Strengthening primary health care nursing in Europe: the importance of a positive practice environment

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Stärkung der pflegerischen Primärversorgung in Europa: die Bedeutung einer positiver Praxisumwelten

Abstract
Nurses, form one of the most important groups of human resources for health in Europe – also and especially in primary health care. In this paper it is argued that to support and develop the practice of nurses in primary care, the World Health Organization initiative of Positive Practice Environments should be examined, implemented and the outcomes of such an innovation subjected to rigorous research. Having reflected on the central place of primary health care in all health systems, the evidence concerning the position of nursing in primary health care is considered and innovative models of community based nursing examined. A tool, the 'roadmap', which may be used to examine the current position of nurses in primary health care is outlined and the context within which the 'roadmap' sits, Positive Practice Environments, is then considered in detail. The paper concludes with recommendations for changes in the organisation of primary health care nursing, drawing on the available evidence, and urging the need for implementation and research into Positive Practice Environments to strengthen primary health care and the value of primary health care nursing to be fully realised. The tool could be also helpful to develop primary health care nursing in Germany where, traditionally, primary health care has been fragmented and based on a single disease model.

Keywords: Human Resources for Health, Positive Practice Environments, Primary Care, Primary Health Care Nursing

Zusammenfassung: KH erster Aufschlag – geht noch nicht so durch

Pflegende stellen eine der wichtigsten Humanressourcen der Gesundheitsversorgung in Europa dar – auch und besonders in der Primärversorgung. Der Beitrag betrachtet die Initiative der Weltgesundheitsorganisation für ein positives/gelungenes Praixisumfeld??? (Positive Practice Environments) und deren Beitrag zur ~~Unterstützung und~~ Weiterentwicklung der Rolle von Pflegenden in der Primärversorgung. Dabei liegt die These zugrunde, dass die Initiative wichtige Impulse für eine innovative Pflegepraxis in der Primärversorgung bietet

Nach einer Reflexion des Stellenwerts der Primärversorgung im Gesundheitssystem wird die Bedeutung der Pflege in der Primärversorgung aufgezeigt und innovative Modelle einer gemeindebasierten Pflege ~~untersucht?/~~aufgezeigt. Schließlich wird eine Road Map, die zugleich als Tool für die Analyse der Position von Pflegenden in der Primärversorgung genutzt werden kann, skizziert - ebenso der Kontext in dem die Road Map zu betrachten ist????. Die Bedeutung Positiver Praxisumwelten wird sodann detaillierter aufgezeigt. Abschließend werden notwendige Veränderungen der Organisation der Pflege in der Primärversorgung aufgezeigt, und der Bedarf an Entwicklung, Implementation und Forschung für eine Entfaltung der Potentiale der Pflege in der Primärversorgung diskutiert.

Introduction and background

Nurses form one of the largest groups providing health care in the community across Europe (WHO 2010). It is, therefore, vital to the health of individuals, communities and the nurses themselves, that the abilities and working conditions of primary health care (PHC)[1] nurses are maximized. In this paper we argue that the World Health Organization (WHO) Positive Practice Environments (PPE) campaign (WHPA 2008) provides a framework to support the development of PHC nursing in Europe. Starting with a review of the literature identifying the central role of PHC in health care we will then consider the evidence concerning the effectiveness of PHC nursing. We then discuss innovative models of community nursing and outline a tool, the 'roadmap', which may be used to assess the factors that contribute to effective PHC nursing and the environment in which PHC nurses practice. The rationale and evidence concerning the importance of the environment or context of practice and Positive Practice Environments is discussed. The paper concludes by identifying the key requirements for strong PHC nursing and making recommendations as to how we might work to develop and enhance the work of nurses in PHC.

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[1] Primary care is defined as the first point of contact of an individual with the health care system. Primary health care is a broader more inclusive concept identifying that the promotion and maintenance of health with active participation of a population is vital to the health of the whole society.

The paper has important implications for the further development of PHC Nursing in Germany where the practice environment and the ability to practice autonomously is not as well developed as in other European countries. Traditionally, PHC in Germany has been fragmented, based on a single disease model (Schlette, Lisac and Blum 2009). PHC has been traditionally managed entirely by physicians in Germany. However as Freund et al (2015) point out, growing numbers of consultations in PHC in Germany and complexity of conditions indicates a growing need for a wider PHC workforce. Integration of services can be more effectively achieved through strengthening the nursing contribution to chronic disease management for example.

