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Financing networks of care: a cross-case analysis from six countries

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ABSTRACT

Objectives Describe experiences of countries with networks of care's (NOCs') financial arrangements, identifying elements, strategies and patterns.

Design Descriptive using a modified cross-case analysis, focusing on each network's financing functions (collecting resources, pooling and purchasing).

Setting Health systems in six countries: Argentina, Australia, Canada, Singapore, the United Kingdom and the USA.

Participants Large-scale NOCs.

Results Countries differ in their strategies to implement and finance NOCs. Two broad models were identified in the six cases: top-down (funding centrally designed networks) and bottom-up (financing individual projects) networks. Despite their differences, NOCs share the goal of improving health outcomes, mainly through the coordination of providers in the system; these results are achieved by devoting extra resources to the system, including incentives for network formation and sustainability, providing extra services and setting incentive systems for improving the providers' performance.

Conclusions Results highlight the need to better understand the financial implications and alternatives for designing and implementing NOCs, particularly as a strategy to promote better health in low- and middle-income settings.

STRENGTHS AND LIMITATIONS OF THIS STUDY

⇒ Analysis is limited by the number of cases and the information available for each case.
⇒ Heterogeneity of cases provides a range of settings in which networks can be implemented.
⇒ Using a single health-financing framework allows better comparison between different countries and contexts.
⇒ Analysis based on official documents (rather than academic studies) gives more updated and standardised information.

INTRODUCTION

Quality in healthcare services and health systems is still a major challenge for many countries around the world. According to the Lancet Global Health Commission on High Quality Health Systems (HQSS Commission), nearly 9 million deaths occur yearly due to a lack of good quality care, with 60% of them corresponding to people who accessed care.[1 2]

Changes in the epidemiological profile of the population, as well as the way health systems respond to meet these needs, require new ways to think about healthcare service delivery in every country, to improve its effectiveness, sustainability and quality.[2]

In this context of growing concern about quality in healthcare and strategies for improving health outcomes, networks of care (NOCs) have been identified as one approach to dealing with common challenges such as difficulty in access to healthcare and fragmentation of services in health systems.[3–5]

Although there are several definitions of NOC, they can be broadly understood as groups of health providers or facilities that are explicitly integrated, including an administrative and clinical model and common goals, and that are accountable for the health of the population they serve.[5–7]

Using the framework proposed by Carmone and colleagues,[5] NOC can be further characterised as including four different domains: (1) agreement and enabling environment; (2) operational standards; (3) quality, efficiency and responsibility and (4) learning and adaptation. Each of these domains comprises several themes. Within the first domain—agreement and enabling environment—, the authors identify financing as a relevant theme. According to the authors, financing in NOC includes 'affordability of services for the user, and appropriate budgeting for continued NOC operation,'[5] key elements in an NOC operation.

Despite the rising interest in NOC and the importance of financing for the strategy,[8–11] information on financing these types of health system reforms is still scarce.[7]

How are NOCs financed at a large scale and how might financing modalities influence the ability of networks to deliver high-quality care in an integrated manner? Effective NOC financing has the potential to create synergies with universal health coverage policies, promoting integration and increasing

