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SPECIAL ARTICLE

Advanced practice nurses and evidence-based practice. An opportunity for change☆

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Abstract In a context of ageing of the population, increased prevalence of chronic diseases and increasing complexity, it is necessary to define new professional roles that can meet the health needs of the population.

Added to this is the certainty that variability in clinical practice, as well as in health management, makes it necessary to use best evidence as the basis for decision-making. But the application of clinical practice based on evidence in a specific context implies a broad mastery of the available evidence, its applicability and limitations, as well as a deep understanding of the particular characteristics of the area where it is to be applied, from the ''macro'' (health policies, framework regulations, strategic lines, social values, etc.) to the ''micro'' level (local culture, user preferences, etc.).

The ''Health Service of the Balearic Islands'', in collaboration with the Faculty of Nursing and Physiotherapy from the University of the Balearic Islands, proposes the development of new advanced practice nursing roles that focus their efforts on the planned implementation of evidence in clinical settings. Advanced practice nurses have managed naturally, thanks to their competence development, to exercise the role of promoting organisational and attitudinal changes that facilitate the implementation of evidence in organisations and complex environments.

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Enfermeras de práctica avanzada y práctica basada en evidencias. Una oportunidad para el cambio

Resumen En un contexto de envejecimiento de la población, aumento en la prevalencia de enfermedades crónicas y creciente complejidad, se hace necesario definir nuevos roles profesionales que consigan dar respuesta a las necesidades de salud de la población.

A ello se une la certeza de que la variabilidad en la práctica clínica, así como en la gestión sanitaria, hace necesaria la adopción de las mejores evidencias como base de la toma de decisiones. Pero la aplicación de la práctica clínica basada en evidencia en un determinado contexto implica un amplio dominio de la evidencia disponible, su aplicabilidad y limitaciones, así como una profunda comprensión de las características particulares del ámbito en que se pretende aplicar, desde el nivel «macro» (políticas de salud, normativa marco, líneas estratégicas, valores sociales, etc.) hasta el «micro» (cultura local, preferencias de los usuarios, etc.).

El Servei de Salut de les Illes Balears, en colaboración con la Facultad de Enfermería y Fisioterapia de la Universitat de les Illes Balears, propone el desarrollo de nuevos roles enfermeros de práctica avanzada que focalicen sus esfuerzos en la implementación planificada de evidencias en entornos clínicos. Las enfermeras de práctica avanzada han conseguido de manera natural, gracias a su desarrollo competencial, ejercer el papel de impulsoras de cambios organizacionales y actitudinales que facilitan la implementación de evidencia en organizaciones y entornos complejos.

The incorporation of evidence in advanced practice

The evolution of health requirements within a backdrop of increased healthcare costs, an ageing population and the increase in the prevalence of chronic illnesses, has necessitated the redesigning of our health systems and the defining of new healthcare professional roles. One of the strategies for confronting this setting is the implementation of advanced practice nurse (APN) roles.[1] These roles have had a strong impact internationally and on health.[2] This article focuses on the role of these nurses in the incorporation of evidence-based practice and in the reduction of the traditional standard divide between research and healthcare practice. The health service of the Balearic Islands, in collaboration with the Faculty of Nursing and Physiotherapy from the University of the Balearic Islands, wish to design and develop new advanced practice roles which focus their activity on structured implementation of evidence in clinical settings.

Variations in practice and services. A question of quality but also equality

Variability in clinical practice has been described since the 1930s in the study published by Glover in 1938.[3] It described tonsillectomy rates in children up to 8 times higher in certain districts without any apparent explanation. After this, the series of studies by Wennberg et al. in the United States[4–6] demonstrated major differences between regions with regard to the rates of tonsillectomy, hysterectomy, prostatectomy and other interventions. After several decades of studies, we can confirm that variability of clinical practice is present in almost any observed case.[7]

''Population variability'' is defined as systematic (not random) variations in the standardised accumulated incidence rates by age and gender of a clinical procedure, to a certain level of population aggregation.[8] An ''individual variability'' has also been described.

Consensus in decision making, when it occurs, is mostly between professionals of a certain area or a specific context.[9] Thus, under the phenomenon of variability, lies the uncertainty regarding the efficacy of interventions and the real results derived from our individual practice,[10] a fact which breaks with the presumption that all professionals apply the best practice possible to a specific health situation. Variety of professional criterion when taking decisions necessarily leads to different efficacy in interventions, or a different quality of care.

