CAMBRIDGE

Cambridge University Press & Assessment
978-1-009-23682-9 — Collaboration-Based Approaches
Graham Martin , Mary Dixon-Woods
Excerpt
More Information



# 1 Introduction

In this Element, we identify the potential and challenges of using collaboration-based approaches to support improvement in healthcare. We review a range of approaches, summarising some of the evidence about their role, value, and limitations. We conclude by discussing the implications for those considering using such approaches in practice. Our focus is on collaboration-based approaches led primarily by healthcare staff, since this is where much of the academic literature has focused. Some other approaches focus on the contribution of patients and carers – for example, those addressed in the Element on co-producing and co-designing.[1]

# 2 What Are Collaboration-Based Approaches?

One of the most enduring lessons of research in healthcare improvement is that improving quality requires systems for sharing knowledge, coordinating and organising activity, and encouraging cultures that are supportive of improvement. In this context, the promise of collaboration-based approaches to improvement has become a focus of increasing interest, activity, and study.[2]

Though the literature on collaboration is rapidly growing and developing, a universal definition has proven elusive. In part, this is because, as we shall see, many different collaborative forms have emerged. The unifying feature of collaboration-based approaches however is that they involve groups working together around shared improvement goals.

Another crucial feature of these approaches is that they are based on networks.[3,4] Networks are ubiquitous in everyday life – they connect parents whose children attend the same school, colleagues who share the same professional background or workplace, and people who play a team sport, for instance. Networks enable multiple forms of relationship-based exchange, allowing people, for example, to share contacts or exchange favours.[2] They have a particularly important role in the speedy and efficient exchange of knowledge,[4] including the know-how formed within a particular community. This kind of 'non-canonical'[5] knowledge (the sort that concerns how things are really done in practice) is especially valuable because it is frequently implicit or unspoken, practice-based, and often difficult to articulate or formally describe.[6] Networks are not, of course, just circuits for information exchange.[7,8] They also exert powerful effects on norms, values, and behaviour – in other words, the culture of the group involved.[9]

Though a collaboration cannot exist without a network, a network on its own does not equate to a collaboration. Networks may exist without any common mission, but collaborations are purposeful. Additional characteristics of collaborations in healthcare contexts include a commitment to cooperating and contributing in pursuit of

© in this web service Cambridge University Press & Assessment www.cambridge.org

Cambridge University Press & Assessment
978-1-009-23682-9 — Collaboration-Based Approaches
Graham Martin , Mary Dixon-Woods
Excerpt
More Information



that purpose and an ethos of learning. These features tend to foster trust and reciprocity: if a collaboration works well, it can generate a virtuous circle in which mutual benefits encourage further investment of time and effort, resulting in further benefits. We therefore offer the following definition.

> *In healthcare, a collaboration-based approach to improvement involves a network of people who come together to cooperate around a common interest, with a shared goal of improving care and mutual learning.*

In this basic formulation, collaboration-based approaches can be readily recognised as consistent with the long-standing principles and values of community that underpin the healthcare professions,[10] particularly when they are empowered to set their own rules and enforce them through peer influence.[11,12]

Several types of collaboration-based approach to healthcare improvement can be identified, ranging from informal communities of practice at one end of the spectrum through to managed clinical networks at the other, with many other forms (e.g. quality improvement collaboratives, clinical communities) somewhere in the middle. They vary in their origins, degree of formality, and exclusivity of membership, and in the methods used to achieve their goals. Although collaborations are sometimes described as professionally led[13] or bottom-up[14] improvement approaches, the degree to which they exhibit these features varies. In Section 3, we explore a small selection of the various approaches available.

## 3 A Selection of Collaboration-Based Approaches

Collaboration-based approaches to healthcare improvement vary in form and origin. Some were developed primarily in a healthcare context; others have their roots in quite different fields. They also vary in the extent to which they are focused explicitly and primarily on improving quality and patient safety, the extent to which they are naturally occurring or deliberately formed, and the formality with which they are organised and coordinated.

To illustrate this range, we describe four collaboration-based approaches: quality improvement collaboratives, managed clinical networks, communities of practice, and clinical communities. These approaches are not exhaustive. They are chosen because they vary in how much they tend towards control, self-organisation, and professional ownership.

### 3.1 Quality Improvement Collaboratives

Some collaboration-based approaches are highly organised, featuring an extensive and well-documented infrastructure, prescriptions for organisation, and specified activities, events for interaction, and timetables. Among the most

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-009-23682-9 — Collaboration-Based Approaches
Graham Martin , Mary Dixon-Woods
Excerpt
More Information



prominent and best-known examples of this kind of approach are quality improvement collaboratives.

Collaboratives typically focus on a specific clinical topic (such as a presenting condition, pathway, or intervention) – often one in which large variations in care or gaps between current and best practice are known to exist. They involve creating a network of people from several organisations (or occasionally within organisations) and multi-professional teams around defined improvement goals. A core group or faculty works on periodically convening members of the network, coordinating its members, establishing shared goals, and providing infrastructural support, such as a database or registry to which participants submit data, using indicators with standardised definitions and methodologies.[15,16] Participating sites receive feedback, usually benchmarked against other sites, and attend face-to-face or virtual meetings to discuss progress and identify interventions that might be used to support improvement. These features, while typical, are not invariable: quality improvement collaboratives take many different forms.

