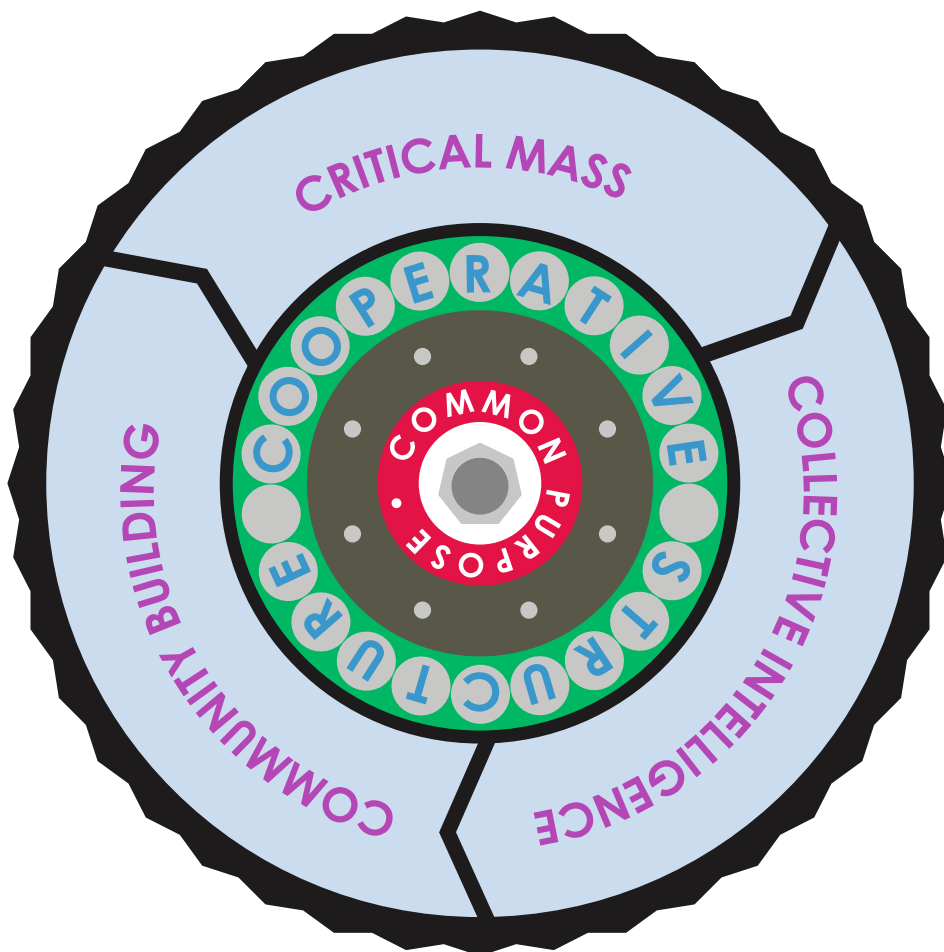


Effective networks for improvement

Developing and managing effective networks
to support quality improvement in healthcare



Learning report

March 2014

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- The Advancing Quality Alliance (AQuA)
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- Macmillan Cancer Support
- PatientsLikeMe
- Doctors.net.uk
- The NHS Future Forum

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www.cihm.leeds.ac.uk/new/wp-content/uploads/2012/07/Brief-literature-Networks.pdf

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Foreword

Healthcare organisations are highly social. As a manufacturing engineer by background, I don't need any convincing of the need to design high-quality, reliable processes. But I also know that even the best designed process depends on the behaviours of the people who will deliver it. In the end this relies upon discipline, trust, collaboration and judgement – and a good thing too.

The Networks Supporting Improvement review, conducted by McKinsey Hospital Institute (MHI) for the Health Foundation and summarised in this report, argues that the process of improvement in healthcare is also highly social and, at least for certain types of improvement, this is a strength to be leveraged. Working with others to tackle a common problem creates a platform for learning and peer mutual accountability, and can also generate energy and excitement. The NHS has a history of successful improvement networks – such as the 'Collaboratives' – and at MHI, we have also found this to be a very powerful model for bringing together organisations to work on a common problem.

Healthcare providers are facing the prospect of climbing a long, steep 'improvement hill' with a gradient of 5–6% recurrent savings per year for the next 5–10 years, while also needing to maintain or improve quality and deal with rising demand and rising expectations. This is a very tough challenge. So leaders will be looking for ideas on how to upgrade their improvement 'engine' to make it up that hill. Properly designed, improvement networks provide an inbuilt mechanism to spread successful change quickly, leveraging the power of social and professional connections, rather than relying on the formal chain of command of a hierarchical organisation. Our experience is that going

beyond what 'the system' requires of network members, and grounding the improvement network in what really inspires them, reframes improvement work in a powerful way.

The Networks Supporting Improvement review drew on the literature and empirical evidence about effective networks to describe the component parts of a successful improvement network. I hope that this contribution will help leaders and practitioners to design networks purposefully – with the end in mind – taking account of the social factors to make them exciting and uplifting to be a part of. This is the fundamental strength of a network-based model of improvement; it provides a 'high energy, high impact' model of change at a time when many of the classical models of designing and implementing improvement programmes are running out of steam. In fact, it can feel like relying on a steam engine – old technology – to climb the improvement hill which lies ahead of us.

None of this means that networks are the answer to every problem. However, for large-scale change which is rooted and grounded in the need to improve quality and safety, and which requires behavioural change in hundreds or thousands of front-line staff to make it happen, I believe that an improvement model based on networking structures has a lot going for it. Too much to ignore in fact.

So I hope that this report, and the ideas and insights it contains, will inform, inspire and equip you to build networks which deliver material benefits to patients and which staff learn from and enjoy being a part of.

John Drew,
McKinsey Hospital Institute

1

Introduction

Networks play many roles in healthcare. Some drive change across organisations; others simply unite individuals with common interests. Networks are growing in number and importance in UK healthcare. They are ideally placed to tackle systemic and complex problems faced by commissioners, providers and regulators, as well as frontline staff and service users. Research has suggested they contribute to healthcare improvement by providing a forum for experimentation and creating knowledge, exchanging information and spreading good practice.

But not all networks are equally effective, and healthcare improvement can be achieved through other means. It is difficult to measure their impact and to know when a network might have advantages over other types of organisation.

The Health Foundation commissioned research to better understand how networks can support healthcare improvement. We were keen to explore how networks can help services meet their objectives, enable learning and encourage change across professional and organisational boundaries. We asked McKinsey Hospital Institute to carry out the Networks Supporting Improvement review – analysing the types of network found in healthcare, identifying features key to improving quality and describing practical steps for designing effective networks.