The concept of strong PHC as the key to an effective and productive health care system has been discussed in the literature since at least the early 1970's (Newell 1975; Starfield 1994; Bryar 2000). This international debate culminated in the signing of the Declaration of Alma Ata in 1978 in which primary health care was recognised as the route to achieving 'Health for All by the Year 2000' (WHO/UNICEF 1978). In 2008 the World Health Organisation (WHO) published the report: *'Primary Health Care – Now More than Ever'.* This report was of international significance since it came 30 years after the Declaration of Alma Ata (WHO/UNICEF 1978) and reiterated the contribution that PHC makes to the health and well-being of communities and countries at a time when the Millennium Development Goals (MDGs) were under scrutiny. In 2002, Barbara Starfield led a study that compared the strength of PHC systems across 13 countries, including nine in Europe (Starfield/Shi 2002; Starfield et al. 2005). This study was regarded as seminal as it brought together data on the health system characteristics of the countries, the PHC practice characteristics and health indicators such as infant mortality, smoking, suicide rates, amongst others. These data were analysed and scores for strength of the PHC system were applied and mapped against the distribution of income in the countries. Starfield demonstrated that the stronger the PHC system was, the lower the overall health care expenditure of the country and the better the health outcomes.

In 2013 Kringos et al. published an international study that compared the strength of PHC across 31 countries in Europe. These authors used five dimensions of PHC, based on Starfield's original work and derived from a systematic review of primary care research, these were: structure, access, coordination, continuity, and comprehensiveness. These key features of strong primary care were analysed for each country against a range of indicators of PHC outcomes to produce a score for each country translating into weak, medium or strong primary care. The scores were used to test five hypotheses: the level of health care expenditure, hospitalisation, population health, patient satisfaction with non-medical care, and socio-economic inequalities. Using multiple regression analysis and adjusting data at each country level they concluded that countries that had a strong primary care system had higher levels of overall expenditure (in contrast to Starfield et al. 2005), but better population health, lower rates of hospitalisation and some evidence of narrowing social-economic

inequalities. The hypothesis that the quality of *non-medical* care was associated with strong primary care was unproven, the authors believing that patients who completed this aspect of the research referred to quality of the physician input rather than non-medical care and concluded that this component needs further examination. Most of Starfield's (2002, 2005) earlier work focuses on the primary care physician rather than the wider PHC team or explicitly the nursing contribution. This is of interest to this paper, since we contend that nurses are a major contributor to strong primary care (Kendall, 2008) and, based on the emerging evidence from new models such as Buurtzorg (de Blok/Kimball 2013) and Nuka (Gottlieb 2013), nurses (and other non-medical providers) are making a difference, for example, to reducing hospitalisation and improving quality of care.

The International Council of Nurses (ICN) recognised that nursing in PHC was under-represented in the international context and that, at a time when the nursing workforce was under threat, it was timely to consider how the PHC nursing workforce could be shaped and developed to respond to the changing needs of societies and to contribute to making a difference to major health challenges globally. Two reports were published by ICN, *Nursing Perspectives and Contribution to Primary Health Care* (Kendall 2008) and *Reforming Primary Health Care: A Nursing Perspective* (Bryar/Kendall/Mogotlane 2012). Both reports aimed to bring together evidence and case studies to demonstrate the contribution that nurses make to PHC, the concepts and theories that help to organise and deliver primary care nursing, the practices that are required to make a difference to health and wellbeing in the community and the significant shifts that may be needed in the practice and preparation of the nursing workforce to contribute most effectively to PHC.

Since publication of these reports, the United Nations (UN) agreed, in September 2015, to support 17 Sustainable Development Goals (SDGs). Whilst all the SDGs are important to everyone, nurses can specifically contribute to SDG 3: 'Ensure Healthy Lives and Promote health for all at all ages' (UN 2016). This goal is underpinned by a further 13 targets that focus on the major global health challenges. The targets include the reduction in maternal and infant mortality, reduction in major epidemics such as AIDS/HIV, tuberculosis and malaria, reductions in deaths from non-communicable diseases and road traffic accidents, reductions in alcohol and substance misuse and promotion of mental health and well-being. All such targets have varying degrees of relevance in different countries and health care systems, but all are central to the work of PHC which should be at the centre of any health system, as originally discussed by Starfield (1992) and reiterated by her in 2011. Members of the PHC team, including nurses, have access to communities and people and can mobilise resources to reach the most vulnerable populations. We argue that PHC nursing, in its various forms, has a specific role to play in ensuring healthy lives and promoting wellbeing. As we consider below, there is a need to update and review the evidence for what PHC nursing can

contribute, and what the circumstances and contextual factors are that will enable nurses to make the greatest difference to strong PHC and to achievement of the SDGs.

