

Scottish School of Primary Care

GP Clusters

Briefing

Paper 12



Collaborative Quality Improvement in General Practice Clusters

Adrian Rohrbasser
GP in Switzerland, MSc, PhD
student Oxford University

adrian.rohrbasser@kellogg.ox.ac.uk

Bruce Guthrie, Professor of Primary
Care Medicine, Dundee University, GP, Hon-
orary Consultant NHS Fife
B.Guthrie@dundee.ac.uk

John Gillies OBE, Deputy Director of the
SSPC, Honorary Professor Department of General
Practice, Population Health Sciences, and Senior
Advisor Global Health Academy, University of Edin-
burgh jgillies@exseed.ed.ac.uk

Stewart Mercer, Director of SSPC, Professor of
Primary Care Research, University of Glasgow, GP and
Honorary Consultant NHS Greater Glasgow and Clyde
Stewart.mercer@glasgow.ac.uk

Scottish School of Primary Care
General Practice & Primary Care,
Institute of Health & Wellbeing,
College of MVLS,
University of Glasgow,
1 Horselethill Road,
GLASGOW G12 9LX
Email: info@sspc.ac.uk

 **SSPC_News**
www.sspc.ac.uk



Collaborative Quality Improvement in General Practice Clusters

This paper is the twelfth in a series that relates to areas of quality and safety on which general practice clusters could usefully focus improvement activity. Each paper summarises research, guidelines and other evidence about areas of care which can be improved, and improvement methods and interventions.

How to run a successful GP Cluster

Many European countries have used Quality Circles (QCs) as a way of creating collaborative improvement in primary care¹⁻⁶. QCs are usually defined as being small groups of 6 to 12 professionals from the same background (often GPs), who meet at regular intervals to consider their standard practice^{7,8}. The groups provide a social context for reflective thinking to improve clinical practice at the workplaces of the participants. The focus of discussion is usually a critical evaluation of an aspect of quality which participants themselves identify as important to them. There is much that GP Cluster leads, and cluster participants, can learn from the experience of QCs in Europe and this paper describes what is known about quality circles from the published literature.

How to run a successful GP Cluster: learning from Quality Circles

The Task

Quality improvement (QI) can be understood as an organised and data-guided activity which brings about positive change in the delivery of care. It can address system-wide problems, but often focuses on local ways of working which clinicians perceive to be inefficient, harmful or badly-timed^{9,10}. QI in primary health care is complex, since it depends on scientific progress, social and cultural changes, and economic contexts, all of which influence and modify each other¹¹.

The effect of Quality Circles: evidence base

Numerous studies suggest that QCs improve individual and group performance in terms of costs, ordering of tests, prescription habits and adherence to clinical practice guidelines, resulting in better patient outcomes as measured in changes of performance indicators. For example, the number of diagnostic tests carried out can be modified by QCs encouraging GPs to pay more attention to the clinical problem and direct their test ordering towards the suspected diagnosis, instead of routinely ordering the same tests for all patients¹²⁻¹⁴. Multifaceted programmes like QCs can also have an impact on prescribing habits¹⁵⁻²¹ and the quality of chronic disease management such as for people with

diabetes²². Many QC programmes use several types of intervention which are known to be generally effective to positively change the behaviour of practitioners, including educational material, workshops, audit and feedback with or without outreach visits, and championing by local knowledge experts²³⁻²⁷. In practice, which of these elements is used and in what order varies but they are important tools that GP Cluster leads can and should consider using depending on their local context.

Characteristics of successful Quality Circles: evidence base

Data from various trials evaluating the impact of QCs show that it is important for the groups to follow some basic principles to be successful.

The social aspect of the group is important

Having a meal together or at least eating something together before the work starts makes social interaction easier and makes participants feel more comfortable^{28,29}. A friendly and relaxed atmosphere is vital if participants are to share sensitive information. It also drives the motivation to continue attending^{30,31}. Removing barriers, such as computer screens, and arranging tables and chairs in a circle also makes social interaction easier²⁸.