In agreement with the Health Foundation, the research team chose seven healthcare networks as case studies (see Table 1 overleaf) and then tested their observations in the existing literature. All but one of the networks were based in the UK, and all were connected or relevant to the NHS, though not necessarily part of it. The team sought the widest range of network types and settings.

Each case study comprised interviews with leading members of each network, supplemented by a review of the literature about and by the network. Each study looked at how the network had come about, how it was implemented, its overall impact and lessons learned.

The research confirmed that networks are uniquely positioned to support quality improvement. They can focus on it directly and exclusively – unlike most organisations, which have other primary functions, whatever their commitment to quality. Networks can provide a neutral environment where individuals from different organisations, disciplines and constituencies can collaborate on an equal footing, freed from the constraints and competition created by more hierarchical structures.

While the review found no ‘one size fits all’ formula for successful network design, it did identify five core features of effective networks. These are:

- common purpose
- cooperative structure
- critical mass
- collective intelligence
- community building.

These features are interdependent, and interact to give a network energy and momentum. They ensure a clear direction, credibility and increased scale and reach, while enhancing knowledge, encouraging innovation and creating meaningful relationships. All five features are mutually reinforcing, and their combined effect enables quality improvement, learning and change to happen.

Together they can be represented diagrammatically as the ‘5C wheel’ (see Chapter 3) – a comprehensive framework for developing a network that can also serve as a diagnostic tool. In addition, the review team identified practical steps that networks can take to nurture each of the 5C wheel’s components (see Chapter 4).

This report will help those who want to use networks as a mechanism for change, and guide improvement leaders to ensure their networks are designed and run in line with what works best.

Table 1: Organisations selected for case studies

Case study	Overview
The London Cardiac and Stroke Networks	This network was founded in 2008 to help reconfigure London’s stroke services, emerging from existing cardiac networks. It is a managed, mandated network that offers an independent forum for exchanging information, allowing providers and commissioners to collaborate to reconfigure services.
The Advancing Quality Alliance (AQuA)	AQuA is a clinical development network promoting the spread of evidence-based healthcare. Members include purchaser and provider organisations across the North West of England, working together to provide a catalyst for change by sharing best practice, providing improvement training and offering intelligence and advice to stimulate innovation.
NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC) in North West London (NWL)	The North West London CLARHC is one of nine research networks established by the National Institute for Health Research (NIHR) as partnerships between universities and their surrounding NHS and social care organisations. The networks have the specific purpose of getting evidence into clinical practice in a sustainable way.
Macmillan Cancer Support	Though not a network itself, Macmillan works to create communities of influence that draw professional and lay people together around a common goal: improving the experience of patients with cancer. Macmillan works to create networks both of and for patients (eg Cancer Voices) and clinicians (eg specialist cancer nurses or general practitioners (GPs)), driven by public and patient engagement, shared decision making and developing new ways of working and fundraising.
PatientsLikeMe	PatientsLikeMe is a US-based international social network established in 2004. It comprises 180,000 members with 500 conditions who self-organise into groups. A ‘bottom-up’ network funded through contracts with partners in academia, research and industry, it allows patients to share personal stories and health data, and so contribute to research and help develop new treatments.
Doctors.net.uk	A commercial, peer-to-peer, professional network, Doctors.net.uk was launched in 1998 and provides an online platform for connection, education, and research. It offers registered doctors a range of free online services, starting with an email account before expanding to include medical news and jobs, professional forums, educational tools and Continuing Professional Development (CPD) resources.
The NHS Future Forum	The NHS Future Forum was established by the prime minister in 2011 to consult on and recommend changes to the Health and Social Care Bill. The Forum was a relatively informal and unstructured group that used network tools to share learning and influence policy. It used webinars, blogs and tweets to disseminate messages and invite contributions, and also held nationwide public meetings.

2

Context

What are networks and what do they do?

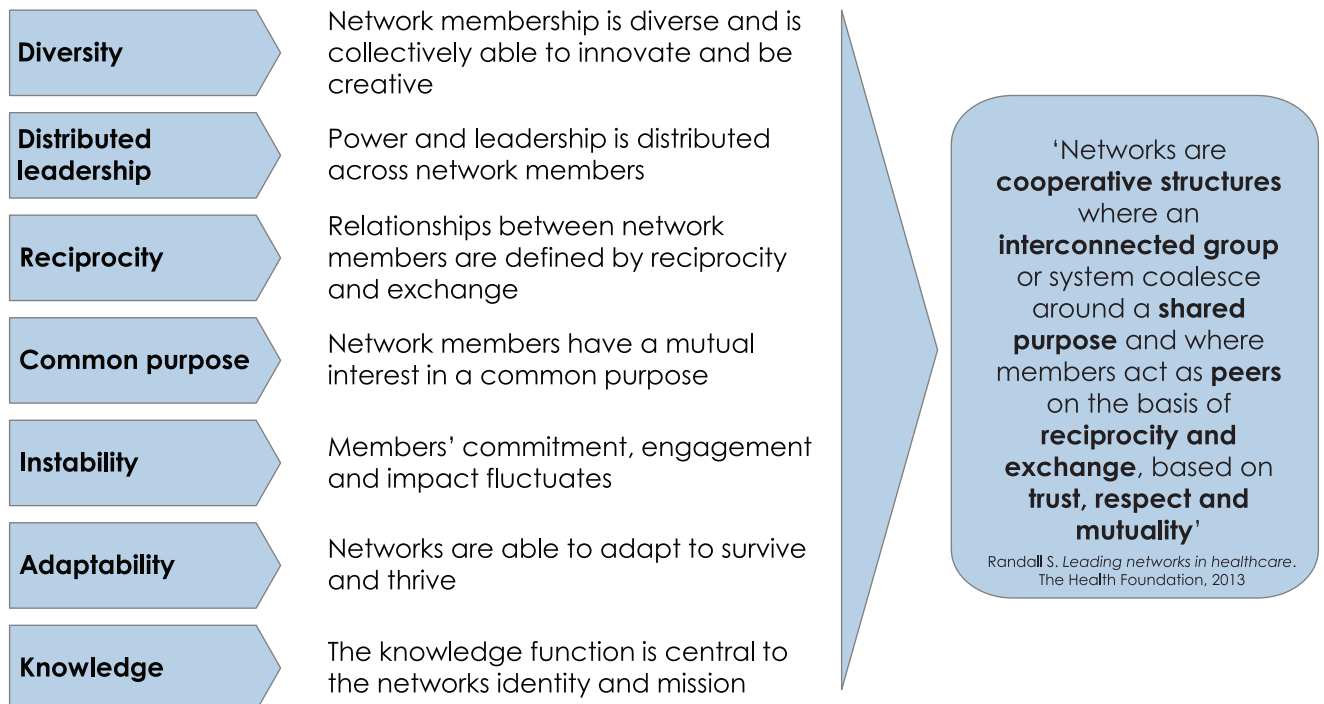
What is a network?