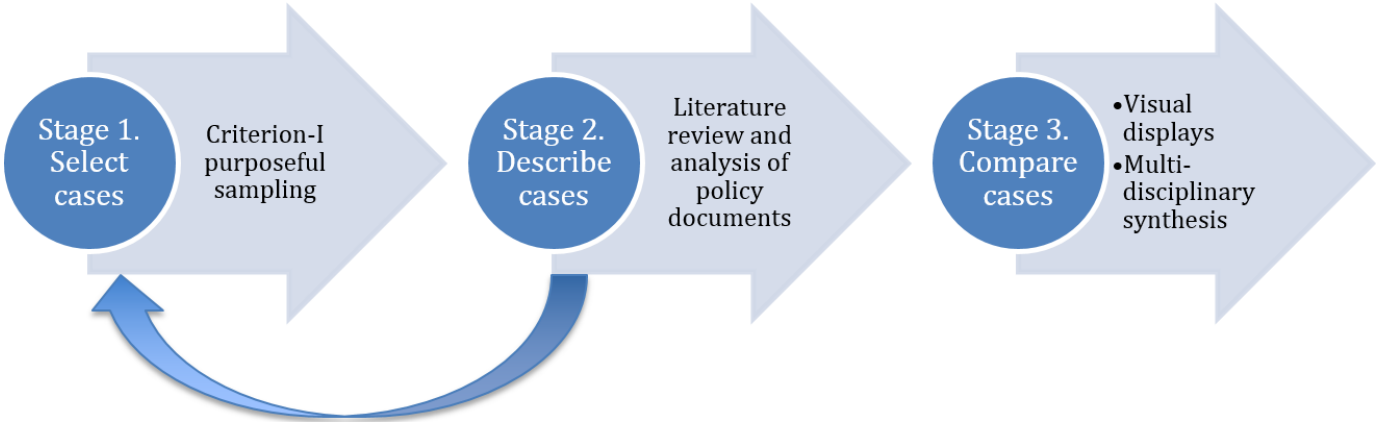

Figure 1 Cross-case analysis methods. Source: Authors' elaboration.

utilisation of services; integration also improves efficiency if can make service delivery more cost-effective, for example, by encouraging cooperation instead of competition among actors; providing incentives that align the goals within the network and allowing risk-sharing between participants, including providers and insurers.[5 7] Financing addresses the affordability of services for the user as well as appropriate budgeting for securing the NOC operation.

This article aims to describe current experiences with NOC financial arrangements around the world, identifying elements, strategies and patterns to extract lessons that can be used by countries embarking on the challenge of implementing NOC in their health systems.

MATERIAL AND METHODS

A modified cross-case analysis method was used to answer our research question: How are NOCs financed at scale and how might financing modalities influence the ability of networks to deliver high-quality care in an integrated manner? Cross-case analysis was chosen because of the exploratory nature of the research question and novelty of the NOC concept, as well as the practical purpose of conducting the research, that is, to inform national policy and programme planning in low- and middle-income countries interested in implementing NOC.[12] The method is summarised in figure 1.

The WHO's conceptual framework of health system performance is used to situate our research question within the larger goal of achieving Universal Health Coverage. Specifically, health financing as a health system function—including collecting resources, pooling and purchasing—is viewed as contributing to the quality of care with NOC as a potential strategy to achieve that result.[13]

Our initial study design called for multistage purposeful sampling. In stage 1, all cases meeting our criteria were to be selected (purposeful sampling). The purposeful sampling was guided by principles of comparative studies, as a way to approach an institution or policy and understand it from different perspectives.[14] To deal with the problem of 'many variables, small N' arising from the methodology, criteria were carefully selected to restrict the scope of the analysis, increase homogeneity and focus on key variables of interest.[15 16] The analysis was based on 'large scale' NOC: cases had to demonstrate the implementation of NOCs (based on the definition by Carmone and colleagues[5]) across health system levels at national or subnational scale; pilot studies were excluded. Information about key variables of the financing arrangements (ie, source of funding, goal of the NOC, resource allocation mechanisms and use of resources) had to be available for study. Only networks that began after the year 2000 were included. The identification of cases started by searching the literature of NOC,[17 18] and then trying to find two or more cases that differ in the variable of interest, using a diverse criterion.[19–21] Since both, countries with NOC and the financial mechanism were unknown before the search, in stage 2 (description of cases) each case was analysed and the sample was redefined based on this information. This second stage encompassed the following information potentially related to the NOC design and financing, including the country's priorities and challenges that could be addressed through the establishment of NOCs. Descriptive indicators used were as follows: geographic (geographic area); demographic (total population and share population over 65 years); health system features (health system type, health expenditure) and health system outcomes (coverage, mortality, burden of disease).

Published and grey literature, especially publicly available government documents, were then identified to develop each case. Grey literature was especially important for this study because it is likely that information on NOC—as national health system's strategies—is available through government rather than academic sources and because information from government websites was more likely to be up-to-date.

