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Impact of community based nurse-led clinics on patient outcomes, patient satisfaction, patient access and cost effectiveness: A systematic review

Sue Randall*, Tonia Crawford, Jane Currie, Jo River, Vasiliki Betihavas

Sydney Nursing School, Australia

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ABSTRACT

Background: The role and scope of nursing practice has evolved in response to the dynamic needs of individuals, communities, and healthcare services. Health services are now focused on maintaining people in their communities, and keeping them out of hospital where possible. Community based nurse-led clinics are ideally placed to work towards this goal. The initial impetus for these services was to increase patient access to care, to provide a cost-effective and high quality streamlined service.

Objectives: This systematic review aimed to identify the impact of nurse-led clinics in relation to patient outcomes, patient satisfaction, impact on patient access to services, and cost effectiveness.

Methods: A review of community based nurse-led clinic research in Medline, CINAHL and Embase was undertaken using MeSH terms: Nurse-managed centres, Practice, Patterns, Nurse, Ambulatory Care, keywords: nurse-led clinic, nurse led clinic, community and phrases primary health care and primary care. Papers were appraised using the Joanna Briggs Appraisal criteria.

Results: The final review comprised 15 studies with 3965 participants. Most studies explored patient satisfaction which was largely positive towards nurse-led clinics. Patient outcomes reported were typically from self-report, although some papers addressed objective clinical measures; again positive. Access was reported as being increased. Cost-effectiveness was the least reported impact measure with mixed results.

Conclusions: Nurse-led clinics have largely shown positive impact on patient outcomes, patient satisfaction, access to care and mixed results on cost-effectiveness. Future research evaluating NLCs needs to adopt a standardised structure to provide rigorous evaluations that can rationalise further efforts to set up community based nurse-led clinical services.

What is already known about the topic?

- Nurse-led clinics have been established worldwide in many settings.
- In general terms, nurse-led clinics are reported as effective in managing patient assessment and care.

What this paper adds

- This review specifically reports evidence of the efficacy of nurse-led clinics in community settings.
- This review demonstrates impact of community based nurse-led clinics on patient outcomes, patient satisfaction, patient access and cost effectiveness.
- The review highlights a lack of standardised structure to rigorously evaluate the impact of community based nurse-led clinics.

1. Introduction

The role and scope of nursing practice has evolved in response to the dynamic needs of individuals, communities, and healthcare services. In particular, the ageing population, which has led to higher numbers of people living in the community with a chronic disease, has placed greater demands on health resources and prompted a need for change in service delivery (Australian Institute of Health and Welfare, 2015). Health services are now focused on maintaining people in their communities, and keeping them out of hospital where possible (Standing Council on Health, 2013). Community based nurse-led clinics (NLC) are ideally placed to work towards this goal (Hoare et al., 2011). While it has been argued that community NLCs can provide cost-effective, high quality care and can improve patient access (e.g. Handley, 2010; Bentley et al., 2016), to date there has been no systematic evaluation of this new trend in health services. This paper, therefore, provides a systematic review of the literature examining the

* Corresponding author at: Sydney Nursing School, The University of Sydney, M02, 88, Mallett St., Camperdown, NSW 2050, Australia.
E-mail address: sue.randall@sydney.edu.au (S. Randall).

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impact of community based NLCs on patient outcomes, patient satisfaction, patient access and cost effectiveness.

2. Background

Nurse-led Clinics have been defined as a clinical practice where nurses have their own patient caseload (Hatchett, 2008). The nursing role in such clinics involves patient assessment, admission, providing health related education, treatment and monitoring, discharge and referral to other health care professionals, as well as, offering psychological support for patients (Hatchett, 2008). Community based NLCs tend to be specialised – commonly focused towards the treatment or management of a specific disease (Schadewaldt and Schultz, 2011). For example, NLCs for upper gastric-intestinal cancers and chemotherapy treatment (Penfold, 2016; Uitdehaag et al., 2014), rheumatoid arthritis (Arvidsson et al., 2006), sexually transmitted diseases (O'Neill, 2009), heart disease (Schadewaldt and Schultz, 2011), diabetes (Hicks et al., 2012) and mental health (Tong and Fong, 2012), as well as specific child focused conditions and disorders such as eczema (Francis, 2010), asthma (Frost and Daly, 2010), and chronic constipation (Ismail et al., 2011).

