

NETWORKS TO SUPPORT EVIDENCE IMPLEMENTATION

What are networks?

There are many definitions and interpretations of the term 'networks'. In all networks the key components are individuals or organisations, brought together by a common objective and interaction. Networks can link across traditional organisational and professional boundaries, and are distinct from conventional organisational forms such as teams and departments.

There are many types of networks. In a review of literature across a range of sectors, the three main network types identified were formalised 'hierarchies', flat 'enclaves' and 'individualistic' one on one affiliations.⁽¹⁾ Box 1 outlines some of the different network terms and models relevant to healthcare.

There is no single ideal network format. Networks generally evolve, or are developed, as hybrids of different network types⁽¹⁾ varying in attributes such as:

- Area of interest
- Types of activity and outputs
- Complexity of structure and degree of hierarchy and formality
- Size
- Leadership, decision making processes and autonomy of members
- Diversity of members
- Extent and frequency of connections between members
- Durability and duration of existence.

Box 1: Network models⁽²⁻⁴⁾

Communities of Practice

Communities of practice are 'groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly'.⁽⁵⁾ Communities of practice are a type of informal 'enclave' network. Members are individuals (rather than organisations) whose participation is voluntary and often transient. The concept has developed into a set of principles used to aid knowledge sharing and learning within and across organisations in a range of industries. Well-publicised examples include the United States Army, IBM and Xerox. The National Institute of Clinical Studies (NICS) has developed a community of practice in emergency care (see www.nicsl.com.au).

Knowledge networks

Knowledge networks are groups of 'experts' who work together on a common concern to strengthen each other's capacity, to share knowledge, to create knowledge and to develop solutions. Knowledge networks are a type of 'hierarchical' network, more structured than communities of practice, with more formalised communication and governance. Examples of knowledge networks include many medical associations and the Health Roundtable.

Service coordination networks

Service coordination networks are made up of health organisations, rather than individuals, linked into generally non-voluntary management groups, with an overarching administrative structure. These 'hierarchical' networks typically focus on integration and coordination of clinical services, centred on a specific disease, speciality, patient group or a geographical region. Examples include Australian state area health services, and clinical networks such as the recently established Cancer and Palliative Care Network in Western Australia.

Information networks

Information dissemination services are often called 'networks'. These services include websites, newsletters or databases that provide information, but generally have no other interaction between members or users. Examples include information databases like the Victorian Clinicians Health Channel or New South Wales' Clinical Information Access Program.

Networks and evidence implementation

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Networks have gained interest in health care as a way of engaging health professionals in 'bottom up' approaches to influencing day to day decision-making in care delivery.⁽⁶⁾ Networks that aim to improve the use of evidence in practice or the quality of care range from established networks that have evolved from research or other activities, to those established specifically for a short time such as quality improvement breakthrough collaboratives.⁽⁷⁻¹²⁾ Many clinician-led networks collect data on aspects of the quality of care members deliver and share this information between members, but have not moved into other active implementation strategies.

The success of a network in improving use of evidence in practice may depend on a number of factors including the strategies the network applies, the topic, the setting and local context issues,⁽¹³⁾ as well as the processes of the network itself. Most of the published information on evidence implementation networks comes from case studies, and there are few quantitative studies examining the influence of networks, or attributes of networks, on evidence use. Often, trials of evidence implementation involving networks of services or health professionals don't include the network itself in interpretation of the effect of the evidence implementation strategy and many papers don't include information about the network in their published details.

A few programs have studied the effect of organisations' participation in a network on the quality of care compared to non-network 'controls'. For example, Laliberte found positive effects of involvement in research networks on compliance with guidelines in early stage breast cancer treatment, when compared with non-participation.⁽⁸⁾ Ray-Coquard found that a guideline implementation program including audit and opinion leader-led meetings was successful in improving guideline compliance in a voluntary network of cancer services, in comparison to non-network services.⁽¹¹⁾

A much wider body of information is available about how networks relate to information diffusion, learning and innovation, from both healthcare and organisational perspectives,^(3, 13, 14) and on the strategies for, and barriers and enablers to, evidence implementation generally. Together, these sources suggest potential benefits and effective approaches for networks in evidence implementation. Box 2 outlines components of networks and network success relevant to evidence implementation.

Box 2: Components of networks relevant to evidence implementation

Concept	Explanation
'Social' influences on individual health professionals	Relationships are the key component of networks. Peers and professional social networks have strong influence on individuals' values and standards. Peers are a source of information for health professionals that comes with a level of credibility that can influence acceptance of that information and the final decision to change practice. ^(13, 15, 16) Social exchange allows better exchange of tacit 'how to' information that is not easily written, such as experience in changing practice. ⁽¹³⁾
Peer comparison: benchmarking and 'norms'	The degree to which an individual's or an organisation's peers have adopted an innovation or practice can influence change towards the perceived 'norm'. ⁽¹³⁾ Auditing of practice and/or outcomes allows comparison between organisations or individuals. Audit and feedback can be effective in improving use of guidelines. ⁽¹⁷⁾
Leadership and champions	Leadership in health organisations can affect the quality of patient care, ⁽¹⁸⁾ and opinion leaders as a strategy for evidence implementation have mixed, but frequently positive, results. ⁽¹⁹⁾ Networks can involve and make use of opinion leaders within their membership to help influence change.