This is ongoing in a setting of progressive increase in the complexity of healthcare and social healthcare interventions. Additionally there is also the development of healthcare technology and a high level of professional specialisation, in which a large variety of factors intervene and affect the course of diseases and the response of the healthcare system in offering care.[11] No further delay should take place in working in teams and decision being taken together

between users and health teams. If this does not occur, we will continue perpetuating a situation whereby in the same health situation some people have access to more appropriate treatment, care and services than others. Providing a response to this situation is also an ethical obligation for health system and health institution managers. It is essential that they take on board management based on evidence, since it is a well known fact that the problems of variability also extend to the area of health care management.[12] In a system which promotes equality of rights and access to health, can we speak of variability without also mentioning equality?

Evidence-based practice

Evidence-based practice (EBP) began in the United Kingdom, Canada and the United States during the decade of the 1990s. The standard definition by Sacket[13] describes it as ''the conscious, explicit and judicious use of the best scientific and clinical evidence available for taking decisions on the care of each individual patient'', with ''scientific evidence'' being understood as the body of tests or outcomes resulting from quality scientific research.

Over 20 years later, the debate continues: why is there a gap between research results and practice? What can healthcare institutions do to bridge this gap?

There is no simple answer to the questions posed. Evidence-based practice is a complex process which requires knowledge, planning and time. Furthermore, there are very few theoretical models to effectively explain and guide this transference.[14] Information collected from some of these models allows us to summarise key elements required in the transference procedure of knowledge into practice:

- Selection and summary of useful evidence in a growing body of scientific information.
- Analysis of the validity and credibility of evidence, which means extensive methodological knowledge. The difficulty of finding experimental evidence in the field of nursing due to the nature of our interventions adds even greater uncertainty to the interpretation of the body of evidence.
- Evaluation of the possible impact in healthcare of incorporation of evidence.
- Analysis of the applicability of investigation, the possibility of adapting it to the context of practice depending on cultural characteristics, resources and other environmental variables.
- Analysis of sources of evidence or tests relating to clinical activity (measurement is critical for the evaluation of processes), as healthcare indicators, auditing results, local regulations, health policies and preferences, patient perspectives or expectations.
- Diffusion and dissemination of relevant evidence, selecting the key information or priority in each context.
- Design of routes, protocols or dynamics which foster the application of practices to be implemented. This implies the use of innovative solutions for the promotion of adopting effective practices and frequently abandoning ineffective or low value practices. Moreover, this implies considering aspects relating to the health team, their experience, preferences and available resources for which feedback from professionals is decisive.
- Assessment of clinical outcomes associated with implementation, including evaluation of outcomes in specific areas, replanting actions depending on the analysis of these outcomes, together with possible new proof that may have been able to occur during this process.
- Report of professional results, even at a local level, promoting the reflection and design of actions for improvement.

Despite the complexities of the process, the responsibility for the application of the EBP in the current Spanish practice model is placed on each individual profession, which implies that all nurses have to have the knowledge and competences to manage a broad range of evidences and design ways of putting them into practice. Can we demand that each of the nurses in our system should develop this?

This ''individualistic'' model of transference is not conducive to advancement, because it ignores the complexity of the necessary activities for promoting EBP and the barrier which nurses systematically find for their development.

The role of healthcare institutions and healthcare teams

Care overburden, lack of time during the working day and lack of research training are the reasons commonly given by the nurses as barriers for EBP,[15,16] forcing them to take decisions mainly based on opinions, beliefs, experiences and habits. However, the ''individual factors'' or the ''individual attitudes compared with evidence'' only explain a part of the use of research by professionals. The size of organisations, their participation in university programmes, the dynamics of decision making, support from administration or from other professionals and the climate for research development explain between 80% and 90% of the research usage.[17]

It is improbable that care nurses undertake the complex labour of incorporating evidenced-based practice by themselves and at the same time there are few or no figures in Spain who are able to sustainably contribute to this task. Furthermore, the competences which are currently demanded of the manager nurses do not allow them to be in the best setting as leaders for its introduction. They are already overburdened by their management and organisational tasks.

Factors associated with the appearance of errors and low quality practices[18] include lack of collaborative practice, the patient's divided view, the healthcare provided and the lack of application of evidence.

In sum, the necessary contextualisation of evidence and the multitude of coordinated actions its establishment requires necessitates the reforming and resizing of today's organisational structures so that expert training leaders may be appointed in the field of evidence, who would be able to take on the mission of reducing variability and driving transformative actions in team healthcare practice.