The primary health care nursing workforce

Many health care systems are recognising that timely and effective care that takes place closer to the patient and family in the community can lead to better outcomes and be much more cost efficient and beneficial than care delivery in the acute hospital sector. For example, in England the *Five Year Forward View* for the National Health Service (NHS England 2014) highlights the need for prevention, to empower patients, engage with communities, integrate primary and secondary care, and introduce new models of care that will be more person-centred and closer to home. A film, *The Power of Community Nursing,* commissioned by the Queen's Nursing Institute (2014) in the UK, illustrates some of these principles in practice. To achieve these ambitions beyond the rhetoric and for the future NHS in England attention is being paid to the need to recruit and retain a strong PHC and community nursing workforce. The assessment of the actual size and shape of the PHC nursing workforce in England is not an exact science because as new graduates are recruited, people retire, take on new roles or change their titles. The landscape is constantly shifting, but the latest available data would suggest that the number of community nursing numbers have declined or stayed about the same since 2010 (RCN 2015a) and that the proportion of nurses in primary and community care compared with hospital care has declined from 23% in 2010 to 21% in 2014. A survey conducted by the Queen's Nursing Institute (2015) of nurses in general practice found that one third (33.4%) of general practice nurses in England will have retired by 2020. In its report on the retention of health visitors, the Institute of Health Visiting (2015) argues that for health visiting to meet its goals and objectives the workforce must be retained at least at its current level. The survey resulted in workshops that addressed issues such as personal effectiveness, influencing public health, professional leadership skills and where the profession needs to be to maximise outcomes for children and families. These topics were based on health visitors' reports on what was needed for them to work with providers and commissioners more effectively and stay in the workforce.

These workforce challenges in England are replicated across Europe. Whilst the number of nurses per 100,000 population varies from 128 in Albania to almost 2000 in Switzerland, (WHO 2015) these nurses are not mainly working in PHC but are hospital focused.

Models of community based nursing

One of the new models of care that is being supported in England, is the Multi-Speciality Community Provider model that brings together primary care with public health, acute services, rehabilitation services, end of life care and other services through PHC-led collaboratives. According to the *Five Year Forward View* (NHS England 2014)

these models will have PHC and community nurses at their centre, providing nurse-led and managed services that will be engaged with by local communities and be people-centred. These so-called Vanguard models are currently under evaluation across England but it is already self-evident that the nursing contribution to the quality and safety of care will be essential.

However, whilst this conceptual model is under evaluation the components are not new to PHC in the UK. There has been a wealth of evidence in favour of nurse-led programmes and the development of specialist nurse roles in primary care (Kendall 2008; Laurant et al. 2008). Kendall (2008) brought together international evidence of how PHC nursing has contributed to the key components of PHC that were central to the WHO Alma-Ata declaration: 1. Accessibility to health services; 2. Use of appropriate technology; 3. Individual and community participation; 4. Increased health promotion and disease prevention; and 5. Inter-sectoral co-operation and collaboration. Kendall found sustained evidence from global examples of research and practice that nurses were making significant contributions to these enduring principles of PHC.

Laurant et al. in 2005 conducted a systematic review that found that nurse practitioners could substitute for doctors in PHC and maintain quality of care and outcomes. Sibbald et al. (2006) argued that PHC could be more effective if the nurse's role was strengthened and laws and practices changed to enable nurses to carry out a wider range of activities in a general practice setting, including prescribing. Other countries have also considered ways in which effective primary care can be delivered in the community. In Alaska for example, the Nuka model of care has been pioneered over the last decade and its vision and outcomes are now being applied to other healthcare systems. Gottlieb (2013) has demonstrated how a strong vision for a model of care based on ownership by the Native Alaskan people and relationships can transform a previously dysfunctional health care system into one which embraces and delivers wellness to its communities. As part of the development of this model all primary care practitioners, including nurses, were brought into generalist primary care teams and roles were reviewed so that, for example, nurses were undertaking activities where the nursing role could add most value, such as case management of long-term conditions like diabetes and asthma (Collins 2015). Outcomes have been highly favourable: reducing waiting times for appointments from four weeks to same day access, a 36% reduction in hospital days, 42% reduction in Emergency Room and urgent care usage, and 58% reduction in specialty clinic visits have been sustained for ten and more years (Gottlieb 2013). The positive approach to wellness and the importance of relationships in the Nuka model have been taken up for example in Scotland and England as a potentially effective approach to primary and community health care (The Scottish Government 2012; Collins 2015). In the Netherlands, Jos de Blok has pioneered the Buurtzorg model of community care since 2007. This model is based on a nurse-led, self-managed service provided by teams of 12 nurses across a geographically defined caseload of 40 to 50 patients. The focus is on care of people with chronic illness, older