Core QI knowledge and skills matter

When starting groups which deal with QI, it is vital to introduce the basic principles of QI, such as the Plan-Do-Study-Act cycle (PDSA) and how to implement them in practice³²⁻³⁷. The impact of QCs seems to vary depending on whether new groups or already existing groups were studied in trials. Previously existing groups or groups which have met at least three or four times succeeded more often than newly formed groups or groups who only met once to change practice. Groups show a learning curve when they perform, and they improve after each cycle of QI^{13,16,38,39}.

Agreeing a topic to focus on is central

The group must have a shared understanding of the problem when they are about to start the process of QI. The topic must be relevant to everyday practice and of a manageable size. The group should agree on the need for change or at least recognise that there is a problem when they start the process. Trial results show that GPs will hardly ever change behaviour if the need for change is not obvious to them^{20,21,40}. There is a balance to be struck between central direction as to what GP Clusters should work on, and local autonomy to



decide what matters most in a particular area. collaborative working. The 'best' topic to focus on will also depend on the maturity of the group. GP Cluster leads and members might wish to initially focus on relatively simpler problems where there is clear consensus, in order to facilitate longer term collaborative working.

Agreeing how to address the topic has to balance local expertise with wider knowledge

It is vital that GPs start with their own experiences when they have chosen the topic. Discussion of personal cases increases the sense of ownership, and helps participants understand how the topic matters in the context of everyday practice. When discussing and reflecting on their own cases, GPs activate their existing ("tacit" or implicit) knowledge based on their everyday work. It is very important that tacit knowledge (which is rarely documented anywhere) becomes explicit^{30,31,41-44}. Ideally it will then often be complemented by other information that is relevant to practice, such as patient complaints, narratives, statistical data on diagnostic habits or prescription patterns, or discussion with specialists^{18,30,32,45}. The current state of practice can then be examined in relation to guidelines, educational evidence-based material, or the input of a respected local opinion leader^{20,21,30,32,34,36,46}.

Planning what to change has to balance local expertise and wider knowledge

New concepts and ideas are created when the group reflect on their own experience including discussion of individual cases, add information from other sources that illustrate their practice and then compare the current status of their practice with contemporary evidence-based educational material. As knowledge depends on perspectives, each member of the group can contribute, and a range of different views are likely to be expressed. Ideally, this range will include everything from the micro view of single patient care to the wider perspective of how the whole system works. Ideas that the group develops about how to improve care or work differently have to be justified by data from practice and evidence-based recommendations, but will sometimes (or perhaps often) have to be adjusted to local circumstances. A key function of the quality circle or GP cluster is therefore to merge knowledge based on familiarity with local context and personal experience with evidence-based knowledge.

There needs to be a discussion of the pros and cons of new ideas or ways of working, since when it comes to implementation of new ideas, it is important to address barriers that arise during discussions. Prototype plans should be debated in the group^{18,30,32,36,40,45-49}. After testing and "playing with" potential prototypes, the group may then decide to develop one or more. Participants of the group formulate possible improvements

