Outcomes included improved clinical care and reduced variation in practice performance [36].

Six studies described a qualitative assessment, three studies described a quantitative assessment and eight studies described a mixture of qualitative and quantitative assessments. Four studies reported the use of one qualitative method, either interview [29,37,43] or document reviews [34]. Two studies used a combination of two qualitative methods, namely interviews and document review [30,32]. Most variation in methods was seen in the mixed assessments. Five studies reported a combination of three methods (questionnaires, document analysis, and interviews) [32,33,35,36,39], and three studies a combination of two methods [31,44,45]. Overall, qualitative and quantitative questionaires, document analysis, and interviews were the most mentioned.

A total of sixteen studies [29–37,39–45] described indicators/standards for evaluating care networks, critical success factors and/or desirable outcomes. Since clearly articulating the desired outcomes of networks can provide insights into ways network effectiveness can be measured, these are counted as possible standards. An overview of all standards found in the literature can be found in Supplementary file 4.

Comparison of literature standards and OECI European Cancer Network Quality standards

An overview of how the standards found in the literature compare with the OECI European Cancer Network Quality standards can be found in Table 1. Thirty-two out of 54 OECI network standards were found with an equivalent in literature (the round shape in Figure 2). From the conformity of these results 8 basic principles for standards against which to evaluate the effectiveness of Comprehensive Cancer Networks were deduced (see Table 1).

These principles are:

1. The network has a defined governance structure with clear objectives, contractual agreements between all parties, and an established Board of Directors to provide leadership.
2. The network has a broad representation of key stakeholders across the continuum of care, including primary, secondary and tertiary healthcare providers responsible for patients in a defined geography. The scope includes