Facilitation of knowledge transfer

Facilitation is one of the key elements of the Promoting Action on Research Implementation in Health Services (PARIHS)[19] model which is one of the most commonly used for structuring and conceptualising implementation in health, although other models of transference or implementation contain equitable concepts. It comprises a set of techniques by which a professional is able to make some things easier than others, promoting changes in attitude, habits, skills, ways of thinking and working styles.[20]

The previously described setting justifies the need to enhance facilitation for the incorporation of evidence through figures who are close to care activity. Strengthening team work and care leadership are greatly relevant factors for achieving the adherence of clinics to changes or innovations. To do this interdisciplinary discussion is essential, describing the concept of facilitation and its role in the transfer of knowledge and the ability of the APN to promote EBP where support from other professionals is critical when accepting new initiatives.

With regard to the characteristics of the APN roles in promoting EBP, they include actual competences of the advanced practice role, and the working environment. The APN whose function includes a higher clinical component usually feels more capable of affecting the team since they create opportunities to promote the most tangible and relevant EBP for the other nurses, particularly through informal teaching and the role modelling.[21]

Roles and settings of advanced practice

Historically, the roles of advanced practice nurses, a wider description of which is provided by the International Board of Nurses,[22] have been introduced into the health system to respond to the needs of the system and its users, and are frequently associated with highly specialised and complex practice.[23] Despite not being specifically designed to allow for the transfer of evidence, it has been observed in different setting that they do this naturally. This occurs because an elemental underlying substrate of advanced practice is an EBP integrated within the performance of daily clinical practice of these nurses.[24] In certain cases the APN has greater competences related to research, the transference of knowledge and the adherence of an EBP, compared with other professional nursing roles.[25] The APN appears as a professional response for the reduction of variability, the increase in care quality and guarantee of clinical safety.

Advanced practice nurse have shown the impact they have in transference of scientific knowledge to practice in specific care enviornments,[26] through a combination of practice which include:

1. Knowledge management. The APNs are recognised by the other nurses as the managers of knowledge, capable of applying scientific criteria for complex health decisions. The APN role involves gaining knowledge through research, collecting useful and valid evidence, summarising it, transferring it and translating it into the local language, disseminating the knowledge and the key practices for better clinical outcomes.
2. Agents of the theoretical-practical union (facilitators).
3. Drivers of change, using planned management of the same, modelling and mentoring. This implies the ability to resolve problems using the results from research and the ability to drive strategic changes in work dynamics.

The APNs have to manage a range of strategies for the transference of knowledge which should necessarily be creative and contextualised,[21] such as the inclusion of dynamics for strengthening team work, auditing and feedback, educational or training materials, educational or training or informative meetings, support systems for decision making, training in EBP tools, etc.

We could pinpoint 2 key factors which enable the transfer of knowledge by the APN: (1) the expansion of competences beyond the habitual range and (2) guidance towards the promotion of the profession and their holistic values, focused on people-centred health and care.

APN environments have the following in common: (1) demand for care of greater complexity and (2) need for integration or coordination of different professionals or care levels (CNA 2005). The key clinical practice for the APN is usually oriented in highly specialised settings, with frequent changes in evidences and the use of technology. The result of all of this is that these professionals constantly need to update, assess and adapt to the context. The APNs act effectively in this context as the agents of gradual and daily change.[27] The development of their role in some environments or health systems has been possible through several years of training strategies and programmes which have been progressively adapted to the context needs.[28] It is reasonable to believe that a professional trained with these characteristics is able to motivate nursing practice and the practice of other key professionals in adapting it to evidence and achieving an answer to individual health requirements, promoting a comprehensive vision of health care.[28,29]

Conclusions

In the Balearic Islands, the health service and the faculty of nursing are proposing an APN role within a range of greater or lesser specialisation, applying formal strategies for the development of EBP aimed at reaching a higher spectrum of

patients. To do this it is essential to plan the implementation phases, and also to identify their areas of action as well as obtain the involvement of the healthcare team.[30]

One of today's challenges is to drive research on the effect of the incorporation of advanced practice roles in healthcare results obtained by the health team where they have been established.

Although no doubts can arise regarding the efficacy and cost-effectiveness of the APN roles, since systematic reviews on the issue demonstrate the clear impact on health outcomes and user satisfaction, both in replacement and complementary roles, the unification of legal criteria to sustain the viability of this figure is needed. Otherwise we run the risk once again and as has almost always been the case of incentivizing the variability between the practices of the different organisations.

Conflict of interests

The authors have no conflict of interests to declare.

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