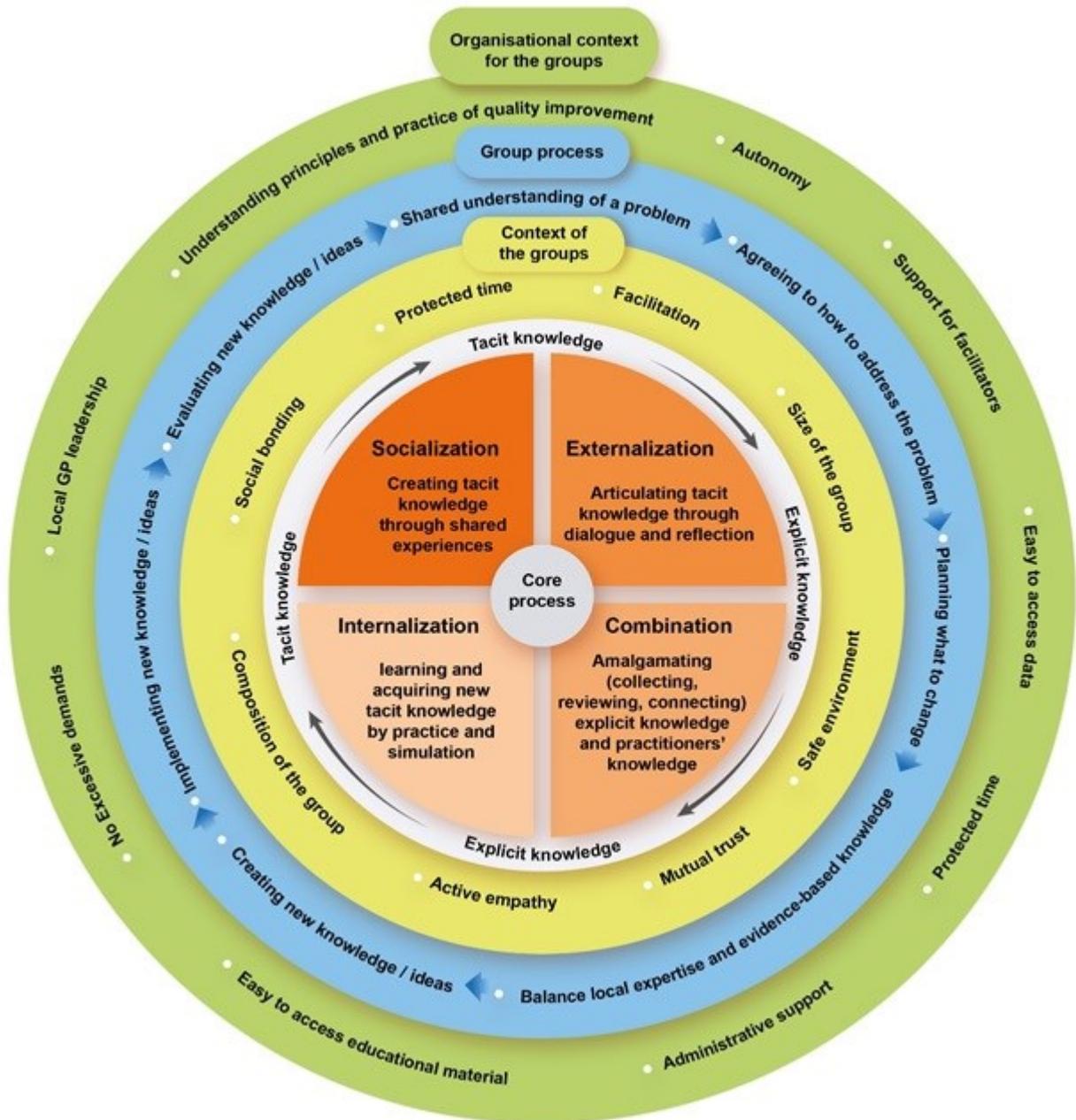
based on their own practice and decide on an action plan^{33,34,50,51}.

Facilitation is critical

The role of facilitators is key in the process of QI. Facilitators open the meetings and map the timelines. The facilitator will normally be a GP with skills in this area. They have to try to create an atmosphere of openness and trust, so participants can interact in an authentic way. Facilitators create an atmosphere where people reveal what they are thinking as they do their everyday work. They open discussions, summarise, clarify statements and question issues. They attempt to achieve a balance between comfort and an appropriate degree of tension and challenge within the group. Facilitators encourage participants to talk about their own clinical cases. They form the emotional basis of a learning atmosphere where participants can reflect on their current practice and compare it with educational, evidence-based material (EBM) such as guidelines. They assist the group in identifying factors that may hinder implementation of new ideas and innovative ways of working. This difficult task demands the abilities and skills to manage group dynamics that may not always be easy to solve. Timely identification and resolution of conflicts is one of the more difficult tasks, since disruptive groups cease working. A supportive atmosphere, a sense of collegiality and mutual trust are prerequisites for participants to openly discuss their problems and failures using their own clinical cases. Facilitators may need to help participants articulate what they want to say since it may be difficult to make implicit knowledge explicit. At the point when a participant struggles to express their thoughts, active empathy is important; this is the realisation that QC members really care for each other, even though they question each other's statements. Facilitators should close meetings on time and plan future meetings by summarising the group's progress and highlighting the goals that have been achieved^{29-31,42-44,52-55}.



The infographic below summarises the evidence-base.