Broadly speaking, a network is an interconnected group or system. Networks are established or evolve spontaneously to facilitate the movement or exchange of resources or commodities. They are distinct from hierarchies, which are controlled via commands, and from markets, where control is financial. A network can be defined as ‘a cooperative structure where interconnected groups or individuals coalesce around a shared purpose on the basis of trust and reciprocity’.

This report focuses on networks of individuals and organisations that enable the exchange of knowledge, ideas and support to improve quality of healthcare.

The Networks Supporting Improvement review adopted a loose set of distinctive features and common characteristics to define a network (see Figure 1), while recognising that many healthcare networks may have more narrowly defined organisational structures.

Figure 1: Distinctive features of networks



Adapted from: Malby B, Mervyn K. *Summary of the literature to inform the Health Foundation questions*. April 2012. p7. www.cihm.leeds.ac.uk/new/wp-content/uploads/2012/07/Summary-of-literature-May-2012-FIN1.pdf

What do networks do?

As the seven case study networks demonstrate, a network's core functions, and the roles adopted by its members, can vary significantly depending on the purpose and structure of the network.

Previous research¹ found that networks have six main functions:

- **community building** – promoting and sustaining members' values
- **filtering** – organising and managing relevant information
- **amplifying** – helping make public and comprehensible, new and little-known or little-understood ideas
- **facilitating and learning** – helping members carry out activities more effectively and efficiently
- **investing and providing** – offering members resources to achieve goals
- **convening** – bringing together people or groups with distinct strategies to support them.

These functions are not unique to networks, but they tend to play a more central role than in other types of organisation.

Within networks, members may take on one of four common roles:²

- **central connectors** – linking people; these may not be the leader of a unit or department but they know who can provide information or expertise and draw them in
- **boundary spanners** – connecting one network with another in a different department or field; they invest time in meeting people outside their network, and have multiple contacts throughout any organisation

- **information brokers** – keeping a network's smaller subgroups together, preventing it from splitting into ineffectual segments
- **peripheral specialists** – who can be accessed by anyone in the network when they need specialist advice.

Strengths and limitations of networks

Researchers³ have noted that networks – by their nature – can exploit certain attributes better than other types of organisation. These benefits include:

- **rapid and expansive growth** – since the benefit to members increases as the network expands, members are motivated to create linkages
- **rapid diffusion** – networks diffuse information and resources to their members, allowing them to spread ideas and generate feedback quickly
- **'small world' reach** – networks can provide short 'pathways' between individuals separated by geographic, organisational, professional, cultural or other barriers
- **resilience** – networks can withstand stresses, including fluctuations in membership and engagement, because members can quickly reorganise
- **adaptive capacity** – networks can adapt with relative ease, assembling or disassembling capacities, membership and engagement as needed.

However, networks do have limitations and can face difficulties. They can descend into talking shops, drift without adequate leadership or resources and find managing performance difficult. They may emphasise local creativity at the expense of national policy, suffer high transaction costs and long lead times or be dominated by professional elites paying scant regard to service users.

Plastrik and Taylor identified situations where networks are unlikely to be effective – for example, where a problem is uncomplicated

1 Mendizabal E. *Understanding networks: the functions of research policy networks*, Working Paper 271. London: Overseas Development Institute, 2006.

2 Cross R, Prusak L. The people who make organizations go – or stop. *Harvard Business Review*. 2002;80(6):104–112

3 Plastrik P, Taylor M. *Net gains: A handbook for network builders seeking social change*. Alexandria, VA: Wendling Foundation, 2006. <http://networkimpact.org/downloads/NetGainsHandbookVersion1.pdf>

or needs hierarchical authority to implement a solution. Organisations unwilling to share decision making, resources or credit are unsuitable for leading or hosting networks, as are those where cultures clash or network membership is not a priority for the organisational leaders. Goals requiring investment may be inappropriate for a network if funders are unwilling to release control or accept the uncertainties inherent in network evolution and outcomes.

Networks in healthcare

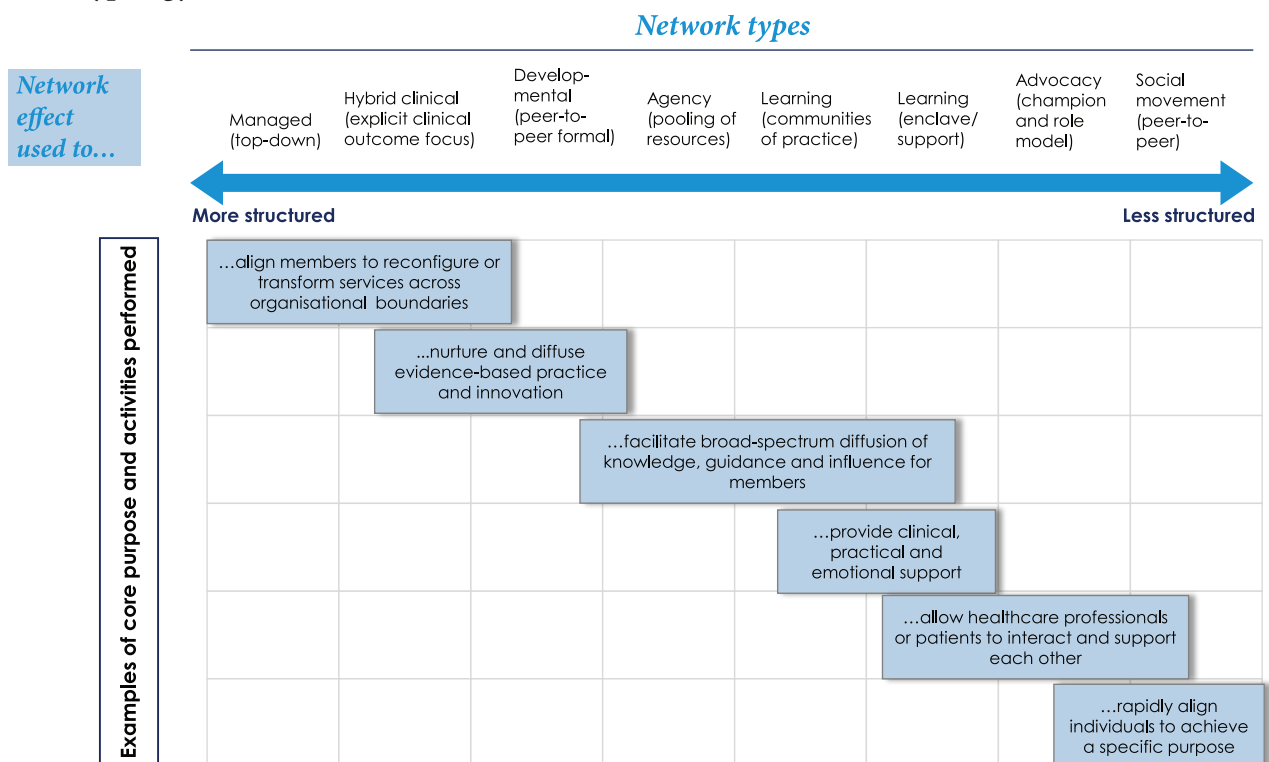
Healthcare faces challenges which demand that organisations and professions engage and collaborate with each other. These types of problems may be becoming more important or simply more visible: financial constraints on the NHS are revealing configuration inefficiencies, while variation in quality is now widely measured and acknowledged. Earlier research⁴ has highlighted how networks are well placed