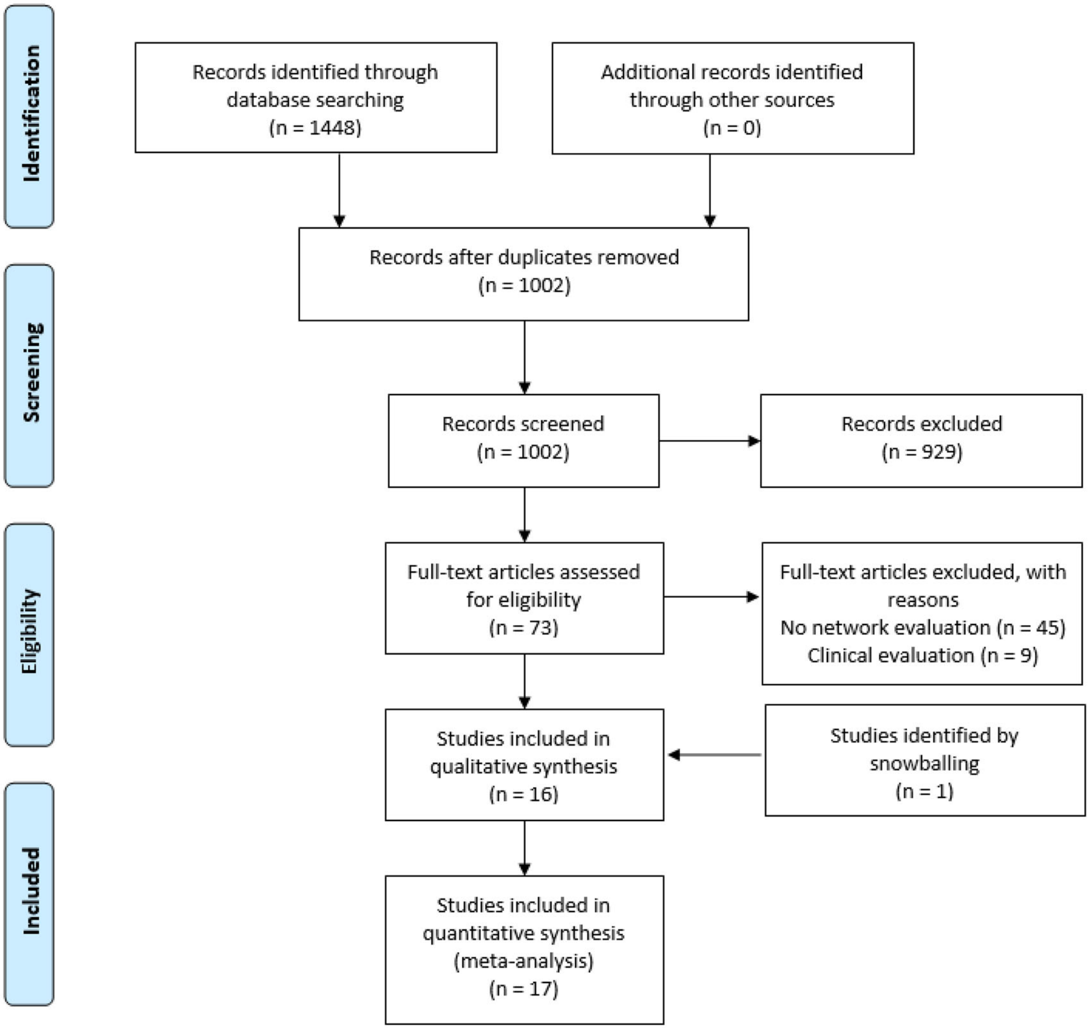

Figure 1. Selection procedure of articles.

clinical research and engages universities and research institutes in translational research.

3. The network ensures that every patient is diagnosed and managed in a fully multidisciplinary way.
4. The network ensures patient-centredness by structured involvement and consultation of patient representatives. It also ensures equitable access to care and information, case management and continuity of care without undue variation.
5. The network ensures a focus on sharing best practices, promoting innovation, and new technologies and models of care.
6. The network ensures uniform quality standards and clinical guidelines, underpinned by documented patient pathways.
7. The network has instruments to ensure the monitoring and continuous improvement of care quality, including key performance indicators, outcome indicators, and evaluation of employees.
8. The network maintains communication and IT systems which allow effective, consistent, and confidential sharing of data across the network.

For 22 OECI standards no equivalent was found in literature (triangle shape in Figure 2) and for 17 standards found in the literature there was no equivalent OECI standard (pentagon shape in Figure 2). The standards unique to the OECI set can be summarised as follows:

- Standards on the structure of a network, such as governance structures and representation
- Domains on patient involvement and empowerment (mentioning patient involvement and empowerment policies such as having processes for holistic care and psycho-social support)
- Details of the multidisciplinary approach (assessing, for example, the structure of MDT meetings)
- Details regarding research (emphasising the creation and functioning of an overarching common research leadership, providing access and information on clinical trials, and a biobank). The integration of research and clinical care is a key characteristic of comprehensive cancer centres, and should also be a core feature of comprehensive cancer networks.

Most indicators from literature for which no OECI equivalent was present are found in the domain of Organisation. The articles by Haines et al. [32] and Brown et al. [40] contained the largest number of measures that were not present

Table 1. Comparison of literature standards and OECI European Cancer Network Quality standards.