Support needed by GP Clusters in Scotland in order to succeed

Support for Cluster Quality Leads

The Cluster Quality Lead's (CQL) role is so important and covers so many aspects that they should have regular opportunities for meetings with other CQLs and for further training^{29-31,42,43,52-54,56}. CQLs will also need support to access knowledge resources such as clinical practice guidelines, service delivery and organisation guidelines, or information about potential topics for QI. Leadership skills are also important in driving forward quality improvement; training places are currently available through NHS Education for Scotland. Some

suggested resources for such support are shown in Box 1 at the end.

Support to collect, compare and interpret data

Where possible, health care professionals should be actively involved in data collection so that they trust the findings^{18,29,40,57}. Local data collection to address local priorities is therefore important, but for other topics, this means Board or Scotland-wide provision of data



data on standard quality indicators to minimise the burden of data collection. The Primary Care Information (PCI) dashboards (<http://www.isdscotland.org/Health-Topics/General-Practice/Primary-Care-Information-and-TQA/>) provide a single access point for GPs and practice staff to see health care information for their GP Practice and Cluster. The information is delivered through a set of Tableau dashboards, and show comparisons at Scotland, NHS Board and Health & Social Care Partnership level. The latest PCI dashboards include measures based on secondary data sources (such as emergency admissions, outpatients and readmissions) and measures similar to QOF aimed at supporting the Transitional Quality Arrangements (TQA). At present, many of the measures are based on the ongoing collection of QOF data. In the future, the PCI dashboard will use data extracted through SPIRE (further information can be found at www.spire.scot). In addition, NHS Scotland will provide additional local support to clusters in the use and interpretation of data (<http://www.isdscotland.org/Health-Topics/Health-and-Social-Community-Care/Local-Intelligence-Support-Team/>).

Administrative support

At an organisational level, it is also important to provide protected time, which means that group work is done during regular working hours or at pre-arranged times. The process should not be disturbed by phone calls or urgent patient problems, since these disrupt discussion. Excessive demands for rapid results often destroy QI. Managers need to accept the speed that the group works at, and accept local adjustments to national 'solutions', because QI is a local process and will result in different interventions and new ways of working^{29,53-55}. There is no explicit literature on how to transfer the solutions GP Clusters develop to other regions and the solution may not fit other regions in other contexts. However, it makes sense to have a system for communication of different solutions so that CQLs can access the ongoing and earlier work of other GP Clusters.

Summary

The development of GP clusters is a major change for primary care in Scotland, following the withdrawal of the Quality and Outcomes Framework in 2016. Other aspects include current negotiations on a new GMS contract, additional clinical input from advanced nurse practitioners, pharmacists and AHPs, and the integration of health and social care. The framework for the GP cluster approach is set out in a recent BJGP editorial and collaboratively produced Scottish Government publication^{58,59}. By encouraging and enabling working between practices, and between clusters and health and social care partnerships, this aims to contribute to the conditions for 'Realising Realistic Medicine' as set

out in the Chief Medical Officer's 2015-16 report: communicate, connect, collaborate and (changing) culture⁶⁰.

In summary, to function effectively and contribute to local Quality Improvement, GP Clusters in Scotland will need the following:

- **An understanding of the principles and practice of Quality Improvement**
- **Local autonomy** to determine what topics/ clinical areas to address
- **Local GP leadership** and buy in from the clinical community
- Support to develop and use **facilitation skills** to enable the cluster to form and develop
- **Easy access to relevant local and national data**
- **Administrative support** and engagement with the health and social care partnership

Box 1. Support Resources

Scottish School of Primary Care Briefing Papers, which give GP Clusters advice on a range of topics: http://www.sspc.ac.uk/publications/briefing_papers/

Scottish Inter-Collegiate Guidelines (SIGN): <http://www.sign.ac.uk>

National Institute for Health and Care Excellence (NICE): <http://www.nice.org.uk>

NICE also have guidelines on service delivery, organisation, and staffing: <https://www.nice.org.uk/guidance/service-delivery--organisation-and-staffing>

Healthcare Improvement Scotland is developing educational and quality improvement support to embed continuous quality improvement in primary care. For further information please visit:

www.ihub.scot/gp-clusters/

Educational improvement and safety methods for primary care teams and GP clusters are available on the **NHS Education for Scotland Patient safety Zone**

