

# What is the evidence for the effectiveness, appropriateness and feasibility of group clinics for patients with chronic conditions? A systematic review

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## Scientific summary

### Group clinics for patients with chronic conditions

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# Scientific summary

## Background

Group clinics are a form of delivering specialist-led care in groups rather than in individual consultations. They may include aspects of clinical management as well as patient education and support. Group clinics have been suggested as a way to replace individual patient consultations with a group session focused on the management of an ongoing condition and advice. Synonyms for group clinics include group medical appointments, drop-in group medical appointments, shared medical appointments, group visits and cluster visits. In the UK, interest in group clinics is linked to a wider concern about modernising outpatient services, which account for over 90 million episodes every year and increase year on year.

### *Theoretical considerations*

We found supporting evidence for many candidate programme theories to explain how and why patients might benefit by attending group clinics. Particularly influential high-level theories reflected in the published accounts included social cognitive theory, social comparison theory and social learning theory. Of particular value to understanding group clinic dynamics were theories relating to the core components of chronic disease self-management developed by Corbin and Strauss and the five core self-management skills identified by Lorig and Holman: problem-solving, decision-making, appropriate resource utilisation, forming a partnership with a health-care provider and taking necessary actions. Opportunities for a partnership of clinician and patient to use all of these skills are evidenced in the standard group clinic format.

In the UK, there is little published evidence on the impact and a lack of good-quality information on the range and scale of group clinic activity in different specialties. A systematic review is needed to combine published evidence of different types, including descriptive or qualitative studies, with grey literature.

## Objective

To examine the evidence for the use of group clinics in patients who have chronic health conditions.

The review question is:

- What is the current evidence for the feasibility, appropriateness, meaningfulness, clinical effectiveness and cost-effectiveness of group clinics/group medical visits (GMVs) for patients with chronic conditions?

Specifically:

- What different models of group clinic exist (in the UK and internationally)?
- What evidence exists about the outcomes and cost-effectiveness of these clinics?
- What evidence exists about patient experience of these clinics?
- What are the possible explanatory mechanisms for any reported improvements in outcomes?

## Methods

### Data sources

We searched MEDLINE, EMBASE, The Cochrane Library, Web of Science and Cumulative Index to Nursing and Allied Health Literature from 1999 to 2014. Systematic reviews and randomised controlled trials (RCTs) were eligible for inclusion. Additional searches were performed to identify qualitative studies, studies reporting on costs and evidence specific to UK settings. UK studies were included regardless of the quality or level of reporting.

### Study selection

We sought to differentiate a group clinic from group educational interventions that are common in chronic disease management. To define inclusion in our review we required that a participating clinician do more than simply fill an educational or a facilitative role. Our focus on chronic disease meant that we excluded numerous studies of group clinics for pregnant women and for smoking cessation. We included group clinics for inherited metabolic disease because of their long-term disease management implications. Detailed inclusion and exclusion criteria for the review were as follows.

### Population

Adults and/or children receiving health-care services for one or more chronic health condition. We excluded visits for healthy patient groups (i.e. those without an indication related to a chronic health condition). This exclusion covers pregnant women and women planning a pregnancy (unless they also had a chronic health condition such as diabetes), as well as smoking cessation and other health promotion clinics.

### Intervention

Delivery of one or more services to a small group of patients (typically 8–10 patients) simultaneously. Only studies including the delivery of the intervention by one or more specialist health-care professionals met the inclusion criteria of the review. We excluded delivery of intervention by peers or non-specialist health-care professionals. We also excluded peer-facilitated support groups, as the intervention in these cases is not principally delivered by health-care professionals (although they may contribute).

### Comparison

Other methods of organisation of treatment (with the exception of qualitative research and surveys, only studies with a comparator group are included).

### Outcomes

Patient outcomes, health services outcomes, patient and carer satisfaction, and resource use.

Search results were sifted and studies were selected for inclusion by one reviewer. Where there was doubt about inclusion, a second reviewer independently examined the full text.

### Data extraction

Formal data extraction was employed for all included systematic reviews, RCTs and qualitative studies. Data extraction was undertaken by three reviewers using a standardised form. Quality assessment was performed for RCTs and qualitative studies. For the RCTs we used the Critical Appraisal Skills Programme (CASP) checklist for RCTs and the Cochrane risk of bias tables, and for the qualitative research we used the CASP checklist for qualitative studies. Assessment of the limitations of included studies was also undertaken using the limitations reported by study authors in the included studies.