For the systematisation process, the focus was on identifying explicitly defined financing elements used by NOC. One important challenge for the analysis was to identify NOC-specific financial mechanisms, that is, actions and resources planned for the implementation of the

Table 1 Demographic and health indicators in selected countries

Country	World Bank geographical region*	Total population, 2020 (share of population 65+, 2020)*	Health system classification†	Current health expenditure per capita, PPP (current international $), 2019 (current health expenditure (% GDP), 2019)*	UHC effective coverage index, 2019‡	Infant mortality rate (per 1000 live births), 2020*	DALYs per 100 000, 2019 (top cause of death and disability (DALYs), 2019)‡
World	–	7 763 498 647 (9.3)	N/A	1466.8 (9.8)	60.3	27.4	32 801.7 (Ischaemic heart disease)
Argentina	Latin America and the Caribbean	45 376 763 (11.4)	Universal public–private insurance	2198.9 (9.5)	61.2	7.6	27 898.27 (Ischaemic heart disease)
Australia	East Asia and Pacific	25 693 267 (16.2)	Universal single payer/National Health Insurance	5294.5 (9.9)	89.4	3.1	25 598.63 (Low back pain)
Canada	North America	38 037 204 (18.1)	Universal single payer/National Health Insurance	5520.7 (10.8)	90.3	4.4	27 335.93 (Ischaemic heart disease)
Singapore	East Asia and Pacific	5 685 807 (13.4)	Universal public insurance/National Health Insurance	4102.3 (4.1)	92.4	1.8	18 487.47 (Ischaemic heart disease)
UK	Europe and Central Asia	67 215 293 (16.6)	Universal single payer/National Health Service	5087.4 (10.2)	87.9	5.4	29 324.84 (Ischaemic heart disease)
USA	North America	331 501 080 (18.7)	Non-universal, public–private insurance	10 921.0 (16.8)	82.1	3.6	33 866.36 (Drug use disorders)

*World Bank.[22]
†Social Security Administration,[23] Commonwealth Fund[24] and Böhm *et al*.[25]
‡IHME.[26]
DALYs, disability-adjusted life years; GPD, gross domestic product; PPP, parity purchasing power; UHC, universal health coverage.

network. The focus on NOC-specific financial elements implies looking for extra resources used and extra benefits delivered because of the existence of the NOC (incremental funds). For each country, two sets of information were collected:

- Basic NOC information: name, starting date, objectives and coverage (number of networks and participants) (pooling)
- Financing NOC information:
  - Collecting resources: source of funding, level of funding
  - Purchasing: types of funding/use of resources (of the budget is used within the network)

For stage 3 (case comparison), a cross-case visual display based on the work of Miles and Huberman was used to organise data.[12] The partially ordered meta-matrix organises information by country chronologically using each NOC starting date. Researchers conducted a series of meetings to identify themes and questions for discussion.

Patient and public involvement statement

None.

RESULTS

The search identified six countries with large-scale NOC strategies in place. Cases come from three different geographical regions. Table 1 shows commonalities and differences between countries, including the health system's features and health outcomes.[22–26] Except for Singapore, the rest of the countries exhibit relatively large populations (over 25 million) and a ratio of health expenditure to gross domestic product of roughly 10%, close to the global average. The population in these countries is relatively more aged—in terms of the share of people 65+ in the population—compared with the world's average. The cases include different types of health systems, with per capita health expenditures above the world's average but lower for Singapore and Argentina. Similarly, the universal health coverage (UHC) index is above the global index but lower for Argentina. In terms of health outcomes, all countries show lower rates of infant mortality compared with the global average and a larger burden of disease, associated with non-communicable diseases.

Table 2 shows information about NOC in each country.[27–46] Most cases are networks implemented as a national strategy, except for Canada that—in line with the organisation of the country's health system—presents the experience of one province (Alberta) and the USA with a national-level programme that is designed for supporting specific regions (rural areas). As proposed by Carmone and colleagues,[5] networks are defined within a