<https://learn.nes.nhs.scot/685/patient-safety-zone/patient-safety-tools-and-techniques/safety-and-improvement-in-primary-care>



NES also offers collaborative leadership courses, developed with RCGP Scotland and Scottish Social Services Council:

<http://www.knowledge.scot.nhs.uk/home/portals-and-topics/leadership--management/programmes/you-as-a-collaborative-leader.aspx>

The Royal College of GPs has developed a helpful QI website which offers practical tools applicable to GP clusters:

<http://www.rcgp.org.uk/clinical-and-research/our-programmes/quality-improvement.aspx>

References

- Tross O. Qualitätszirkel als Form der Arbeitsorganisation: Planung und Gestaltung von Qualitätszirkeln als Variante der Teamarbeit in Unternehmen. München: Verlag für Akademische Texte; 2003.
- Tutorengruppe. Definition medizinischer Qualitätszirkel – ein Vernehmlassungstext Eine Neuorientierung der Empfehlungen für die medizinische Qualitätsarbeit in der Schweiz. *Primary Care* 2005; **5**(16): 370-2.
- Diel F. Qualitätszirkel. 2013. <http://www.kbv.de/themen/qualitaetszirkel.html> (accessed 05/03/2016 2016).
- Zwald E. Die ARGOMED-Qualitätszirkel. 2013. <http://www.argomed.ch/qualitaetszirkel.html> (accessed 05/03/2016 2016).
- Hockl W. Qualitätszirkel. 2016. <https://oegam.at/qualitaetsicherung-und-qualitaetszirkel> (accessed 10/02/2017 2017).
- Tutorengruppe. MFE (Haus und Kinderärzte Schweiz): Qualitätszirkel. 2016. http://www.hausaerzteschweiz.ch/fileadmin/user_upload/hausarzteschweiz/Kommissionen/Qualitaet/7c_2005-12-28_Empf_med_QZ_V41.pdf (accessed 05/03/2016 2016).
- Bahrs O. Was ist ein Qualitätszirkel. In: Bahrs O, Gerlach FM, Szecsenyi J, eds. *Ärztliche Qualitätszirkel*. 2 ed. Köln: Deutscher Ärzteverlag; 1995: 17-42.
- Greenhalg T. Part 1 Introduction. In: Elwyn G, Greenhalg T, Macfarlane F, eds.: *Radcliffe Medical Press*; 2004.
- Czabanowska K, Klemenc-Ketis Z, Potter A, et al. Development of a competency framework for quality improvement in family medicine: a qualitative study. *J Contin Educ Health Prof* 2012; **32**(3): 174-80.
- Ovretveit J, Gustafson D. Using research to inform quality programmes. *BMJ* 2003; **326**(7392): 759-61.
- Plsek PE, Greenhalg T. The challenge of complexity in health care. *BMJ : British Medical Journal* 2001; **323**(7313): 625-8.
- Verstappen WH, van der Weijden T, Sijbrandij J, et al. Effect of a practice-based strategy on test ordering performance of primary care physicians: a randomized trial. *JAMA* 2003; **289**(18): 2407-12.
- Verstappen WH, van der Weijden T, Dubois WI, et al. Improving test ordering in primary care: the added value of a small-group quality improvement strategy compared with classic feedback only. *Ann Fam Med* 2004; **2**(6): 569-75.
- Verstappen WH, van Merode F, Grimshaw J, Dubois WI, Grol RP, van der Weijden T. Comparing cost effects of two quality strategies to improve test ordering in primary care: a randomized trial. *Int J Qual Health Care* 2004; **16**(5): 391-8.
- Richards D, Toop L, Graham P. Do clinical practice education groups result in sustained change in GP prescribing? *Family Practice* 2003; **20**(2): 199-206.
- Welschen I, Kuyvenhoven MM, Hoes AW, Verheij TJ. Effectiveness of a multiple intervention to reduce antibiotic prescribing for respiratory tract symptoms in primary care: randomised controlled trial. *BMJ* 2004; **329**(7463): 431.
- Niquille A, Ruggli M, Buchmann M, Jordan D, Bugnon O. The nine-year sustained cost-containment impact of Swiss pilot physicians-pharmacists quality circles. *Annals of Pharmacotherapy* 2008; **44** (4): 650-7.
- Wensing M, Broge B, Riens B, et al. Quality circles to improve prescribing of primary care physicians. Three comparative studies. *Pharmacoepidemiology and drug safety* 2009; **18**(9): 763-9.