The reported benefits of NLCs are in line with the World Health Organisation's (WHO) (1978) directive, which advocated for Primary Health Care models of service that could provide community based effective, accessible and affordable care. Research indicates that NLCs can reduce patient wait times (Handley, 2010; Moore, 2010); increase consultation times, which have been associated with higher patient engagement (Bentley et al., 2016); increase patient satisfaction (Hegney et al., 2013); improve communication between nurses and patients (Jakimowicz et al., 2015); and provide patients' with access to tailored advice on self-management of disease and illness (Horrocks et al., 2002; Laurant et al., 2005). NLCs have also reportedly reduced the demand on General Practitioner (GP) services by offering an alternative to traditional providers of healthcare (Mahomed et al., 2012), and nurses working in NLCs report higher levels of job satisfaction related to practice independence and autonomy (Wong and Chung, 2006).

While there is conflicting evidence on the cost-effectiveness of NLCs compared to traditional doctor-based clinics (Laurant et al., 2005; Raferty et al., 2005; Mason et al., 2005), individual NLCs have reported significant gains in health outcomes that have economic implications. For example, an NLC for the prevention of coronary heart disease reported an increase in cost for the clinic and pharmacotherapies but fewer deaths in the intervention group, leading to a gain of 0.124 quality adjusted life years (QALY) as well as an improved incremental cost per life year saved (Raferty et al., 2005). Based on this broader view of health costs, Raferty et al. (2005) concluded that NLCs were, indeed, cost-effective. However, a review which explored cost in relation to resource utilisation, tests, investigations and direct costs, found that NLCs were marginally less cost-effective, or there was no cost difference, when compared to standard doctor-led clinics (Laurant et al., 2005).

Major factors such as population ageing and subsequent growth in numbers of people living with chronic illness and higher expectations of health services (Bloom et al., 2011) have influenced the location of where patient care takes place. In the context of an ageing population, and an ever-increasing demand for quality care, the emergence of NLCs may represent a considerable advance in health service provision that could assist governments in meeting healthcare demands. Also, under the WHO (1978) directive to provide care within a PHC model, it seems likely that NLCs will to continue to expand (Halcomb et al., 2004) yet, important to the design of any new service, is the evaluation of whether the service is achieving what was intended. In the case of NLCs, the initial impetus for these services was to increase patient access to care, to provide a cost-effective and high quality streamlined service. In order to ensure that the current design of NLCs is effective, evidence about their impact is now required. Therefore, this systematic review aimed to identify the impact of nurse-led clinics in relation to patient outcomes, patient satisfaction, impact on patient access to services, and cost effectiveness.

3. Defining terms

To aid with clarification, patient outcomes, patient satisfaction, access and cost effectiveness were defined as follows: (i) we defined patient outcomes as health outcomes which were either self-reported or nurse-observed. These included modification in behaviour, as well as physical and psychological clinical outcomes; (ii) while the literature has previously included patient satisfaction within patient outcomes (Jones et al., 2007), we sought to differentiate patient satisfaction from health outcomes. Patient satisfaction with any aspect of receiving care in a NLC was, therefore, taken as a distinct category of evaluation that might also include satisfaction with factors other than clinical outcomes such as the timeliness of services; (iii) we adopted Kringos et al. (2010) definition of access, which includes seven features of accessibility: availability, geographical accessibility, accommodation of accessibility (transport, out of hours appointments), affordability of services, acceptability, utilisation of services and equality in access; (iv) cost effectiveness was defined as an economic value related to system, provider or patient outcomes.

4. Method

4.1. Search strategy and outcome

A systematic review of the literature was conducted between September and October 2016 to identify research literature on community based NLCs. As outlined by the Joanna Briggs Institute Reviewers Manual (2014), a search strategy was identified by the research team who have considerable knowledge of the nursing field. For each database a combination of Medical Subject Headings (MeSH), phrases and free text or keywords (KW) were identified. Relevant identified studies prompted follow-up searches using allocated controlled subject headings and relevant references. The search terms used in this review are shown in Table 1. The search was conducted primarily using online bibliographic databases. The services of a research librarian were utilised to undertake the search and the following databases were interrogated: CINAHL, MEDLINE and Embase.

A search was undertaken in each database and to support the relevance to clinical practice, literature published between 2006 and 2016 was extracted. A sample of 701 papers were obtained. The titles and abstracts were screened by three authors, duplicates were removed and the inclusion and exclusion criteria were applied as shown in Table 2. Full paper copies (n = 97) were then screened against the inclusion and exclusion criteria. The search process, which used the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) (Moher et al., 2009), is outlined in Fig. 1.

Table 1
Search terms for systematic review.

Database	CINAHL	MEDLINE	Embase
MeSH	Nurse-managed centres Ambulatory care[a]	Practice Patterns Nurse Ambulatory care	Ambulatory care
KW	Nurse led clinic Nurse-led clinic community	Nurse led clinic Nurse-led clinic community	Nurse led clinic Nurse-led clinic community
Phrase	Primary health care Primary care	Primary health care Primary care	Primary health care Primary care

[a] Ambulatory care scope note closer to our definition for community setting.