to tackle ‘wicked’ problems⁵ where different agencies and professions are involved within cross-cutting areas of responsibility. Networks can help implement national policy involving major service reconfiguration, and secure high levels of clinical engagement and credibility.

Types of network in healthcare

Networks are often difficult to categorise. Researchers have tried to classify them, but can fail to encapsulate the sometimes amorphous nature of network structures and how they often evolve from one category to another or occupy more than one at a time. The Networks Supporting Improvement review positioned healthcare networks on a continuum (see Figure 2) to illustrate the range of potential models.

Figure 2: Typology of networks in healthcare



Adapted from: Malby B, Mervyn K. *Networks – a briefing paper for the Health Foundation*. Centre for Innovation in Health Management, February 2012. Executive summary, pp4-5. www.cihm.leeds.ac.uk/new/wp-content/uploads/2012/07/Brief-literature-Networks.pdf

4 Ferlie E, Fitzgerald L, McGivern G, Dopson S, Exworthy M. *Networks in health care: a comparative study of their management, impact and performance*. NIHR Service Delivery and Organisation programme. London: HMSO, 2010.

5 A wicked problem is one where there are multiple and often competing definitions of the problem itself and where any solutions are likely to have unknowable and possibly unintended consequences.

A network's position in the diagram below reflects the looseness of its structure and the extent to which it goes beyond simply connecting people. More managed and structured networks lie to the left of the spectrum, less managed and structured towards the right. Different networks may appear to have similar purposes but take different approaches, and so overlap. Also, networks often operate without clear boundaries and change over time, so cannot be boxed too narrowly within this framework.

How networks are used in healthcare

There is strong interest in using networks to improve healthcare worldwide. In the NHS, appreciation of their potential has been growing since the 1990s. Some of the earliest NHS networks focused on procurement, policy and public health, while the first large-scale, national clinical networks explicitly to improve quality were the cancer networks. Since then many pathway-based clinical networks have emerged. The Health and Social Care Act 2012 gave networks a central strategic role with the creation of clinical senates, strategic clinical networks and academic health science networks.

Many more informal multidisciplinary and inter-organisational initiatives to improve quality have continued to emerge. Some have been made possible by the development of low-cost, easy-to-use technology.

During the last 20 years the burgeoning realisation of what networks can offer has led to their greater visibility and status, raising expectations of what they can do and how they will be held to account.

How do networks have an impact on quality improvement?

Evidence demonstrating the impact of networks is scarce. It is difficult to identify precisely a network's effect on clinical outcomes independent of other factors – which is true of many health improvement initiatives but especially of networks, given their intangible nature. Traditional performance measures may overlook outcomes such as relationship development, trust building and changes in values and attitudes. Network impact must be measured on multiple levels: individual, organisation, network and community.

Among the evidence that does exist, studies have found that networks can improve quality both directly and indirectly. For example, creating cohesive and collaborative professional networks helps coordinate care. By creating social capital among employees, networks can improve physician performance and job satisfaction while reducing burnout and staff turnover. They may also have a more symbolic impact through publications, events and images that foster network identity and legitimacy. A network's cooperative, collegial environment allows 'bottom up' views to contribute to solving complex planning, design and delivery problems – bridging gaps between professional groups and competing organisations. And a network can provide a forum for addressing inconsistent practice and variations in outcomes.

3

Core features of an effective network

Driving force behind networks: the '5C wheel'

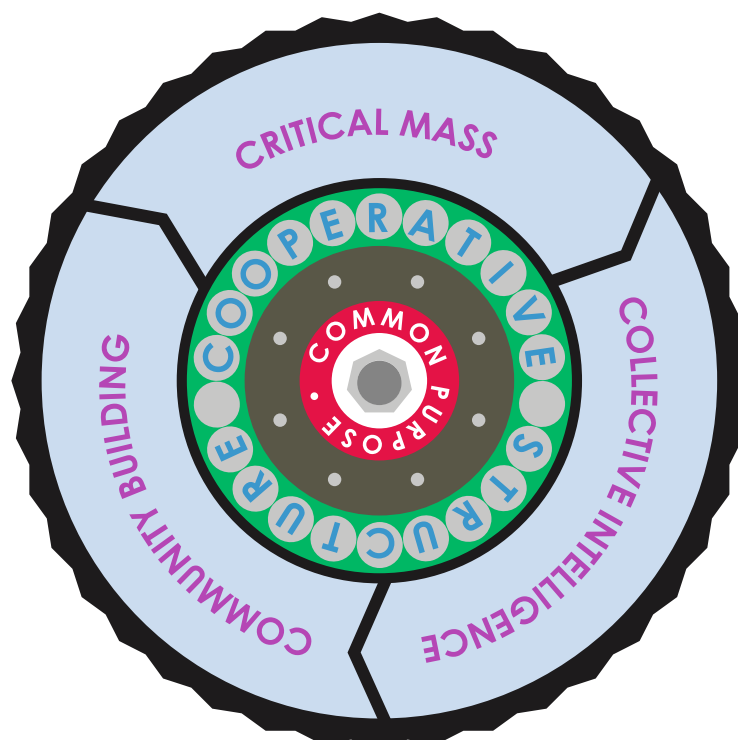
The review identified five core features of effective networks that added value to quality improvement. All are interdependent and interact with each other, collectively enabling a network to support service delivery while encouraging learning and change. Together, the features create a comprehensive framework: the '5C wheel' (see Figure 3).

A **common purpose** acts as the network's axle: drawing members together, keeping them aligned and moving in the same direction. A network would otherwise lack sufficient focus to drive its cause forward. Next, a network can establish a **cooperative structure** that allows people to work together across organisations, make decisions and pool resources. This acts like the bearings in a wheel, enabling movement.

Then the network can gain momentum and achieve **critical mass** as it continues to expand, increasing its value for members. Value is further enhanced by gathering **collective intelligence**, which accumulates as members share and learn from each other, facilitating discussion and experimentation. Value also stems from developing a sense of **community**, with members benefiting from each other and building relationships that foster reciprocity and discretionary effort. This mutually reinforcing cycle, like air in the tyre of a wheel, helps a network maintain momentum.