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Linking across professional boundaries	Many traditional health networks (e.g. colleges) are uni-disciplinary, but processes in health care delivery often require multidisciplinary interaction. Networks that link across disciplines and include the full range of professional stakeholders have the potential to establish common language between groups, improve transfer of information and build trust between disciplines. ⁽²⁰⁾ Multi-professional networks include a diversity of opinions and can avoid 'collective blindness' from over-convergence of views. ⁽²¹⁾
Mutual support, in-kind support, trust	Reciprocal assistance, the willingness of members to do a favour for another member, and in return receive, can be a feature of voluntary networks. ⁽²²⁾ The experience of working together builds trust, which in turn builds willingness to collaborate. ⁽²¹⁾
Knowledge dissemination	Networks help improve diffusion of information between individuals and the organisations they work at, allowing sharing of information across organisations and locations, ⁽¹³⁾ and can help in raising awareness about specific evidence or the need to improve a specific practice.
Efficiencies created by sharing	Networks provide opportunities to share resources between organisations (e.g. clinical policies), reduce duplication of effort and obtain better impact from limited resources. Networks can build on existing infrastructure to help reduce set-up costs.
Flexibility	Networks can be flexible in focus and activities, allowing local tailoring of different approaches to changing practice, and adaptation in response to external pressures.
Leverage, creating motivation	Networks can provide a joint focus for improvement efforts, create 'bottom up' momentum for members, and a weight of influence to gain support of affected clinicians or organisational managers. ⁽²³⁾
Leading consensus, deliberation	Networks can provide a forum for discussion about the priorities for evidence implementation and opportunities for consensus on recommended practice. This process can make explicit the degree of agreement between members, helping to influence others not yet committed.

Challenges and success factors for evidence implementation networks

Networks undertaking complex work are likely to need some sort of governance, leadership and central structure to coordinate work, and to maintain direction and momentum. However, less formal structures offer benefits of better trust and information sharing, engagement of members, openness and flexibility. Over-managed structures may impede evidence implementation, for example Addicott suggests that the focus on organisational restructuring and meeting obligatory targets impeded knowledge sharing in NHS cancer networks⁽²⁴⁾ and Bate suggests that the centrally imposed quality improvement method limited linking and exchange between organisations and the longer term achievements of the collaborative.⁽²⁵⁾

Networks can also present challenges.^(3, 21, 26) For example, coordination across organisations can introduce a range of complexities in meeting local organisational requirements, and it can be difficult to gain the recognition and time for individuals' contribution to the network. Networks require resources and the time and effort of their members, and suffer if key people drop out. Consensus and 'norms' in networks may also reinforce use of practices not recommended by best evidence.

The following considerations are likely to affect the success of evidence implementation networks:^(1-3, 21, 27)

- **Clear vision and focus** – members decide the aims of the network and agree on joint focus to work towards those aims. Members and network partners are clear about these aims.
- **Focus on relevant issues** – members are motivated by the network engaging in issues they care about or see as important and feel are likely to have impact.

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- **Incentives to participate and added benefit** – members have intrinsic and/or extrinsic incentives to participate and are aware of what they can gain by involvement.
- **Clear roles and decision-making process** – clear communication about the roles of individuals and organisations and the network processes for decision-making. Formalised contracts and agreements can help understanding.
- **Clinician leadership** – there is leadership from the clinicians within the network and a leadership style that is compatible with the values of network members. Recognised leaders can add credibility to the network.
- **Voluntary, inclusive, multidisciplinary membership** – membership includes individuals from the range of professionals groups affected by, or essential for impact on, the evidence implementation work of the network.
- **Good communication and focus on building relationships** – trust and openness built through good communication using mediums that suit member needs. Face to face meetings are especially important. Ongoing rather than sporadic communication helps build relationships.
- **Active, shared tasks** – activities build on published studies and others' experience of effective implementation strategies and the barriers and enablers to evidence implementation. Active strategies are more likely achieve change and to engage members.
- **Means of measuring** – the network has the ability to measure appropriate indicators of clinical practice and provide feedback about change in practice.
- **Resources** – participating members have available effort and time to contribute, as well as funding or in-kind support to sustain communication, coordination and activities.
- **Time** – time is allowed for the evolution and development of the network, and to build trust and relationships within the network.
- **Size** – size is matched to function and structure. Over-large networks lead to inertia and higher running costs and a network may struggle if it becomes larger than its resources can support.

NICS network program

NICS has established a program that aims to support networks to undertake networks in evidence implementation. This program provided seed funding to 11 groups to use in developing their networks and to support them in pinpointing gaps between evidence and practice in their area of care. Two of these networks – the Australian and New Zealand Neonatal Network and the Diabetes Collaborative Network – were chosen to receive further funding to work on closing the priority evidence-practice gaps they identified (see www.nicssl.com.au).

Prepared by Michaela Willet, Program Manager, NICS. September 2006.

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