OECI network standards	Deduced principles of a CCN	Literature network standards
There is a Network contractual agreement to which all Members of the Network subscribe which sets out the objectives of the Network and the obligations of all Members.	Common governance – The network has a defined governance structure with clear objectives, contractual agreements between all parties, and an established Board of Directors to provide leadership	Clearly defined goals and achievable work plans [40]
		Common identity for the network [35]
The role and terms of reference of the Network Board are clearly defined and documented in a set of governance rules and procedures.		Egalitarian processes in network [30]
The Network has a Board of Directors which provides the ultimate governance of the strategy and policy of the Network		Leadership; vision and facilitation, clear leadership structure, commitment of network chairs [31,37,45]
		Organisational ability and commitment of the Network Manager [32,37]
There is a Network co-ordination team with the resources to co-ordinate the activities of the network which has a defined role in maintaining functional data systems to enable the Network to operate effectively.		Streamlined pathways for referral, networking, communication [29]
		Engagement with all stakeholders [30]
The Network has within the network contract an agreement with at least one University or Research Institution which documents the collaboration in terms of research	Comprehensive coverage - The Network has a broad representation of key stakeholders across the continuum of care, including primary, secondary and tertiary healthcare providers responsible for patients in a defined geography. The scope includes clinical research and engages Universities and research institutes in translational research.	Broad representation of key stakeholders in network – e.g., across continuum of care, geographically, specialist-wise and educationally [30,44]
The scope and coverage of the Network is defined in the contractual agreement in terms of the geographical area covered or the services provided by each Healthcare Provider Member of the Network		Partnerships with state health and local health services [29]
		Building collaborative relationships and engaging with the external environment [40]
The Network has an agreement with at least one University, College or Educational body for undergraduate and postgraduate education available to the network		Stakeholders of the network should include representatives of state management, municipalities, and education and research partner institutions [42]
The Network actively promotes the creation of new investigator-initiated and commercial trials		Development of multidisciplinary research collaborations and research agendas [31]
		Clinical research fostered [32]
		Research productivity (outputs) [30]
		Promotion of good research and good interventions [34]
The Network ensures that HCP Members identify key training and oncological continuing educational needs of all staff		Training and support for the Network Managers [31]
The Network promotes oncology training in cancer for physicians, nurses, researchers, supportive disciplines and other relevant disciplines		Providing clinical education [31]
The network ensures that an MDT for each tumour type covered by the network is established.	Inter-professional and multidisciplinary – The Network ensures that every patient is diagnosed and managed in a fully multidisciplinary way.	Interdisciplinary collaboration [29]
		Perceived multidisciplinary representation [40]
The Board of the network has established mechanisms to incorporate the voice and opinions of patients and families	Patient centred – The Network ensures patient-centredness by structured involvement and consultation of patient representatives. It also ensures equitable access to care and information, case management and continuity of care without undue variation.	Involving consumers, having consumer representation in networks and informing consumers [29,31]
		The perceived quality of care services can be measured by means of users' satisfaction surveys [39]
The Information about the members of the Network and all relevant clinical pathways is sufficient to enable patient access to the network		Developed consumer resources [32]
Each HCP in the Network has processes and resources (e.g., Case Managers/Trackers) to ensure that at all times in the pathway of a patient it is clear which physician and which HCP has the responsibility for the care of the patient		Case managers appointed [29]
		Case manager's activities can be adequately monitored and appraised [39]
The Network has policies and procedures for ensuring equal access of patients to care throughout the network and reducing variations in outcomes.		Improving equity of access or providing patient access to new interventions and services [29,31]
		Consistent clinical practice and reduction of variation in performance [31,45]
Network Patients' experiences and satisfaction are collected annually; the information is used by the Network to take strategic decisions		Perception that the network has improved patient outcomes [40]
		Enhancing consumer participation, or informing consumers [31]

(*continued*)