Table 2 NOC basic information in selected countries

Country	Name of the NOC	Starting date	Scope	Participants	Coverage	Declared objective
Argentina*	Programa Redes	2009	National	Public facilities (primary, secondary and tertiary level)	24 networks (one for each health jurisdiction) covering 100% of the population in the public system (~18 million people) with 9.189 health centres	► Encouraging interaction between providers in all levels, with primary healthcare as it backbone ► Contribute to prevention, promotion and treatment of NCDs
Australia†	Primary Health Networks (PHNs)	2015	National	Public, private and non-government providers (primary level)	31 PHNs across the country working with the Local Hospital Networks covering 100% of the population	► Improving efficiency and effectiveness of medical services, particularly for those at risk of poor health outcomes ► Coordination of care
Canada‡	Strategic Clinical Networks (SCN)	2012	Province (Alberta)	Health facilities (hospitals, clinics, continuing care facilities, cancer centres, mental health facilities and community health sites) in the province of Alberta	11 thematic SCN covering—together—100% population in Alberta (4.4. million people) with more than 900 facilities	Improve health outcomes
Singapore§	Primary Care Network (PCN)	2017	National	Private general practitioner (GP) clinics (primary level). Can be driven and coordinated by a GP or work in partnership with the Regional Health System	11 PCNs, with 704 GP clinics. Although there is no information on the NOC's population coverage, the 1800 GP clinics in the country cover about 80% of the total primary care demand	► Support more holistic and team-based care ► Move care beyond the hospital to the community, so that patients can receive effective care closer to home ► Holistic chronic conditions management ► Economies of scale for ancillary services (eg, diabetic eye and foot screening).
United Kingdom¶	Primary Health Networks (PHNs)	2019	National	GP practices, community, mental health, social care, pharmacy, hospital and voluntary services providers (primary level)	1250 PCNs across England, each typically serving communities of between 30 000 and 50 000 people, with over 99% of GPs being part of a network	Enable greater provision of proactive, personalised, coordinated and more integrated health and social care for people close to home
USA**	Rural Health Network Development Planning Program	2018	National, focused on rural areas	Participants within the health sector (hospitals, clinics, laboratories, pharmacies), as well as other actors (schools, NGOs, transportation sector), depending on the project	20 networks in 16 states (2020 projects). People's coverage and number of participants in the NOC vary according to each project	► Achieve efficiencies ► Expand access to, coordinate and improve the quality of basic healthcare services and associated health outcomes ► Strengthen the rural healthcare system as a whole.

*RISSALUD,[27] Pinto *et al*[28] and Ministerio de Salud [Argentina].[30]
†Booth *et al*,[31] Department of Health and Aged Care [Australia][32] and healthdirect [Australia].[33]
‡Wasylak *et al*,[34] Alberta Innovates[35] and Alberta Health Services.[36 37]
§Primary Care Pages,[39] Ministry of Health Singapore[40] and King's Fund.[41]
¶Parkinson *et al*,[42] NHS England[43 44] and U.S. Department of Health and Human Services.[45]
**U.S. Department of Health and Human Services.[45 46]
NCDs, non-communicable diseases; NGO, non-governmental organisation; NOC, network of care.

well-defined catchment area to provide services to enable continuity in care, with explicit agreements between providers. NOCs are used as a strategy to encourage collaboration between existing health providers, as well as other relevant actors.[29 30 32 43 44] In several cases, the NOC is used as a tool to coordinate general practitioners (GPs) and primary healthcare with other providers; this is important since the implementation of NOC relies on GPs and primary care, it requires a well-developed first level of care in the country. Their goals relate to improving healthcare outcomes, particularly by expanding the provision, access and coordination of services.

Table 3 presents the analysis of NOC's financial arrangements for all the analysed cases.[27–46] First, it is noted that the financing source for the NOC in all countries is the government, mostly through resources coming from the Ministry of Health. The NOC is supposed to work as a strategy within the system instead of as a parallel system; this is aligned with the declared goals of improving the efficiency and outcomes of healthcare services.

Second, there are two different types of NOC financing strategies related to the design and requirements of the network. A first group of countries (Argentina, Canada and the United States) uses a 'bottom-up' financing strategy, which allocates a budget to finance individual projects—designed and submitted by groups of providers that want to collaborate as a network—for improving the health system performance through the implementation of a specific project. A second group (Australia, Singapore and the United Kingdom) exhibits a different strategy—the 'top-down' strategy—, in which the NOC's use of funds is determined at the central level by the health system with specific financing instruments designed to achieve specific aims (eg, network formation and sustainability, financing extra services and incentives). However, both types of NOCs define certain priority areas to be addressed by NOC, such as improvement in infrastructure, managing non-communicable diseases and healthcare services for vulnerable populations.