### *3.1.1 Growth of Collaboratives in North America*

Some of the early collaboratives originated in North America.[15] An important example is the Vermont Oxford Network.[17] This not-for-profit organisation was established in the late 1980s to improve the quality and safety of care for newborn infants and families through a coordinated programme of research, education, and quality improvement. Now involving more than 1,200 hospitals worldwide (including around 800 in the USA), it is organised around a network of healthcare professionals who work together as an interdisciplinary community. All members of the network contribute data to high-quality databases on interventions and outcomes for infants under their care. Key to the approach is the use of uniform and standardised definitions for data collection. Members are given detailed, confidential, risk-adjusted reports that allow them to track their data over time and measure the performance of their unit against others.

The Vermont Oxford Network has much in common with another well-known collaborative: the Northern New England Cardiovascular Disease Study Group, also founded in the late 1980s. A voluntary consortium, it initially focused on hospitals across three US states that were seeking to improve outcomes of coronary artery bypass graft surgery. By gathering standardised data from all hospitals, the collaborative identified variations in mortality after surgery that could not be explained by case-mix. It undertook a three-component improvement programme, which involved giving benchmarked performance feedback to participating centres, training courses in continuous quality improvement, and team-based visits to all sites.[18]

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE
Cambridge University Press & Assessment
978-1-009-23682-9 — Collaboration-Based Approaches
Graham Martin , Mary Dixon-Woods
Excerpt
More Information



A similar, though somewhat later, movement took place in the US state of Michigan in 1997. Hospitals began to work with Blue Cross Blue Shield of Michigan (a health insurer), which owns the Blue Care Network (a health maintenance organisation), to study variation in outcomes of angioplasty services. By 2004, Blue Cross Blue Shield of Michigan was investing in statewide quality improvement initiatives in a variety of clinical specialties. The Michigan collaboratives are now a large-scale enterprise, involving programmes across several different clinical fields (Box 1). All the programmes use clinical registries, with hospitals and clinicians submitting data and receiving feedback on their performance from their registry coordinating centre. Participating healthcare organisations convene to interpret and review their data, often focusing on variations. Best practices are identified and implemented across regions.[19]

Several of these kinds of large, often statewide collaborative have endured over time, with many – perhaps crucially – distinguished by their commitment

**Box 1 The Michigan collaboratives' programmes**

The Michigan collaboratives' programmes have reported some striking improvements in the quality and safety of healthcare services, sometimes outperforming both secular trends and improvements made by other improvement programmes. One example is the Michigan Surgical Quality Collaborative. Focusing on general and vascular surgery, it is the largest and most mature of the Michigan collaboratives. Between 2005 and 2009, participating hospitals reduced risk-adjusted morbidity rates (the primary outcome measure of the American College of Surgeons' National Surgical Quality Improvement Program, NSQIP) from 13.1% to 10.5%, outperforming results achieved by participants in NSQIP.[19]

The Michigan Bariatric Surgery Collaborative has also produced impressive improvements, including a reduction in the overall rate of perioperative complications among participating hospitals from 8.7% to 6.6% in the first two years of the programme (2007–09).[19] More recently, in 2012–14, the Michigan Urological Surgery Improvement Collaborative achieved a 53% reduction in infection-related hospital admissions following transrectal prostate biopsy, among participating hospitals.[20]

Key to these collaboratives' achievements seems to be the use of high-quality, clinically relevant data; site visits; collaborative learning; treating practice variation between hospitals as natural experiments in what works and what doesn't; rapid and robust assessments of relationships between process changes and outcomes; and improvements in safety culture associated with peer-norming effects.[19]

© in this web service Cambridge University Press & Assessment www.cambridge.org

CAMBRIDGE

Cambridge University Press & Assessment
978-1-009-23682-9 — Collaboration-Based Approaches
Graham Martin , Mary Dixon-Woods
Excerpt
More Information



to research as well as to quality improvement. The Vermont Oxford Network, now over 30 years in existence, continues to meet three times a year. As well as supporting quality improvement, it uses its platform to conduct observational studies, intervention studies, and research on the role of differences in the structure and organisation of units in explaining patient outcomes.[21] By so doing, it has made a substantial contribution to the evidence base for neonatal care. The Northern New England Cardiovascular Disease Study Group remains similarly active. The Michigan collaboratives' programmes, though newer, continue to thrive, with large numbers of published studies.

A rather different, though very popular, model of a collaborative is the more time-limited, topic-specific approach offered by the Institute for Healthcare Improvement's (IHI) Breakthrough Series. Conceived by the IHI's founders in 1994, a Breakthrough Series collaborative is time-bound (often in the range of 6–15 months) and usually involves three face-to-face learning sessions between participants drawn from several organisations. Central to the theory of change – the assumptions about how its activities will give rise to the intended outcomes (see the Element on evaluation[22]) – is that those involved must have a clear objective, a clear means of measuring whether that objective has been achieved, and a notion of what is needed to make that change happen. Box 2 summarises the blueprint for running a Breakthrough Series collaborative.[24] The detailed blueprint includes recommendations about the numbers of organisations and individuals that should be involved, the timing of meetings, the relationship to other improvement methods (such as the IHI's Model for Improvement), the role of expert faculty in guiding improvement, and the intended outputs and outcomes.[24] Various how-to guides are available.[25,26]

Box 2 Key elements of the IHI's Breakthrough Series collaborative approach

(1) **Topic selection:** the topic should be ripe for improvement efforts: for example, there may be a demonstrable gap between evidence and its use in practice that has important consequences for patients and that is tractable to improvement.
(2) **Faculty:** as part of the package of support available to organisations, 5–15 experts in relevant disciplines, including those with improvement expertise, are asked by the collaborative's convenors to form a faculty of subject matter experts and individual clinicians. The faculty develops content for the collaborative – for example, aims, measurement strategies, and the evidence-based changes to be implemented.

© in this web service Cambridge University Press & Assessment www.cambridge.org