It is the five features' combined effect that enables effective quality improvement, learning and change. The following sections discuss these five features, with illustrations from the case study networks.

Figure 3: The 5C wheel



Common purpose

A network unites individuals from various organisations and professions around a common purpose, which fosters widespread engagement and commitment to quality improvement.

Case study networks said...

‘You need to have a credible aim that means something to members.’

North West London CLAHRC

‘Impact starts with being clear about your aims.’

AQuA

‘We had a document spelling out what the networks wanted to achieve.’

London Cardiac and Stroke Networks

Establishing and articulating a clear common purpose is crucial. It must transcend organisational status and individual rank while engaging members. As networks may not involve contracts or clear chains of command, aligning members and sustaining commitment around a common purpose may be all the more important. Because networks cross organisational boundaries and represent multiple stakeholders, it is vital they define and communicate a unifying direction of travel.

Each of the seven case study networks had a clearly defined common purpose, and their leaders spoke of the need to have a credible aim. The London Cardiac and Stroke Networks had an official mandate to implement reconfiguration across London, connecting organisations and teams along the care pathway for patients’ benefit. This was clearly expressed to commissioners, providers and the public. Although individual communities within Macmillan operate differently, they all work towards the overarching purpose of improving cancer patients’ experiences and offering support. The NHS Future Forum was set up to conduct a national listening exercise and recommend changes to the Health and Social Care Bill; its common purpose required a concerted effort to meet objectives within a specified time frame. AQuA has a clear mission to stimulate innovation, spread best practice and support local improvement.

Cooperative structure

A network establishes an independent cooperative structure, governance model and organisational framework that allows individuals – including service users – and organisations to collaborate safely and in a non-hierarchical manner, while being structured and influential enough to get things done.

Case study networks said...

‘If you try to performance-manage or be dictatorial, people will vote with their feet.’

Macmillan

‘The network was independent and had nothing to lose or gain from the changes to be made.’

London Cardiac and Stroke Networks

‘Patients can cross professional divides in a way that we can’t, and accelerate change...’

North West London CLAHRC

Independence and reduced hierarchy foster cooperative structures. Emphasising decentralisation, consensus and flexibility, networks depart from traditional bureaucracies that are often characterised by defined borders, top-down authority and clear chains of command. Their focus on committed, trust-based relationships distinguishes them from markets. A network’s cooperative structure enables it to connect disparate organisations and individuals, fostering participation irrespective of affiliation or rank. Networks allow members to speak freely without fear of repercussion. This helps break down barriers to change, encouraging insights and suggestions.

Cooperative structures foster teamwork among departments and services, encouraging collaboration across boundaries. Multidisciplinary teams are key to improving healthcare, offering more patient-centred services than teams formed along professional or organisational boundaries that can be prone to inflexible, inward-looking ‘clan’ cultures. And they may help remove barriers between professionals and service users, since they aim to represent all members’ views.

Networks often rely on ‘coordinators’ rather than a single decision maker at the top. A network’s leadership should delegate responsibility to sub-groups for widespread involvement and commitment to change, enabling members to make decisions regardless of organisation or rank. Macmillan GPs’ role includes network leadership in their community or work environment. PatientsLikeMe has distributed team-based leadership. By contrast, hierarchical structures can alienate patients, public and healthcare professionals, hampering cooperation and knowledge-sharing.

However, without a leader and widespread agreement, a cooperative structure can prevent decision making. ‘Shared’ leadership must articulate a common purpose, provide momentum and remain resilient to adversity. Network leadership requires significant time and effort, relying on influence and consensus-building. Cohesive and collaborative healthcare networks are frequently run by well-connected, credible key players who transmit information, enable social and professional interaction and forge links between members.

Network leaders should foster trust and commitment and demonstrate ability to innovate, provide performance-enhancing feedback, develop collective visions and build creative solutions. They must manage and control quality improvement initiatives – supplying resources, defining strategic direction, communicating across sub-groups and sustaining change.

Critical mass

Networks are able to achieve critical mass by combining the voice, resources and influence of their members. This is important for building the internal momentum and external negotiating power needed to make an impact. Critical mass allows ideas and practices to spread rapidly through the network, promoting and accelerating behaviour change. It also enables the network to influence those outside of its membership.

Case study networks said...

‘One of the early service developments associated with the Macmillan GPs was the spread of systematic processes to improve care for dying patients.’

Macmillan

‘User survey revealed some members became more adherent to their medications and others more involved in their care.’

PatientsLikeMe

‘Reach out to vulnerable groups on their turf. Do all sorts of things you wouldn’t normally do.’

NHS Future Forum

Less constrained by boundaries and legislation than other organisations, networks may enjoy greater reach. With the right infrastructure, they have potential for rapid growth and broad inclusion, so may find it easy to gain sufficient numbers to have weight, voice and influence.

Achieving critical mass means being large enough to get things done. Bigger may be better, but not always: core task and strategic objectives dictate size. Some networks benefit from identifying the minimum scale necessary and limiting growth beyond that. Issues to consider include geographic scope, number and types of stakeholder, scale of the task and the kind of change desired.

If a network seeks to play a prominent part in a larger community, such as a clinical domain or among providers in a particular location, research suggests it will be most influential if its membership captures a third of the eligible population. Although smaller networks may be able to influence behaviour and practice far beyond their members, their ability to manage, monitor and measure this secondary level of influence may be limited. An individual’s influence depends on their connections and reputation as much as their slot in the hierarchy.

How does critical mass affect a network’s impact on its own members? Research on social networks found that ideas, values and behaviour spread through ‘contagion’:

influence spreads even where links are distant and indirect. Networks should therefore seek to connect anyone they wish to influence, even if only indirectly.

Networks use critical mass to maintain and expand their size and influence. As membership grows, so does members' access to others with shared interests, pooled knowledge and collective bargaining power. Internally, critical mass encourages people to adopt improvement measures; it also enables the network to influence those outside its membership, pushing improvement initiatives into mainstream practice.

But networks can become too large and complex to be effective. It would be inefficient if all members of a large network were connected with the same degree of interaction – although smaller networks may be less effective if all members are not in active contact with one another. Networks vary in their capacity and willingness to absorb inactive members. Mutual support networks, regularly refresh and update their membership list to prevent passive members from creating blockages and dead ends in the system. Other networks, such as PatientsLikeMe, allow members to retain their online profiles and participate as much or as little as they wish.

Collective intelligence

Networks are able to gather collective intelligence by pooling data, information and ideas from members. Members can find others to connect with, irrespective of organisational or geographical boundaries and benefit from sharing information reciprocally.