Third, in terms of payment mechanisms, the selected cases show a variety of alternatives used to transfer resources, from line-item budget (which includes core/operational funding for the network, resources for infrastructure and equipment, and pay for activities), project-based funding (for those using the 'bottom-up' strategy based on individual projects) and pay for performance. Also, 'top-down' networks put more focus on the network itself, devoting resources to network formation and sustainability (such as in Australia and the United Kingdom).

Finally, regarding the use of the funds or the requirements of the NOC, there is also heterogeneity across the selected examples (see details in online supplemental file 1). As expected, the 'bottom-up' cases are more flexible in terms of how they use the allocated budget.[29 30 36 45 46] On the other hand, the resources for 'top-down' cases can be grouped into three broad categories: core/operational financing (network formation and operation); delivery of extra services; and incentives for performance. The first group includes resources to invest in infrastructure and equipment, cover the NOC administrative cost, or resources to attract participants and incentivise the formation of new networks. The second group is devoted to paying for extra services or requirements that the NOC needs to perform—that go beyond the responsibilities of any provider within the health system—, such as extended hours of service or providing specific services, as well as resources devoted to hiring human resources (for details, see online supplemental file 1). Finally, a third group clusters resources to incentivise the NOC outcomes (pay for performance), including the evaluation of predetermined goals and funds for innovation.

These different alternatives—regarding both the way the NOC is designed and the use of its resources—are depicted in figure 2. At the top of the figure, the source of financing for the NOC is the same for all the cases selected: resources come directly from the health system, as a side strategy for delivering healthcare services. Second, policymakers need to decide whether to follow a 'bottom-up' or 'top-down' strategy; based on the cases analysed, this means financing individual network projects (organic development) in the first case or establishing a centralised strategy (planned development) to generate networks in the territory. Finally, countries need to determine how to use their resources. As shown in the figure and based on the presented cases, there are at least three broad categories of expenditure: resources to generate and sustain the existence of the network (core funding), resources to provide services not included in the 'traditional' benefits package of the health system (extra services) and payments for performance, subject to meet certain predefined goals (incentives).

DISCUSSION

As countries are gaining experiences with networks as a strategy to improve access and quality of services—by increasing collaboration, reducing fragmentation and expanding services—, the way in which NOCs are and can be financed to improve their results is still to be answered.

The article presents the experience of different countries in implementing and financing NOC. Results show that they all include specific funds, goals and requirements: NOCs are used as a complement of the health systems—an additional strategy to help providers achieve specific goals—to deliver better healthcare services in prioritised topics and populations. The presented cases show that countries use their already established network of providers to turn them into an NOC, that is, using the pool of health providers and other actors in a territory to work together (and doing something different) towards a common goal. This raises concerns about the feasibility of implementing a similar strategy in countries where the health system—particularly the primary care level, that is, used as a pivot in the network, for example, in the cases of Australia, Singapore and the United Kingdom

Table 3 NOC financial arrangements in selected countries

Country	Source of funding	Level of funding	NOC design/ financing strategy	Payment mechanism	Incentive to join the network	Results monitoring/ indicators
Argentina*	Ministerio de Salud Argentina	US$175 million (2021–2023): ▶ Equipment and infrastructure/goods (US$85 million) ▶ Strategies and investments for individual projects (*Proyectos Jurisdiccionales para el Fortalecimiento de las Redes de Salud*)+ pay for performance (US$90 million)	Bottom-up (individual projects)	▶ Line item budget – Infrastructure ▶ Project-based ▶ Pay for performance	No	Project implementation report (indicators as defined by each project) Pay for performance based on two groups of indicators: prioritised process (60%) and NOC indicators (40%) †
Australia‡	Australian Government—Department of Health and Aged Care	Nearly $900 million committed over 3 years for PHNs to deliver primary healthcare (since 2015–2016)	Top-down	▶ Line item budget – NOC operation – Infrastructure – Activities/ services ▶ Pay for performance ▶ Project-based (innovation fund)	Yes	PHN Performance Framework with three tiers of performance: national, local (project implementation report) and organisational §
Canada¶	Alberta Health Services	Annual budget for all 16 SCNs is $17 million for core infrastructure and $16 million for projects (2019)	Bottom-up (individual projects)	▶ Line item budget – Infrastructure ▶ Project-based	No	Project implementation report (indicators as defined by each project)
Singapore**	Ministry of Health Singapore	Annual budget of $45 million has been committed to support the PCN scheme over 5 years (starting in 2018)	Top-down	▶ Line item budget – NOC operation – Activities/ services	No	Achievement of clinical requirements for effective care to patients, such as establishing a chronic disease registry and providing nurse counselling, diabetic foot screening and diabetic retinal photography.
UK††	NHS England	Investment of £2.4 billion into primary care across the country (contract 2023/2024) or £1.47 million per typical PCN	Top-down	▶ Line item budget – NOC operation – Infrastructure – Activities/ services ▶ Pay for performance	Yes	Point system based on six Investment and Impact Fund indicators, clustered in two domains: prevention and tackling health inequalities and providing high quality care
USA	Health Resources and Services Administration—Office of Rural Health Policy	Estimated total programme funding: $2 million per year; Award ceiling: $100 000 (for an estimated of 20 projects)	Bottom-up (individual projects)	▶ Project-based	No	Project implementation report (indicators as defined by each project)