### **Data synthesis**

Data were extracted and tabulated. This tabulation was used to inform a narrative synthesis. There was no attempt to synthesise quantitative data through formal meta-analysis given the heterogeneity of disease conditions and models of service delivery for group clinics. However, given the predominance of studies of group clinics in the context of diabetes and the use of common biomedical outcomes, this large group of studies was subject to quantitative analysis. For literature that made a conceptual contribution, a method known as best-fit framework synthesis was used, which involved the extraction of data against a pre-existing framework. The review provides an analysis of the quality of evidence and the strength of conclusions that can be drawn from existing studies.

## **Results**

### **Effectiveness**

A total of 13 systematic reviews and 22 RCTs (32 papers) met the inclusion criteria. This evidence base was supplemented by 12 qualitative studies, four surveys and eight papers examining costs and other economic issues. Thirteen papers reported on 12 UK initiatives.

Thirteen systematic reviews reported on multiple variations of GMVs. Twelve reviews were analysed in detail and one was available only in summary form. One further review is only at the protocol stage. The majority of reviews were disease specific, primarily with a focus on diabetes. Most included studies were performed in the USA. Reviews of diabetes reported a consistent effect of group clinics in improving glycated haemoglobin A<sub>1c</sub> (HbA<sub>1c</sub>) and systolic blood pressure. A significant effect was also found for disease-specific quality of life in a few studies. No other outcome measure showed a significant and consistent effect in favour of group clinics. Many reviews commented that the heterogeneity of group clinic interventions made it problematic to classify such initiatives, to isolate the effects of specific intervention components and, consequently, to evaluate the intervention's effects.

Recent RCTs supplementing published systematic reviews largely confirm previous findings. Eight reports of seven RCTs have been published between 2012 and 2014 to add to 15 RCTs (24 reports) previously available in existing reviews, making this the largest review to date focused on group clinics. Three of these reports supplement existing meta-analyses. Two of these reports confirm previous findings of a significant effect for improved HbA<sub>1c</sub> and systolic blood pressure associated with the use of group clinics in diabetes. One new trial found a significant effect for total cholesterol and low-density lipoprotein cholesterol but this was not consistent with previous meta-analyses and unlikely to overturn the finding of no overall significant effect.

### **Qualitative studies**

Qualitative research found that patients appreciate many of the features of group clinics, including socialisation, normalisation and information sharing. Clinicians appreciated the opportunity to informally monitor patients and to gain a better understanding of practical threats to treatment adherence. Again, studies from the USA were dominant, with other studies being conducted in Canada, the Netherlands and the UK (one study, two papers). Generally, the qualitative studies were of low quality, with only 5 of the 12 studies using recognised methods of both qualitative data collection and analysis.

### **Costs and cost-effectiveness**

Of the eight papers that provided evidence on costs, seven reported studies performed in the USA and one reported on a study in Italy. The conditions covered were diabetes, comorbid diabetes with hypertension and complex behavioural health and medical needs. This heterogeneous set of studies showed mixed effects of group clinic interventions on costs. Furthermore, certain costs were not explicitly identified in the included studies. For example, it is likely that a group clinic intervention may require specialist training of health-care staff, particularly in relation to facilitation skills.

### **Evidence from the UK**

Of the 13 papers describing group clinic initiatives in the UK, none represented evidence from rigorously conducted experimental studies. Descriptions of several initiatives were available only as abstracts. One study found that acceptability of group clinics was high among patients undergoing acupuncture for knee osteoarthritis. However, the sensitivity of health and lifestyle topics is not a key issue for this particular population. Even in this context there was an expressed demand for single-sex sessions, including in a Muslim population.

A good-quality qualitative study from the UK highlighted the importance of factors such as physical space and a flexible appointment system. The views and attitudes of those who feel that group clinic provision is unacceptable, inappropriate or not feasible were relatively poorly represented and little attention has been directed at the specific needs of those patients from ethnic minorities. Patients for whom group clinic sessions may not be appropriate include those with complex conditions and those with severe pain.

### **Conclusions**

Although there is consistent and promising evidence for an effect of group clinics for some biomedical measures, this evidence does not extend to other measures such as control of cholesterol. Disease-specific quality of life improved significantly in a small number of studies but the effects were less marked for generic health-related quality of life. Much of the evidence was derived from the USA and it will be important to engage with UK stakeholders and identify specific NHS considerations when considering issues relating to the implementation of the group clinic model.

### **Recommendations for research**

A full economic evaluation of group clinics is recommended. This should accommodate data such as the type of clinician delivering the intervention and how long each clinic lasts to derive a richer picture of the costs of group clinics. Primary research that gathers information on the running of group clinics and potential cost savings in the UK NHS context would be particularly valuable.

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