people with dementia, people requiring care on hospital discharge and end-of-life care underpinned by a shared vision of promoting health, preventing illness and supporting people at the end of their lives. The nurses plan their care for each patient or family and manage all the care that is necessary within the team, having easy access to GPs and specialists as necessary. There were 580 such teams of 6,500 nurses across the Netherlands by 2013, supported by a small administrative team (de Blok/Kimball 2013). Outcomes are very positive and have demonstrated reductions in costs, high patient satisfaction and the development of an autonomous self-managed style of nursing.

These models show great promise for developing the primary and community nursing workforce and for delivering a better kind of service to patients, families and communities, consistent with strong PHC. These examples show that it is imperative to not only grow the workforce but also develop and enhance the context within which primary care nurses work, to learn from other environments and to use the evidence that is already available to enable nurses to deliver care most effectively.

Developing the primary health care nursing workforce

In 2012 Bryar et al. were commissioned by ICN to examine the role and needs of nurses in the reform and development of PHC. Based on the review of relevant evidence and the collection of case studies they developed the 'PHC Nursing Workforce Development Roadmap' (Fig. 1). The 'roadmap' provides a tool both to assess the current position of PHC nursing and through doing this it also provides the direction of travel for the development of nursing in a primary care setting in any country.

Hier Abbildung 1 einfügen

The 'roadmap' identifies five characteristics of effective PHC nursing practice: people centeredness, a public health perspective, quality improvement, partnering and inter-professional working, and information and communication technology. These features of effective practice are underpinned by seven workforce component areas that need to be in place to support delivery of the most effective practice: education; competencies; regulation; incentives; health and safety; leadership and managerial support, and skill mix. The five characteristics, the five points of the star in the model, relate to an evidence base that supports these crucial components of PHC nursing development and the potential of the workforce (see Bryar et al. 2012 for full report). Deficits in any area, for example, in the leadership and managerial support for frontline nurses, will have an impact on the quality of nursing provided to a population. As discussed earlier, the organisation of PHC services has a significant impact on outcomes (Gottlieb 2013; de Blok and Kimball 2013). Collectively and singly these characteristics and components are evident throughout the literature on models of care and workforce, as indicated in the models described above. We argue here that essentially they work most effectively towards creating a strong PHC system when operating within a *positive practice*

environment. As illustrated in Fig 1 the 'roadmap' is located in the Positive Practice Environment highlighting the importance of the context of PHC on practitioners and practice. The impact of context has recently been confirmed in a systematic review of interventions to develop health workers in sub-Saharan Africa (Blacklock et al. 2016). The researchers conclude that interventions, such as educational initiatives, can improve the performance of health workers, but comment that: '… policy makers need to understand and address the contextual factors which can contribute to differences in local effect.' (ibid.: p.2)

What is a positive practice environment?

In this section we discuss the concept of PPEs making use of material originally published in Bryar et al. (2012), which has been updated in places. The literature about survival of organisations indicates that the effectiveness of any organisation is contingent upon its ability to recruit, educate and retain high quality staff (Prosser 2005; Torrington et al. 2011; Squires et al. 2016). With the continuing global health workforce crisis work environments have shown a direct relationship between human resources for health (HRH) behaviour and patient care outcomes (Van Bogaert et al. 2009). Positive practice environments have been promoted and supported by ICN and other international organisations since 2008 as an approach to developing the nursing workforce and have been cited by Baumann et al. (2006) as one of the five priority interventions or strategies relevant to recruitment and retention of human resources for health. Positive Practice Environments are settings that support excellence and decent work, where employees are able to meet organisational objectives and achieve personal satisfaction in their work. In particular, they strive to ensure the health, safety and personal wellbeing of staff, support quality patient care and improve the motivation, productivity and performance of individuals and organisations (WHPA 2008). According to Stichler (2009) healthy work environments are a result of good leadership that determines the character and culture of health organisations and provides work settings where employees are able to meet organisational objectives and, at the same time, achieve personal satisfaction in their work.