*RISSALUD,[27] Pinto *et al*[28] and Ministerio de Salud [Argentina].[29 30]
†Prioritised processes: investment plans; digital health; tele-health; clinical practice guidelines; laboratories network. Network priority areas: diabetes mellitus 2; hypertension; acute myocardial infarction; chronic kidney disease; cancer (breast, colorectal, cervical); congenital heart disease.
‡Booth *et al*,[31] Department of Health and Aged Care [Australia][32] and healthdirect [Australia].[33]
§National Headline Indicators: potentially preventable hospitalisations; childhood immunisation rates; cancer screening rates (cervical, breast, bowel); and mental health treatment rates (including for children and adolescents). Local indicators: selected by each PHN. Organisational indicators (2015–2016): establishment of skills-based boards, GP-led Clinical Councils and Community Advisory Committees; development of population needs assessments and annual plans; and development of annual budgets and provision of audited financial statements.
¶Wasylak *et al*,[34] Alberta Innovates[35] and Alberta Health Services.[36 37]
**Primary Care Pages,[39] Ministry of Health Singapore[40] and King's Fund.[41]
††Parkinson *et al*[42] and NHS England.[43 44]
Domain 1 (prevention and tackling health inequalities): percentage of patients aged 65+ who received a seasonal influenza vaccination; percentage of patients on the Learning Disability register who received an annual Learning Disability health check. Domain 2 (providing high quality care): percentage of patients referred to social prescribing; percentage of patients aged 65 and over currently prescribed a non-steroidal anti-inflammatory drug without a gastroprotective medicine; percentage of patients aged 18 and over currently prescribed an oral anticoagulant and an antiplatelet without a gastroprotective medicine; percentage of patients aged 18 and over currently prescribed aspirin and another antiplatelet without a gastroprotective medicine.
U.S. Department of Health and Human Services.[45 46]
NOC, network of care; PCN, Primary Care Network; PHN, Primary Health Network; SCN, Strategic Clinical Network.