- Bugnon O, Jotterand S, Niquille Charriere A, Ruggli M, Herzig L. Physicians-pharmacists quality circles: Shared responsibility of the freedom of prescription. [French]
- Cercles de qualite medecins- pharmaciens, pour une responsabilite partagee de la liberte de prescription. *Revue Medicale Suisse* 2012; **8**(341): 1042-8.
- Gjelstad S, Høye S, Straand J, Brekke M, Dalen I, Lindbaek M. Improving antibiotic prescribing in acute respiratory tract infections: cluster randomised trial from Norwegian general practice (prescription peer academic detailing (Rx-PAD) study). *BMJ* 2013; **347**: f4403.
- Rognstad S, Brekke M, Fetveit A, Dalen I, Straand J. Prescription peer academic detailing to reduce inappropriate prescribing for older patients: a cluster randomised controlled trial. *Br J Gen Pract* 2013; **63** (613): e554-62.
- Stevenson K, Baker R, Farooqi A, Sorrie R, Khunti K. Features of primary health care teams associated with successful quality improvement of diabetes care: a qualitative study. *Fam Pract* 2001; **18**(1): 21-6.
- Forsetlund L, Bjørndal A, Rashidian A, et al. Continuing education meetings and workshops: effects on professional practice and health care outcomes. *Cochrane Database Syst Rev* 2009; (2): Cd003030.
- Giguere A, Legare F, Grimshaw J, et al. Printed educational materials: effects on professional practice and healthcare outcomes. *Cochrane Database Syst Rev* 2012; **10**: CD004398.
- Ivers N, Jamtvedt G, Flottorp S, et al. Audit and feedback: effects on professional practice and healthcare outcomes. *Cochrane Database of Systematic Reviews*, 2012. <http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD000259/frame.html>
- <http://onlinelibrary.wiley.com/store/10.1002/14651858.CD000259.pub3/asset/CD000259.pdf?v=1&t=hk1c20w1&s=0be8ff3421c371347cc39621440a31c8046e0a96> (accessed).
- O'Brien M, Rogers S, Jamtvedt G, et al. Educational outreach visits: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews*, 2007. <http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD000409/frame.html>
- <http://onlinelibrary.wiley.com/store/10.1002/14651858.CD000409.pub2/asset/CD000409.pdf?v=1&t=hk1ltvql&s=7526b5898b35638f25e65bcd19bb0afaa285f0fd> (accessed).
- Flodgren G, Parmelli E, Doumit G, et al. Local opinion leaders: effects on professional practice and health care outcomes. *Cochrane Database of Systematic Reviews*, 2011. <http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD000125/frame.html>
- <http://onlinelibrary.wiley.com/store/10.1002/14651858.CD000125.pub4/asset/CD000125.pdf?v=1&t=hk1jwb3k&s=6e928266e06898315ef67d0ad533f4373a965514> (accessed).
- Peloso PM, Stakiw KJ. Small-group format for continuing medical education: a report from the field. *J Contin Educ Health Prof* 2000; **20**(1): 27-32.
- Watkins C, Timm A, Goberman-Hill R, Harvey I, Haines A, Donovan J. Factors affecting feasibility and acceptability of a practice-based educational intervention to support evidence-based prescribing: a qualitative study. *Fam Pract* 2004; **21**(6): 661-9.
- Armson H, Kinzie S, Hawes D, Roder S, Wakefield J, Elmslie T. Translating learning into practice: lessons from the practice-based small group learning program. *Canadian Family Physician* 2007; **53**(9): 1477-85.
- Kelly DR, Cunningham DE, McCalister P, Cassidy J, MacVicar R. Applying evidence in practice through small-group learning: a qualitative exploration of success. *Quality in Primary Care* 2007; **15**(2): 93-9.
- Frich J, Høye S, Lindbaek M, Straand J. General practitioners and tutors' experiences with peer group academic detailing: a qualitative study. *BMC Family Practice* 2010; **11**(1): 12.