The Network promotes the use of highly specialised diagnostic and therapeutic equipment and facilitates their targeted provision in the Network.	Focus on innovation and sharing best practices	Adequate resources and resource sharing [31,37]
	The Network ensures a focus on sharing best practices, promoting innovation, new technologies and models of care.	Capacity to identify a clinical problem [32]
The network ensures that all MDTs review best practice evidence in a Learning Event at least annually (MDTs jointly per tumour type) and uses this evidence to review or update guidelines, protocols and pathways		Strategic evidence-based workplans [29]
The Network has infrastructure to actively promote innovation		Capacity to implement measurable, practical, sustainable changes [30,40]
		New guidelines developed [32]
		New models of care designed [32]
The Board ensures that all HCP members of the network use the same clinical guidelines for diagnosis, treatment and follow up.	Uniform standards of care for cancer-specific pathways – The Network ensures uniform quality standards and clinical guidelines, underpinned by documented patient pathways	New clinical practice guidelines and new service establishment [43]
		Willingness of hospital clinicians to implement changes recommended by network [40]
		Awareness of network recommendations [40]
Documented patient pathways are established within the network for each cancer type and sub-type		Co-ordinated services and clinical service plans [29]
A periodical planning and control cycle concerning oncology policy and strategy is present.	Uniform system of quality assurance – The Network has instruments to ensure the monitoring and continuous improvement of care quality, including key performance indicators, outcome indicators, and evaluation of employees.	Movement towards network objectives [30]
The Board monitors the activity, outcomes and initiatives of the Network and its members in regard to their specific contractual roles		Activities of healthcare assistants and social workers are regularly recorded [39]
		Number of hours devoted to network initiatives in last 6 months (estimate of time) of multidisciplinary clinicians [40]
		Commitment of multidisciplinary clinicians to network and belief in the work it undertakes [40]
The network records key summary data about patient cohorts on diagnoses, treatments and outcomes.		The achievement of the objectives of the clinical/assistance path is regularly recorded [39]
		Patients health conditions can be adequately monitored during their clinical/assistance path, by means of the data available [39]
		New uniform data collection and monitoring established [32]
The Network uses an agreed set of Performance Indicators		Reduced length of stay [29]
These Performance Indicators could include: waiting times from first referral to diagnosis and first treatment; specific surgical interventions and follow ups; length of Inpatient stay; Survival; Quality of Life Measures.		Cost reductions [29]
		Key performance indicators linked to financial incentives [43]
		Perception that the network has improved quality of care [40]
The network maintains a quality and risk dashboard of its activities, which are regularly reviewed by the Board.		Implementation of clinical guidelines and protocols and audits of practice against evidence based benchmarks to demonstrate improvements [21,33]
Examples of content are: accrual rates of patients into clinical trials; serious adverse events; volumes; 30 day mortality etc; waiting times.		
		The information system gives managers and professional workers adequate measures to understand what is working and why (not) [34,40]
		Developing quality improvement programs and improving quality of care and patient safety [31,34,45]
The Network has a committee for Quality (reporting to the Network Board) with representatives of each HCP network member		Clinical groups to monitor safety and quality [29]
The Network produces a periodical Quality Report and Improvement Plan (ideally annually)		Periodical meetings with other members improve the analysis of what is working and why (not) [39]

(*continued*)

The Network maintains communication and IT systems that allow confidential submission and review of clinical information, including histopathology, radiology, and medical photography by all network members.	Unified informatics system – The Network maintains communication and IT systems which allow effective, consistent, and confidential sharing of data across the network	Effectiveness of information sharing and continuous communication across the network [32,40]