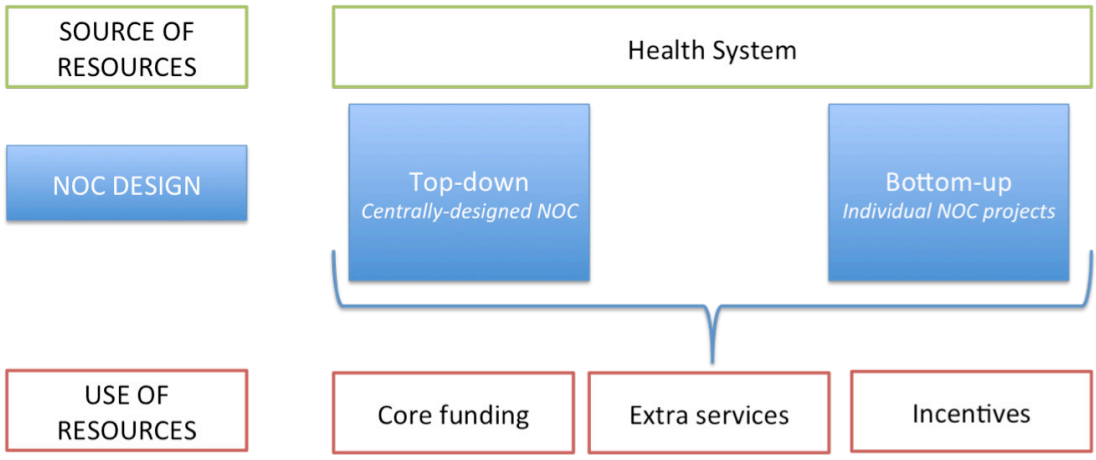

Figure 2 NOC financing strategies. Source: Authors' elaboration. NOC, network of care.

(see table 2)—is not well-developed but, at the same time, opens the possibility of other uses and goals for an NOC, such as achieving UHC.[47–50] Similarly, the selected cases represent medium- and high-income countries. The debate on the role of financing for NOC requires thinking about the design and implementation of these strategies in a low-resource setting. Regarding the NOC design and financing mechanism, in resource-constrained environments, financing initiatives with predetermined goals (top-down design) could be a better strategy than funding individual projects (bottom-up design) since it allows to pool scarce resources towards a more targeted (system-level) goal. In terms of use of resources, the priority should be put on using the extra funds to provide extra services that could help make the role and usefulness of working with networks more visible. Despite this prioritisation process, recent experiences in low- and middle-income countries—such as the case of the Philippines—show that besides financing, other factors such as trust between providers, citizen engagement and information systems are also key for a successful implementation.[50 51]

In this context, the information presented in this article, describing the financial arrangement of current experiences of NOC around the world, helps contribute to this debate by presenting and structuring some key elements identified in the different cases analysed; the experience of NOC is relevant for many countries embarked on the task of improving their health systems.[3–5] This might be particularly important as networks can be seen as a first step into major health system reforms, like the challenge of implementing integrated health systems, as shown by the recent experience of England.[52]

Despite the importance of the information presented, there are some limitations to be acknowledged when interpreting the results. First, the scope of the analysis is limited by the information available and information is limited: since not all the information on NOC is published the results present a partial panorama. For this study, the strategy option for depth instead of breadth, looking at a few cases with enough information to understand their features and financial arrangements. Although the cases presented show some diversity that allows the identification of different typologies of NOC's financing and implementation strategies (top-down and bottom-up), building a taxonomy—as the ones discussed in the literature on health systems—is difficult since not every country has an NOC and not every NOC has information to identify its financing strategy. Second, the analysis focuses on financing networks. As stated by Carmone and colleagues,[5] several elements besides financing comprise NOCs; however, the analysis is relevant as a starting point for countries interested in implementing NOC since, usually, policy decisions involve debate on financial issues.[53] Of course, with more information and experiences on NOC around the world, we could move forward towards different studies and a better understanding of NOC's financing, functioning and performance.

CONCLUSION

The analysis shows the experience of six countries in implementing NOC. All cases analysed use NOC to achieve specific goals in priority areas ranging from serving vulnerable areas to improving non-communicable diseases management. Results show the usefulness of NOC as a strategy to deal with different healthcare services but countries need to identify the area in which they want to intervene, according to their health priorities and idiosyncratic context. In any case, further research is needed to measure the concrete results achieved by the implementation of NOC and the role of different financial arrangements in contributing to the network's success.

We hope this article can help researchers, policymakers and practitioners to better understand the financial implications and alternatives for designing and implementing NOC, fostering the debate, improving the implementation of current initiatives, and encouraging

the generation of new experiences of collaboration in healthcare provision around the world.