33. Geboers H, van der Horst M, Mookink H, et al. Setting up improvement projects in small scale primary care practices: feasibility of a model for continuous quality improvement. *Quality in Health Care* 1999; **8**(1): 36-42.
34. Geboers H, Mookink H, van Montfort P, van den Hoogen H, van den Bosch W, Grol R. Continuous quality improvement in small general medical practices: the attitudes of general practitioners and other practice staff. *Int J Qual Health Care* 2001; **13**(5): 391-7.
35. Engels Y, Verheijen N, Fleuren M, Mookink H, Grol R. The effect of small peer group continuous quality improvement on the clinical practice of midwives in The Netherlands. *Midwifery* 2003; **19**(4): 250-8.
36. Engels Y, van den Hombergh P, Mookink H, van den Hoogen H, van den Bosch W, Grol R. The effects of a team-based continuous quality improvement intervention on the management of primary care: a randomised controlled trial. *British Journal of General Practice* 2006; **56**(531): 781-7.
37. Weiss-Plumeyer M. Wie beginnen? In: Bahrs O, Gerlach FM, Szecsenyi J, eds. *Ärztliche Qualitätszirkel*. 2 ed. Köln: Deutscher Ärzte-Verlag; 1995: 97-108.
38. Smeele IJ, Grol RP, van Schayck CP, van den Bosch WJ, van den Hoogen HJ, Muris JW. Can small group education and peer review improve care for patients with asthma/chronic obstructive pulmonary disease? *Qual Health Care* 1999; **8**(2): 92-8.
39. Papendick H, Fessler J, Gross J. Development of medical costs in a medical network and similar groups after an intervention from quality circles. [German] Entwicklung der Arzneimittelkosten in einem Arztnetz und Vergleichsgruppen nach Intervention in Qualitätszirkeln. *Zeitschrift für ärztliche Fortbildung und Qualitätssicherung : in Zusammenarbeit mit der Kaiserin-Friedrich-Stiftung für das ärztliche Fortbildungswesen* 2006; **100**(2): 150-6.
40. Wensing M, Broge B, Kaufmann-Kolle P, Andres E, Szecsenyi J. Quality circles to improve prescribing patterns in primary medical care: what is their actual impact? *J Eval Clin Pract* 2004; **10**(3): 457-66.
41. Herbert CP, Wright JM, Maclure M, et al. Better Prescribing Project: a randomized controlled trial of the impact of case-based educational modules and personal prescribing feedback on prescribing for hypertension in primary care. *Fam Pract* 2004; **21**(5): 575-81.
42. MacVicar R, Cunningham D, Cassidy J, McCalister P, O'Rourke JG, Kelly DR. Applying evidence in practice through small group learning: A Scottish pilot of a Canadian programme. *Education for Primary Care* 2006; **17**(5): 465-72.
43. Overton GK, McCalister P, Kelly D, MacVicar R. The Practice-based Small Group Learning programme: experiences of learners in multi-professional groups. *J Interprof Care* 2009; **23**(3): 262-72.
44. Cunningham D, McCalister P, Macvicar R. Practice-based small group learning: what are the motivations to become and continue as a facilitator? A qualitative study. *Quality in Primary Care* 2011; **19**(1): 5-12.
45. Andres E, Beyer M, Schorsch B, et al. Quality circles in German ambulatory care: Results of a continuous documentation in the regions of Bremen, Saxony-Anhalt, Schleswig-Holstein and Westphalia-Lippe 1995-2007. [German] Qualitätsforderung und Qualitätszirkel aus der Sicht niedergelassener Ärztinnen und Ärzte--repräsentative Ergebnisse aus Bremen und Sachsen-Anhalt. *Zeitschrift für Evidenz, Fortbildung und Qualität im Gesundheitswesen* 2010; **104**(1): 51-8.
46. Kasje WN, Denig P, Stewart RE, de Graeff PA, Haaijer-Ruskamp FM. An educational programme for peer review groups to improve treatment of chronic heart failure and diabetes mellitus type 2 in general practice. *J Eval Clin Pract* 2006; **12**(6): 613-21.