Case study networks said...

'Patients are provided with opportunities to share their data and learn from each other, a "virtuous cycle" of learning.'

PatientsLikeMe

'We have developed 50 change champions – mostly clinicians – working outside the core team to spread improvement initiatives.'

AQuA

Access to collective intelligence is not unique to networks; but as members connect and feel comfortable sharing information, this can promote comparisons and exchange of ideas. Influence, cooperation and information-sharing generate collective intelligence, stimulated by the voluntary nature of network connections and the flexible structure. This *is* unique to networks – and is particularly important in quality improvement.

First, networks enable access to people members may not have connected with before. A member's existing connections should become available to all other members, allowing the network to expand rapidly and provide a wealth of knowledge and support as members find others to connect with, irrespective of organisation or geography.

Second, networks are well suited to disseminate information. Where a network's connections form horizontally it will be more effective in spreading peer influence; vertical connections are better for cascading codified information and passing on authoritative decisions.

Strong evidence suggests that sharing and publicly reporting information improves productivity and clinical outcomes. This can be slow and difficult to enforce in an organisation: people only share information if they feel safe to do so. Those who trust each other from working together in a network will be more inclined to share information. By fostering transparency a network can generate intelligence specifically for improvement: groups can benchmark data, analyse variation and identify targets.

AQuA provides benchmarking and access to updated scorecards, while North West London CLAHRC and the London Cardiac and Stroke Networks formally evaluate their programmes and publish results. PatientsLikeMe is based on members' desire to share their experience voluntarily. Macmillan gathers intelligence from a wide array of formal and informal sources, including feedback from members, staff and service users to help develop service improvements or campaigns. Doctors.net.uk offers a range of incentives for members to take part in surveys and other research, as

well as providing forums for more informal knowledge sharing. Each of the networks in the case studies has successfully spread new ideas and practices through discussion and experimentation.

However, collective intelligence and transparency can overwhelm a network or be misrepresented outside it. Knowledge-sharing platforms can become blocked with superfluous, unhelpful or irrelevant content, or be dominated by a few who may divert the agenda to their own interests. Networks need to be aware of data sensitivity, especially if taken out of context.

Community building

Networks are able to build a community that fosters cooperation and trust among members, encouraging ongoing participation and commitment. Disagreements can help the network achieve change, where engagement and participation have been actively sought.

Case study networks said...

‘What we are trying to do as a network is provide informal events and networks where people can meet if they are part of a project but also if they are not.’

North West London CLAHRC

‘Networks operate on the level of intangibles – the relationships.’

London Cardiac and Stroke Networks

‘Invest in the relationships – if you’re going to be successful, each of the members needs to feel that the network is adding value for them.’

AQuA

‘The mavericks challenge opinion, so they’re needed in the community but you need a service user voice to ground it.’

Macmillan

Building a community around a shared purpose enhances ‘social capital’ – the benefit derived when individuals and groups cooperate. Investing in social capital is essential when navigating turbulent and volatile environments. Social ties can

also contribute by yielding people with information not available via more traditional routes and exerting influence that may be critical in decision making. Social ties may also reinforce identity, ‘worthiness’ and recognition. Almost everyone interviewed described relationships as essential to any improvement initiative and strongly believed this made them successful in driving change.

For patients, a sense of community belonging can have a positive impact on health and ability to cope with their condition. Research suggests that for some groups – particularly those with conditions affecting social relationships and quality of life – online communities can support self-management and improve patient experience.

Some of the networks studied encouraged personal and social contact more explicitly than others. Macmillan networks rely heavily on personal contact so that people feel safe to share personal experiences: coffee mornings provide an informal social context for meetings. North West London CLAHRC used training events and project team meetings as it built improvement networks. The London Cardiac and Stroke Networks did not appear to formally incorporate personal contact outside regular meetings, yet every network director interviewed visited hospitals to get to know clinicians and teams affected by reconfiguration, and found these interactions invaluable in making progress. Networks that operate entirely online can also flourish through personal relationships. PatientsLikeMe members share personal details about managing symptoms or side effects and establish online dialogue with others for support.

However, relying entirely on personal relationships may foster resistance or dissent. Resistance can be beneficial if it leads to engagement and participation rather than forced change. But while tensions between members may initially stimulate discussion, sustained personal attacks or antagonistic behaviour will impede progress as members disconnect. This can escalate until the network no longer functions, particularly if it involves core members or change agents. Therefore networks should remain alert to adverse shifts in members’ attitudes and behaviour.

4

Practical steps for creating successful networks

For anyone building a new network, the 5C wheel can help ensure they have the architecture and tools needed for success. It can also be used as a diagnostic tool to assess a network's 'health' as members strive to improve quality and encourage learning and change. The 5C wheel can identify causes of problems in a struggling network. And for those in relatively successful networks, it can highlight strengths and areas for improvement.

A network's success is the extent to which network members effectively achieve their common purpose. As discussed in Chapter 3, this purpose gives the network focus and direction, while the other features combine to enable success to be achieved. Based on its analysis of the case studies, the review team identified several steps to securing these features essential to a network's success.

Articulating a clear common purpose

A clearly defined and articulated common purpose is the starting point for any quality improvement network. A network's common purpose should unite members regardless of individual rank or organisational affiliation, and the purpose should resonate with members and encourage engagement. The common purpose should be reflected in a network's mission and widely communicated so that all members are aware of why the network exists and what it hopes to achieve.

The rest of this section looks at the steps identified by the review team to help networks build on their common purpose and secure the core features necessary for success.

Developing a cooperative structure

Step 1: Determine the appropriate leadership model

The network must consider suitable leaders to spearhead its activities. They should be well connected, credible and believe passionately in the case for change. Leaders in the case study networks were collaborative, accessible and engaged, acting as 'facilitators' rather than traditional 'bosses'. Some networks, on the other hand, have a clearly designated individual at their head.

Although strong and visible leadership is important, not all power needs to be invested in one person. In the London Cardiac and Stroke Networks, a charismatic figurehead coexists with more distributed leadership. Professor Anthony Rudd, consultant stroke physician at Guy's and St Thomas' NHS Foundation Trust, was chosen to lead the network because of his clinical credibility. Alongside him, directors for the sub-regional networks led local implementation, while clinical leads and individual service providers were encouraged to work collaboratively to improve care.

Step 2: Consider sources of revenue, income and non-monetary resources

The network must look into start-up capital and other resource needs. First it should decide whether to operate on a for-profit or non-profit basis, and whether membership will be free. Funding levels will depend on the network's operational model, purpose, scope and size. Other resources may include facilities, equipment and technology. All networks need 'unpaid' support, including members' time. Funding may prove hard

to secure, but networks can use their independence and cross-organisational position to appeal to various sources. For some it may be important to retain independence by not aligning heavily with a single source.