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Supplementary file 1. Summary of activities funded with NOC resources

Country	Types of funding/ Use of resources
Argentina[a]	- ***Core funding*** o Equipment and infrastructure/ goods - ***Exra services*** o Strategies and investments for individual projects (*Proyectos Jurisdiccionales para el Fortalecimiento de las Redes de Salud*) and pay for performance o Priority areas: prioritized lines of care and service networks for diabetes, high blood pressure, acute and persistent Covid-19, acute myocardial infarction, chronic kidney disease, breast, colorectal and cervical cancer; identification of people (nominalization and georeferencing process); implementation of scheduled shift systems at the first level of care; improvement of care coordination mechanisms between levels of care; assessment of equipment and infrastructure; expansion of laboratory networks, improvements in infrastructure and equipment; remote care; strengthening of information systems
Australia[b]	- ***Core funding*** o Core/ operational funding: to support operations and maintenance (premises; governance; board; core staff; and office administrative costs including IT requirements) - ***Extra services*** o Flexible funding: to respond to identified national priorities (mental health; Aboriginal and Torres Strait Islander health; population health; health workforce; digital health; aged care; alcohol and other drugs). Measured by key performance indicators (KPIs) in the PHN Performance Framework (potentially preventable hospitalizations; childhood immunization rates; cancer screening rates (cervical, breast, bowel); and mental health treatment rates (including for children and adolescents). o Programme funding: to ensure continuity of priority frontline services (after-hours services; mental health services; support for people to use their My Health Record; health promotion programs; collection of information about childhood immunization; support for primary care (GPs), including continuing education) - ***Incentives*** o Innovation and Incentive Funding: to invest in new innovative models of primary health care delivery that, if successful, can be rolled out across PHNs (for high-performing PHNs to meet specific performance targets).
Canada[c]	- ***Core funding*** o Core infrastructure - ***Extra services*** o Projects: Networks compete for project funding and must provide evidence that demonstrates how work will improve health and care.

	o Thematic SNC: Bone & Joint Health; Cancer; Cardiovascular Health & Stroke; Critical Care; Diabetes, Obesity & Nutrition; Digestive Health; Emergency; Maternal, Newborn, Child & Youth; Medicine (includes Hospital Medicine, Kidney Health, Respiratory Health); Neurosciences, Rehabilitation & Vision; Surgery
Singapore[d]	- ***Core funding*** o Support for the network: government funding to provide team-based chronic care for their patients and monitor their patients' outcomes more closely and IT funding and support to increase the clinic productivity and smoothen the operational process. o Human resources: funding for nurse counselors and care coordinators - ***Extra services*** o Services: support to establish chronic disease registries, manage patients with more complex chronic conditions and care needs: ▪ Patient-facing services (team-based care for ancillary services for chronic disease management): Diabetic Foot Screening (DFS); Diabetic Retinal Photography (DRP); Nurse Counseling & Education (NC); Mental Health Initiative (optional) ▪ Backend services (administrative support, such as primary care coordinator, administrative executive): chronic disease registry, care coordination, monitoring of clinical outcomes
United Kingdom[e]	- ***Core funding*** o Network formation: Network Participation Payment; Core PCN funding; PCN Support Payment; Clinical Director Payment o Workforce: Additional Roles Reimbursement Scheme payments - ***Extra services*** o Extra services/ requirements: Extended hours; Structured Medication Review and Medicines Optimization; Social Prescribing Services; Enhanced Health in Care Homes; Early Cancer Diagnosis; Cardiovascular disease (CVD) diagnosis and prevention; Tackling neighborhood inequalities; Personalized care; Anticipatory care - ***Incentives*** o Payment for performance
United States[f]	- ***Extra services*** o Yearly award for projects: Supports and encourages programs that aim to confront public health issues and improve equity, by addressing the needs of target population groups who are historically underserved, including those who suffer from poorer health outcomes, health disparities and other inequalities o Priorities: Health Professional Shortage Area (HPSA); Medically Underserved Community/ Populations (MUC/ MUPs); Focus on Primary Care, and Wellness and Prevention Strategies

[a] RISSALUD (2017); Pinto et al. (2020); Ministerio de Salud [Argentina] (2021; 2022)

[b] Booth et al. (2016); Department of Health and Aged Care [Australia] (2021); healthdirect [Australia] (2022)

[c] Wasylak et al. (2019); Alberta Innovates (2020); Alberta Health Services (2012; 2022)

[d] Loon Chua et al. (2015) ; Primary Care pages (2019); Ministry of Health Singapore (2022)

[e] King's Fund (2020); Parkinson et al. (2021); NHS England (2022a; 2022b)

[f] U.S. Department of Health and Human Services (2021a; 2021b)