47. Andres E. Bisher grösstes Projekt Hausärztliche Qualitätszirkel zur Pharmakotherapie in Hessen konnte erfolgreich abgeschlossen werden. Eine Betrachtung aus der Sicht der teilnehmenden Ärzte. *Hessisches Ärzteblatt* 2004; **8**.
48. Bersier M, Chevey JM, Dizerens P, Michel C, Nemitz I. Evaluation of referral rates by primary care physicians to specialists and the quality of their collaboration. [French]
- Les cercles de qualite medecins-pharmaciens: Un reseau local reconnu pour maitriser les couts et la qualite de la prescription medicale. *Medecine et Hygiene* 2004; **62**(2501): 2054-8.
51. Spiegel W, Mlczech-Czerny MT, Jens R, Dowrick C. Quality circles for pharmacotherapy to modify general practitioners' prescribing behaviour for generic drugs. *Journal of Evaluation in Clinical Practice* 2012; **18**(4): 828-34.
52. Weiss-Plumeyer m. Was sollte ein Moderator machen. In: Bahrs O, Gerlach FM, Szecsenyi J, eds. *Ärztliche Qualitätszirkel*. 2 ed. Köln: Deutscher Ärzte-Verlag; 1995: 97-108.
53. Gerlach FM, Bahrs O, Weiss-Plumeyer M. Case-oriented work in the quality circle. [German] Fallorientiertes Arbeiten im Qualitätszirkel. *Zeitschrift für ärztliche Fortbildung* 1995; **89**(4): 397-401.
54. Beyer M, Gerlach FM, Breull A. Promoting quality and quality circles from the viewpoint of established physicians--representative Bremen and Saxony-Anhalt results. [German]
- Qualitätsforderung und Qualitätszirkel aus der Sicht niedergelassener Ärztinnen und Ärzte--repräsentative Ergebnisse aus Bremen und Sachsen-Anhalt. *Zeitschrift für ärztliche Fortbildung und Qualitätssicherung : in Zusammenarbeit mit der Kaiserin-Friedrich-Stiftung für das ärztliche Fortbildungswesen* 1999; **93**(9): 677-87.
55. Beyer M, Gerlach FM, Flies U, et al. The development of quality circles/peer review groups as a method of quality improvement in Europe. Results of a survey in 26 European countries. *Fam Pract* 2003; **20**(4): 443-51.
56. Aubke W, Beyer M, Gerlach FM, Szecsenyi J, Kriedel T. Ärztliche Qualitätszirkel: Positive Auswirkung auf Arzt-Patient-Beziehung. *Dtsch Arztebl International* 2003; **2**(2): -65-.
57. Niquille A, Ruggli M, Buchmann M, Jordan D, Bugnon O. The nine-year sustained cost-containment impact of swiss pilot physicians-pharmacists quality circles. *Ann Pharmacother* 2010; **44**(4): 650-7.
58. Smith GI, Mercer SW, Gillies JC, McDevitt A. Improving together: a new quality framework for GP clusters in Scotland. *British Journal of General Practice* 2017; **67**(660): 294-5.
59. Smith G et al. Improving Together: A National Framework for Quality and GP Clusters in Scotland. 2017. <http://www.gov.scot/Publications/2017/01/7911/downloads> (accessed 28/07 2017).
60. Chief Medical Officer's Annual Report 2015-16: realising realistic medicine. 2017. <http://www.gov.scot/Resource/0051/00514513.pdf> (accessed 28/07 2017).
- La demande d'examen specialises et/ou de consiliams: Evaluation de l'importance et de la qualite de la collaboration entre medecins de premier recours et specialistes. *Medecine et Hygiene* 2002; **60**(2418): 2419-22.
49. van Eijk MEC, Avorn J, Porsius AJ, de Boer A. Reducing prescribing of highly anticholinergic antidepressants for elderly people: randomised trial of group versus individual academic detailing; 2001.
50. Bugnon O, Niquille A, Repond C, Curty C, Nyffeler R. Quality circles physicians-pharmacists: A local primary care network effective to maintain the costs and to improve the quality of medical prescriptions. [French]