We recognise that the networks included in the case studies all had significant financial backing, which is not necessarily the norm for smaller quality improvement networks. Data from the Health Foundation's Supporting Networks programme demonstrates that networks do not run 'for free', and all rely on 'discretionary effort'. Commercial and charitable networks often identify multiple revenue sources for independence and flexibility. Doctors.net.uk received start-up funding from two private individuals. They generate ongoing income from allowing paying parties to research doctors' opinions, market products and services and interact with members. PatientsLikeMe sells members' data to partners in industry, academe and research. Although not for profit, Macmillan receives voluntary donations so must promote its brand and ensure wide appeal.

In contrast, many NHS or health system networks rely on a single funding source, and consequently their survival and scope is not wholly self-determined. North West London CLAHRC has core funding for a defined period. AQuA relies mainly on membership fees. The NHS Future Forum had limited funding but used resources from contributor organisations and relied on individuals giving up their time to participate in its activities.

Step 3: Identify relevant stakeholders

Networks must seek and engage stakeholders, involving appropriate individuals and organisations in design and development around the common purpose. In some cases this will be well-connected individuals or potential funders; others will welcome dissenters who challenge and thereby improve the network.

AQuA's initial stakeholders included NHS chief executives across the north west who had previously collaborated on regional improvement initiatives. They sought support from the then strategic health authority and local commissioners, ensuring broad regional

engagement. The London Cardiac and Stroke Networks included critics of the new service delivery model: involving people from the outset who were personally and professionally disappointed with the consultation's outcome was crucial to successful reconfiguration. Doctors.net.uk was initially unsuccessful in engaging stakeholders, with the Department of Health sceptical about an online professional network. Securing endorsements from the General Medical Council and the Medical Protection Society was crucial in attracting members.

Step 4: Encourage co-creation of the network

Members must be encouraged to contribute to the network's development. This helps ensure it meets their needs and prevents any single participant or organisation dominating. However, it also highlights how 'loose' and 'fuzzy' network structures are.

PatientsLikeMe allows members to organise around different conditions, leaving them free to choose what information they share and which members they connect with. AQuA creates opportunities for peer-to-peer learning and communication to ensure all members have the opportunity to shape the network in a way relevant for them. Macmillan supports individuals to create and develop patient groups, with involvement and support from Macmillan staff as required.

Step 5: Coach members

New members should be aware of the expected level of commitment, the nature of their participation and effective ways of communicating and interacting among members. Existing members should be reminded of their network's inclusive nature and how best to involve new members. 'Training' existing members in this can foster their cooperation: through continuing to feel valued and recognising that new members have something to offer.

Macmillan provides training sessions to enable patients to work effectively in communities, encouraging 'experienced' patients to train newer members. North West London CLAHRC runs a patient involvement

course, which has enabled patients to chair groups including health and wellbeing boards. PatientsLikeMe offers guidelines on sharing data and interacting with others online. Doctors.net.uk's forum moderators ensure participation remains collaborative and respectful.

Building critical mass

Step 1: Create a clear and compelling value proposition

The network must offer something unique that members need and value. This may be founded on prestige, but more often is based on personal and professional development opportunities. Doctors.net.uk exploited 'first mover advantage' in the 1990s by offering UK doctors a free professionally defined email account and online portal. PatientsLikeMe was one of the first networks specifically for patients with rare long-term conditions. Now, by offering patients a chance to contribute to research in a much broader and more open sense than traditional clinical trial participation, it satisfies a previously little-expressed or understood demand. Macmillan aims to fill gaps in a crowded field, identifying unmet need and facilitating the emergence of 'communities of influence' focused on tackling specific issues.

Step 2: Define an effective engagement strategy

Potential members must be sought out and told the network exists, but also why it has been created, what participation will involve, how to get involved and what the benefits will be.

Commercial networks put significant effort into marketing, often with limited resources. PatientsLikeMe sought mass media coverage supplemented with postings in existing, popular patient forums. Doctors.net.uk identified early on that medical students were especially receptive to its offering.

Among the non-commercial networks, North West London CLAHRC held open meetings. Macmillan uses creative advertising to promote its brand. The NHS Future Forum used social media. Word of mouth is the most important channel for many smaller networks,

followed by tailored and sustained persuasion. For many networks, external sponsorship and partnerships are critical to build trust, credibility and followership. AQUA has formed partnerships with healthcare think tanks such as the King's Fund, increasing its visibility.

Step 3: Leverage the founding mandate or external sponsorship

Most networks use a founding mandate or external sponsorship to get off the ground. The NHS Future Forum used its connections with the prime minister to communicate messages, galvanise resources and convince participants it could influence policy. The London Cardiac and Stroke Networks used their mandate from the strategic health authority to bring together previously independent and unconnected stroke care professionals.

Networks without a strong mandate can succeed if they make best use of other power sources. Macmillan's Cancer Voices combined the value of compelling personal stories with the Macmillan brand to open doors. The review found that external endorsement was considered the most important factor in a network successfully 'making stuff happen'.

Step 4: Proactively search for members

To achieve critical mass, networks look for participants who have a lot to offer but may not be immediately obvious. Many successful networks reach beyond the 'usual suspects' to under-served or marginalised groups – whether professionals or patients. For example, Macmillan primary care networks and involvement coordinators actively search for those who may benefit from being involved. Networks may attempt to recruit mavericks, sceptics and dissenters. Some of the case study leaders described how they sought dissenting views. This contributes to learning by increasing potential for innovative and disruptive ideas, and reducing the risk of 'group think'.

Recruiting well-connected individuals can accelerate network growth. The NHS Future Forum's members were selected for their reputation and 'hyper-connectedness', as well as personal and organisational credibility.

Step 5: Cultivate change agents within the membership

Engagement and participation in any network will vary between members and over time. Many networks cultivate a cadre of highly committed and well-connected members to act as local champions and drive change by role modelling. They create and sustain momentum, keeping others on track through their credibility and powers of persuasion and engagement.

Macmillan's primary care network uses semi-formal criteria to identify GPs to act as change agents — these include tenure, demonstrated interest in quality improvement and a successful history of spreading innovation. Doctors.net.uk identifies the most frequent users of its clinical forums and offers them roles as forum moderators. AQuA associates work as 'change champions', often acting as clinical leads to spearhead improvement efforts.

Maximising the benefit of collective intelligence

Step 1: Provide infrastructure for people to share data and experience

The network should incorporate a forum that is easy and convenient for all to use. Stakeholders suggest this is the most important step in developing collective intelligence. Several networks rely on regular face-to-face events, varying in style according to network type and objective. The London Cardiac and Stroke Networks have monthly minuted meetings in each sector. Macmillan's primary care network has an annual conference to showcase examples of improvement. Others invested in technology. AQuA has a bespoke member portal for viewing data, intelligence, information and discussion threads. Mainstream social media platforms are emerging as a powerful enabler of networking: Macmillan is active on Facebook and the NHS Future Forum used Twitter.