The benefits of PPEs have been documented in the literature. According to Adams and Kennedy (2006) the benefits can be assessed through organisational performance and health service delivery, health worker performance, patient outcomes and innovation. The implementation of the PPE Campaign began in 2008 building on work that had tested the PPE elements, for example, that reported by Adams and Kennedy (2006). A more recent literature review (Twigg/McCullough 2014) has brought together a range of 39 international studies that demonstrate the value of the practice environment on the nursing workforce. Most of these studies are hospital based and only two provided pre- and post-test outcomes, but nonetheless deliver transferrable evidence to PHC settings. Key strategies included: empowering work environment, shared governance structure, autonomy, professional development, leadership support, adequate numbers

and skill mix and collegial relationships within the healthcare team. Such strategies are in line with the potential benefits of PPEs identified in Box 1 below (WHPA 2008).

Box 1: Benefits of positive practice environments

- Positive changes in the work environment result in a higher employee retention rate, which leads to better teamwork, increased continuity of patient care, and ultimately improvements in patient outcomes.

- Positive practice environments demonstrate a commitment to safety in the workplace, leading to overall job satisfaction.

- When health professionals are satisfied with their jobs, rates of absenteeism and turnover decrease, staff morale and productivity increase, and work performance as a whole improves.

- Maintaining a level of autonomy over their work allows staff to feel that they are respected and valued members in their places of employment.

- Research demonstrates that nurses are attracted to and remain at their place of employment when opportunities that allow them to advance professionally, gain autonomy and participate in decision-making, while being fairly compensated exist. (WHPA 2008)

In contrast to such positive environments many PHC nurses, especially those working in low resource environments and in remote rural areas, experience poor or absent support and supervision, minimal monitoring and evaluation by managers and state officials, excessive workloads, poor infrastructure, with lack of electricity and running water, poor transport and indifferent communication systems (Dywili et al., 2013). Staff turnover is often high, both a characteristic and a consequence of such poor working environments. Munyewende et al. (2014), for example found, in a study of nurse managers working in primary care in two provinces in South Africa, that giving staff more choice in where they worked, improving security and reducing the threat of violence in the workplace were just two of many features of the environment in which they practiced that needed to be addressed to improve their job satisfaction. Providing a PPE in such settings requires leadership and use of tested strategies.

The Nuka Model and Buurtzorg Models both exhibit strong features of PPE that have helped to transform previously de-motivated and struggling workforces in two very different cultures. For example, the Nuka model with its focus on relationships emphasizes the need for providers to build relationships within the organisation and with customers, the Native Alaskan population, in order to deliver on the vision and mission of the Nuka model. Studies to date have demonstrated that this person-

centered, relational model has had a positive impact on health outcomes including a much increased registered population, improved access to health care, statistically significant reductions in emergency room use for any condition, reductions in emergency care for asthma and for unintentional injury (Driscoll et al. 2013). However, Gottlieb (2013) argues that it is not just the customers that benefit from this relationship-centred approach:

"Strong and effective relationships are necessary across the organization to accomplish goals, objectives and work plans. Building a culture of trust, based on relationships, encourages shared decision-making and supports innovation and creativity." (Gottlieb 2013 p.3)

The approach is supported by strong leadership, which role models relationship-centred working, provides staff training programmes and has a focus on teamwork and co-ordination. Evidence from a small scale study in Scotland (Cameron et al. 2012) supports the contention that relationships are highly valued by nurses working in the community and identified a 'quasi-family' model of leadership in the teams included in the study. Whilst the evidence on the association between this positive way of working together and patient outcomes is not widely available, the logic model that underpins it (i.e. positive working relationships lead to stronger staff-customer relationships and better outcomes) it does draw on evidence from the communication field (e.g. Blasi et al. 2001) and makes pragmatic sense. However, this needs to be teased out through further research.