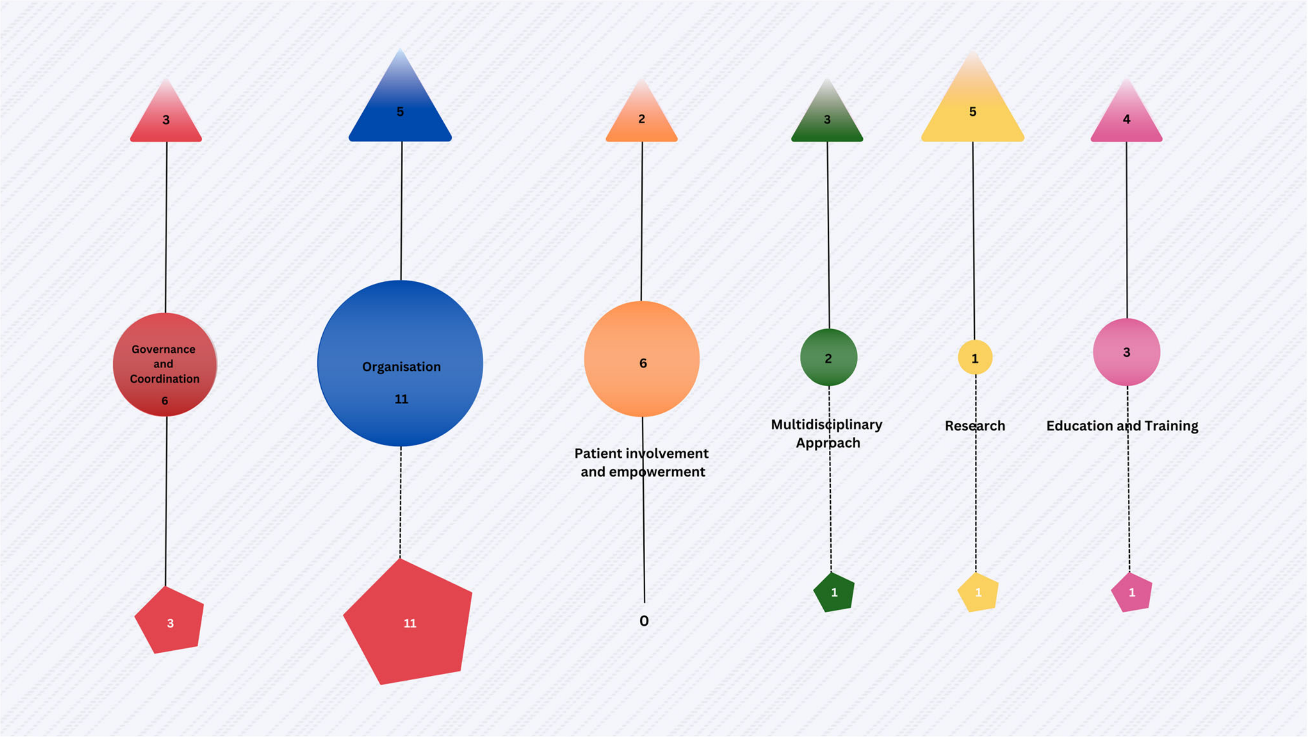

Figure 2. Quantitative overview of overlap and differences between OECI standards and standards found in literature. The round shape in the middle indicates the number of OECI standards that have an equivalent standard in the literature and vice versa; The darker coloured pentagon shape shows the number of OECI standards that did not have an equivalent in literature; The lighter coloured triangle shape shows the number of Literature standards that did not have an OECI equivalent.

in the OECI standards; they had a stronger focus on network management (e.g., specific training for network managers) and individual membership of the network by clinicians. There was also more attention to a network's relationship to the external environment such as (local) governments.

Evaluation/accreditation process for CCNs

The OECI network accreditation process assumes that a Comprehensive Cancer Centre or large cancer centre at the hub of the CCN will have been accredited by OECI in advance of, or in parallel to the CCN. The process starts with a self-assessment of compliance by the network to the standards and providing quantitative data (not described in this article). This is followed by a peer review visit by four or five auditors from different specialties within cancer. Scoring is based on the Deming PDCA cycle [26] (plan, do, check, act). Based on the network review, the OECI delivers a report identifying strengths and recommendations for an improvement plan. Like most of the studies in the literature review, the OECI proposes a 3-stage mixed method assessment. As described in nine studies [31–33,35,38–40,42,44], the online assessment consists of a qualitative questionnaire (Stage 1). To aid the evaluation by means of document analysis [30,32,38,42], the network provides a list of official documents and quantitative data (Stage 2). During the peer review visit, the auditors conduct interviews [29,30,32,33,37,42–44] and make a tour through the network sites (Stage 3).

Discussion

We have provided an overview of criteria and review methods for healthcare networks and show that the proposed OECI European Cancer Network Quality standards place less emphasis on organisational criteria and much more on patient involvement, education, and (clinical) research. Other sets of standards and requirements for cancer care exist in Europe and the U.S. (in particular) which are beyond the scope of this paper. The OECI network standards focus on the continuity and quality of care and research throughout the network, not the processes that HCP's maintain themselves. Networks have to establish instruments to assure uniform quality among the constituent HCPs.