But investment in technology offers no guarantees for gathering collective intelligence. PatientsLikeMe deliberated over whether a generic platform and expansion to other disease profiles would detract from

its strategic objectives. Doctors.net.uk says extremely proactive content generation is essential to ensure repeat visits. Networks must offer sufficient incentive to make people want to use such platforms often enough to generate content that time-poor members want to read and contribute to.

Step 2: Promote transparency

A network should be a safe place where people can be open about their progress – both successes and failures – and sharing data, thoughts or experiences. This must be for improvement, not performance management. Network leaders should reinforce the message that collaboration is for learning rather than judgement; moderating content development and participation to avoid loss of trust, negative member experience or perverse incentives not to contribute.

Step 3: Facilitate discussion, experimentation and innovation

Simply providing people with an opportunity to talk to each other will not deliver progress – a network should stimulate debate and experimentation. Network leaders may have to facilitate discussions to overcome initial inertia, focusing debate on improvement objectives. Stakeholders say this takes effort and is rarely self-perpetuating.

Agreeing action plans on how to move to the next stage of a project is one means; exchanging suggestions or case studies more informally may suit some better. All this is more difficult when limited to an online platform. To encourage members to log on, Doctors.net.uk sends weekly emails customised to user profiles with messages members might find useful. Its medical leadership increased usage by identifying opportunities in discussion forums that were worthy of wider coverage: they used these to develop provocative blogs or targeted member surveys.

Step 4: Define and quantify network impact

Demonstrating impact helps members see a return on their efforts, encouraging further contributions. Many network leaders and participants say they find this difficult.

Networks should consider what they need to create impact and how they can measure it. This may include rapid growth, rapid diffusion, connecting individuals, providing resilience in turbulent times and adapting more easily to change.

It is worth considering whether speed, spread or depth of insight is most critical to the improvement initiative. Doctors.net.uk was set up as a profit-making business – only possible with rapid uptake. Speed and spread were most important, achieved by proactively managing content generation. With sufficient critical mass, members generated their own content, further enhancing the value proposition. For Macmillan, spread is paramount, so it invests in multiple local networks to achieve it.

Judging any improvement programme's impact is not straightforward. In many of the case studies it is possible to see change, but not always to attribute it to the network. After reconfiguration of London's stroke services, deaths among stroke patients fell by 12%. The NHS Future Forum resulted in multiple changes to the Health and Social Care Bill. But it is less clear how each change can be attributed to the network's components, although all interviewees described the breadth and depth of connectivity between members needed for each to work.

North West London CLAHRC attracted high-quality applications for improvement projects by networking with highly motivated clinicians and organisations, and generating publicity. This directly contributed to its extensive academic output. PatientsLikeMe has accelerated medical research, influenced evidence-based practice and improved patient outcomes – for example, by showing lithium is ineffective in treating motor neurone disease (amyotrophic lateral sclerosis). A study assessing its epilepsy community found members' perceived benefits of being part of the network included better understanding of their condition, greater control over it, fewer side effects, improved adherence and better quality of life. The number of perceived benefits correlated with the number of relationships patients had with others in the community.

Building a meaningful sense of community

Step 1: Facilitate personal contact where possible, including social interaction

To encourage connections that generate social capital, networks should offer people a way to meet in person wherever possible. This includes opportunities to socialise, however briefly, so connections can be cultivated outside work to build meaningful relationships.

Some case studies were more explicit in this than others. Several Macmillan networks rely heavily on personal contact to enable people to feel safe enough to share personal experiences. Face-to-face contact is not always possible or necessary, but this should not impede a network from encouraging personal contact.

Step 2: Create opportunities for focused interaction on specific topics

Allowing smaller groups to form within the community encourages members to engage on issues that preoccupy them without disengaging those less interested. All the case studies did this. PatientsLikeMe groups patients by disease type, as well as by medications or symptoms. North West London CLAHRC formed micro-networks within communities hosting improvement project teams, as expecting the entire CLAHRC to review and manage each project would have been cumbersome and time-consuming. AQuA provides programmes tailored to specific participants, including acute hospitals, board members and clinical leaders. The NHS Future Forum formed groups around key themes after wider stakeholder input.

Step 3: Create opportunities for focused interaction by smaller peer-based sub-groups

Sometimes there is power in allowing smaller groups to work together as long as they remain aligned with the overall purpose. Individuals who strongly relate to each other can learn together and may feel more comfortable sharing information.

A photo taken by an anaesthetist of a faulty piece of equipment — that had almost caused a patient incident — and posted in a Doctors.net.uk clinical forum alerted other anaesthetists and helped prevent potential harm. The London Cardiac and Stroke Networks ensured professional groups could meet each other and arrange events specific to their roles – especially important as reconfiguration shifted from acute hospitals into rehabilitation, where allied health professionals are often poorly networked.

But sub-groups that form more covertly may make the community less cohesive rather than better informed. Those that result from disagreement, mistrust or personal conflict are destructive and can become difficult to eradicate if not managed proactively. Unity can be cultivated by getting sub-groups to feed back to the wider group. AQuA ensures that evidence, intelligence and learning accumulated across the network is gathered centrally and made accessible to all members. The London Cardiac and Stroke Networks organise meetings for professional groups then circulate newsletters and update websites on their activities.

5

Conclusion

Unusually, the Networks Supporting Improvement review looked at a diverse range of networks rather than focusing on one type. This enabled the researchers to extract common features and investigate why they were important. The review broke new ground in other ways: it examined more nuanced and elusive network effects rather than concentrating on theoretical or operational aspects, and found how important social media were to all the networks it investigated. Even where no formal network structure existed, the researchers found network benefits could be created and felt, so networks that evolve informally can also have an important role in quality improvement. Finally, it became apparent how highly members valued networks because of indirect effects such as enhancing social connectedness or reducing personal risk.

Effective networks have five core features that add value to quality improvement. This '5C wheel' is a vital tool for ensuring that networks are designed and run in line with what works best. And once a network is up and running, the 5C wheel can be used to assess its health, identify causes of problems if it is struggling, or highlight strengths and areas for improvement.

Successful networks have a clear direction, credibility, scale and reach. They enhance knowledge and encourage innovation while creating meaningful relationships. Networks can focus energy and momentum directly and exclusively on quality improvement, unlike many other types of organisation. They can provide a neutral environment where people from different organisations, disciplines and constituencies – including patients and service users – can connect and collaborate on an equal footing.

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