The Buurtzorg model of care has grown rapidly in the Netherlands and according to the Royal College of Nursing report (RCN 2015b) the model is now being extended from primary care into the acute sector. It is argued that key to the success of the Buurtzorg model is the autonomous and integrated way that teams of nurses work together at neighbourhood level to deliver care (Kreitzer et al. 2015). The explicit lack of a hierarchy within the organisation and the freedom for nurses to assess patients and make autonomous decisions within the patients' own context, the ability to work in small self-managed teams that enable relationships to build with communities and the support that nurses have to manage their own education needs through their own budget, are all key features of a PPE. The Buurtzorg model is underpinned by theory from other fields such as Bronfenbrenner's (1977) social-ecological theory and network science (Barabasi 2002). The self-managed nursing teams are effective because they are empowered to work in this way and can demonstrate their effectiveness at patient level through their relationships with their patients and families, and more formally through the use of the Omaha nursing outcomes system (Martin 2005) that enables linkages to be made between nursing actions and patient outcomes.

Like the Nuka model, there does not appear to be any trial data that demonstrates the benefits of Buurtzorg over traditional models, but the value of the service to patients,

the reports from nurses of the benefits to their own working environment and the effect on patient care and the overall reduction in costs that have been reported, point to the importance of a PPE in PHC. Research from other health care environments seems to support this assumption. In a study by Teasley et al. (2007), four intervention strategies to promote PPEs in a rural Kentucky hospital were developed. The first was to establish a shared decision-making body where nurses participated in governance issues in health facilities. These included the development and standardisation of policies for employee tenure, promotion and working conditions. The second focused on staffing issues in relation to distribution, capacity building and placement to ensure adequate coverage for service delivery. Utilisation of all nursing categories was reviewed and increased, allowing those with other skill sets to coordinate care and evaluate outcomes. The third intervention strategy, focused on ensuring adequate managerial support and supervision, and the fourth on improving communication systems between disciplines within the health system, families, community and key stakeholders in and outside the health system. Evidence from this study suggests that implementation of the four strategies may promote positive work environments in any setting, urban or rural, PHC clinic or hospital. However, this suggestion needs to be tested with research on the impact of PPEs, specifically on PHC nurses, which is currently lacking. Important aspects include development of policy frameworks that are focused on recruitment and retention initiatives, strategies for facilitating ongoing learning, adequate employee remuneration, a safe working environment, adequate supplies and employee recognition programmes. It seems quite clear from the evidence and examples that global health care systems should work towards developing such environments in a sustained effort to not only recruit and retain PHC nursing workforce but also to improve quality of care and patient outcomes. It is within this context that the greatest contribution to strong PHC systems, by nurses, can be expected as reforms across health systems constantly engage with the need for high quality care accessible to all, improvements in health outcomes and management of ever-expanding health care costs.

Discussion: Key elements for strong PHC Nursing

In this paper we have presented a case for ensuring strong PHC Nursing in Europe through the development of Positive Practice Environments (PPEs). The evidence is growing that strong PHC requires a nursing workforce that will be attracted to the PHC working environment as a career option, will stay in the workforce and have a clear career progression, be empowered in their role to enable them to achieve their goals and patient outcomes, improve experience and provide sound leadership and be able to build strong relationships within their teams and with their communities. These are major constituents of a PPE as has been shown in relation to innovative models of PHC and community nursing that are demonstrating positive outcomes and also cost efficiencies to the health care systems of which they are a part. If we consider that the PPE is the context in which PHC nurses are most effective then we also need to consider the elements within that context, which enable nurses to make the greatest

potential contribution to the health and wellbeing of the communities they work in. The evidence underpinning the 'road map' (Bryar et al. 2012) would suggest that, in line with the WHO (2008), people centeredness, a public health perspective, quality improvement, partnering and inter-professional working, and information and communication technology are central to nursing effectiveness and strong PHC. It is timely to test the combination of the PPE context and these elements in a European-wide rigorous study that will test both the strengths and weaknesses of this approach to PHC nursing in a challenging economic and health care environment. Using approaches such as improvement science, where the boundaries of quality improvement and research are merged, would provide further evidence of how the PPE context might be associated with the enabling elements and health care outcomes. Synthesis of evidence from models such as the Vanguard models in England, Buurtzorg in the Netherlands and Nuka in Alaska would bring a wealth of data together to inform national policy. Whilst studies are being developed, we appeal to health care organisations and to governments, local, regional and national, to pay attention to the PPE and the lessons that can be learned from models of PHC and community nursing that are already being implemented. Only by building the concept of PPE into health care planning can the strength of PHC and PHC nursing be fully realised.

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