Subsequent to the completion of our literature review, some new standards have been published internationally which have a bearing on cancer networks. These originate from the American College of Surgeons [46], from SONCOS in The Netherlands [47] and the Innovative Partnership for Action Against Cancer (iPAAC) a Joint Action of Member States financed by the European Union [48]. Sections of these three set of standards **relevant to networks** are tabulated against OECI Network Standards [Supplementary file 5]. This comparison shows a high degree of congruence between the OECI Network Standards and the iPAAC CCCN standards [48]. Overall, there were only three subjects where iPAAC had standards that were lacking in the OECI set: (1) including primary and community care representatives on the Network Board (2) having different types of co-operation memberships, and (3) the existence of an internal audit process within the network. There is less congruence between the OECI Network Standards and the SONCOS set [47], except around network governance and the use of clinical guidelines, with the OECI standards covering a wider range of activities in care, education, and research. By comparison, the standards of the American College of Surgeons [46] lack many standards relating to specific activities of cancer networks.

Many of the evaluation standards distinctive to the OECI set, concern the integration of research and patient care. This could be seen as a distinctive strength that has already been proven in the accreditation of CCCs. The impact of having integration and continuity of basic and translational research within a network has often been underplayed [2]. This is why the OECI core principle for CCNs is that there should be at least one accredited CCC or large cancer centre at the hub of the network leading the research continuum. Innovating the outreach of CCC should be seen as a stepping stone to creating a fully functioning CCN [49].

For 17 literature standards, there were no OECI equivalents. Some of these standards are irrelevant for CCNs and are therefore not to be considered for the OECI set. However, standards with regard to ‘how the network was related to the external environment such as (local) governments’ could be relevant for the sustainability and effectiveness of the network. As CCNs also have a research focus, an interesting additional outcome indicator could be ‘Contribution of the network to development of new research evidence’ [30].

Overall, however, there was a strong commonality between the standards and methods described in literature and those published by the OECI, which has led to the deduction of basic principles for standards for a CCN.

The articles found did not explicitly address the question what types of network and which governance structures yield the best results, nor how patients view networks. There are also substantial methodological challenges in evaluating patient outcomes across networks [29] and adjusting for confounding factors when comparing patient outcomes between networked and non-networked care [50]. The OECI standards use known effective process measures as proxies for outcomes, such as measures of multidisciplinarity, and waiting times between critical points in patient pathways.

Conclusion

The scoping review demonstrated a large variation in standards/indicators and assessment/evaluation methods. The OECI European Cancer Network Quality standards are a promising contribution to the formation and evaluation of such networks for cancer patients. The 8 basic principles for networks deduced from the OECI standards and the more general literature can be a basis for continuous monitoring of network performance. The three assessment methods most mentioned in the literature (qualitative and quantitative questionaires, document analysis and interviews) are also part of the method promoted by the OECI for evaluating CCNs.

The field of study of care networks is still too new to verify whether outcomes for patients treated within networks are better than those treated outside networks. However, a system such as an accreditation programme against measurable standards that conforms to the most evidence-based methods of evaluation is likely to be successful in evaluating the effectiveness of networks and their impact on patient care. If piloting the standards shows that they are robust, demonstrating value-orientated information, the OECI could publish the data in benchmarked format. If numbers become sufficient, evidence may be generated about which network standards have the greatest chance of achieving uniform quality, and thus their utility in furthering the aims of the EU Cancer Mission and Europe’s Beating Cancer Plan. Ultimately, this should contribute to the body of evidence regarding the value of care networks, specifically cancer networks.

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Editorial Board (the Accreditation and Designation Board of OECI (2018–19))

Disclosure statement

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Data availability statement

All articles included in the review can be found in the reference list. Data on all indicators is provided as supplementary documentation.

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