



Blogs and social networks as evidence-based care dissemination tools: *Cuidando neonatos* case

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Abstract

Introduction: several studies have identified the lack of knowledge and time as one of the barriers for the application of research findings to clinical practice. The use of information and communication technologies may offer a solution to these problems. **Objective:** to assess the reach and diffusion of contents published in the *Cuidando neonatos* blog related to the consumption of evidence in health care.

Material and method: we conducted a cross-sectional descriptive study using Google Analytics and the Directorio Blogger.

Results: There were a total of 645 249 page views in the period under study (November 12, 2014 to September 12, 2018) in the course of 155 874 sessions. Most visits came from Spain and Mexico. Of the 144 published posts, 26 had to do with evidence-based care. The most-viewed post was "RCP neonatal. ¿Repasamos conceptos claves?", which received 13 649 visits.

Conclusions: the reach of the contents published in the *Cuidando neonatos* blog and disseminated through its social network profiles demonstrates that blogging can be a powerful tool to facilitate the implementation of evidence-based health care practices in the field of neonatology.

Key words:

- Evidence-based practice
 - Internet
- Neonatology
 - Nursing
- Social media

Blogs y redes sociales como herramienta de difusión de cuidados basados en la evidencia: el caso de *Cuidando neonatos*

Resumen

Introducción: diversos estudios identifican la falta de conocimientos y tiempo como una de las barreras para la implementación de los resultados de la investigación en la práctica clínica. El uso de la tecnología de la información y comunicación puede ser una solución a estos problemas. **Objetivo:** evaluar el alcance y la difusión de los contenidos publicados en el blog *Cuidando neonatos* relacionados con el consumo de evidencia en cuidados.

Material y método: estudio descriptivo transversal. Los instrumentos utilizados fueron Google Analytics y el directorio Blogger.

Resultados: el número de páginas vistas en el periodo de revisión (12 de noviembre de 2014 hasta fecha 12 de septiembre de 2018) fue 645 249 durante 155 874 sesiones. La mayoría de las visitas procedían de España y México. De los 144 *posts* publicados, 26 estaban relacionados con el consumo de evidencia en cuidados. La entrada más vista fue: "RCP neonatal. ¿Repasamos conceptos claves?", con 13 649 visitas.

Conclusiones: el alcance de los contenidos publicados en *Cuidando neonatos* y difundidos a través de sus redes sociales, constatan que el blog puede ser una herramienta que facilite la implementación de cuidados de salud basados en la evidencia en el ámbito de la neonatología.

Palabras clave:

- Enfermería
 - Internet
- Medios de comunicación social
 - Neonatología
- Práctica clínica basada en la evidencia

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INTRODUCTION

Promoting and facilitating evidence-based health care is essential to improve the quality and safety of the services provided to patients, but in many instances clinical decision-making is not based on the latest available evidence. Several national and international studies have identified a lack of knowledge¹ and time as two of the major barriers that currently hinder the translation of research findings to nursing clinical practice.²⁻⁵

The Internet and technological advances are changing how the population communicates and accesses and uses information.⁶ The latest analysis of the perception of science by society of the Fundación Española para la Ciencia y la Tecnología (Spanish Foundation for Science and Technology, FECYT), the results of which were published in 2017, showed that social media have become the most frequent source of scientific information consulted online.⁷ If we focus on health care, we find that an increasing number of patients, users and providers are using online platforms and new technologies as tools to obtain information, stay up to date, communicate⁶ and share experiences and health-related contents that they have generated.⁸ In recent years, there has been an increase in the use of social networking tools such as Facebook and Twitter, not only to disseminate health-related information but also to access profiles and groups that share research results⁹⁻¹¹ and to obtain scientific evidence.^{12,13} The accessibility,⁹ quick dissemination¹ and versatility in the forms of presentation of content⁶ make social networks, *wiki* pages and blogs powerful tools⁹ in the translation of this type of knowledge and therefore in bridging the gap between the production of evidence and its application in clinical practice.

In 2014, the blog *Cuidando neonatos* (Caring for newborns) was created with the aim of providing a communication platform for neonatal nurses, parents, paediatricians and other health care professionals in the field of neonatology. Profiles of the blog were created in the Facebook, Twitter and

Instagram social networks to increase the dissemination and reach of its posts. The site publishes posts (entries or articles) with contents relevant to the field of neonatology, either for health professionals or families, based on the best-available scientific evidence, giving rise to conversations between the readers and the authors of the blog, consistent with the Web 2.0 philosophy.^{14,15} The aim of the study was to assess the reach and diffusion of the contents published in the *Cuidando neonatos* blog related to the evidence-based care and to identify the posts that received the most visits from users

MATERIALS AND METHODS

We conducted a quantitative, descriptive and cross-sectional study of the blog *Cuidando neonatos*. The period under study went from November 12, 2014, the date the first blog entry was published, to September 2, 2018, the date that we reviewed the blog. We collected the data using web analytics tools: Directorio Blogger and Google Analytics.

We analysed the posts published under the period mentioned above. We included published entries related to the dissemination of clinical practice guidelines of the National Health System, reviews and resources from the Cochrane database and the Joanna Briggs Institute, reports/documents developed by the World Health Organization, Asociación Española de Pediatría (Spanish Association of Pediatrics), Sociedad Española de Neonatología (Spanish Society of Neonatology), the Ministry of Health, Social Services and Equality of Spain and the Centers for Disease Control and Prevention. The variables analysed in each post were: title, number of visits and main source of the published content. We collected data related to the audience of the blog: number of users (individuals that opened at least 1 session in the period under study), country of origin, number of sessions (the period of time in which a user interacts with a website) and device used for access.

RESULTS

During the period under study, 118 633 users accessed the *Cuidando neonatos* blog. Most visits originated from Spain, with 34 133 users (57.32%) and Mexico, with 7834 (13.16%) (Table 1). The devices used most frequently to view the blog were mobile phones (67.15%), followed by computers (27.10%) and tablets (5.76%).

During the period under analysis, a total of 645 249 pages were viewed during 155 874 sessions. Of all the site traffic, 45.50% (corresponding to 74 682 sessions by 54 082 users) came from social networks, led by Facebook, which was the main source, corresponding to 69 004 sessions (92.40%). *Cuidando neonatos* had a total of 8844 followers distributed across Facebook (5938), Twitter (1814) and Instagram (1092).

Of the 144 published posts, 26 were related to evidence-based neonatal care. These were some of the most viewed entries:

- Most viewed, “RCP neonatal. ¿Repasamos conceptos claves?” (Neonatal CPR. Shall we review key concepts?), with 13 649 viewed pages, a post created with the aim of disseminating the article “Adaptación de las recomendaciones internacionales en estabilización y reanimación neonatal 2015” published in the journal *Anales de Pediatría*.

Table 1. Ten most frequent countries of origin of the users that accessed the blog *Cuidando neonatos*

Ranking	Country	Users (N = 118 633)	%
1	Spain	34 133	57.32 %
2	Mexico	7834	13.16 %
3	Argentina	3628	6.09 %
4	Peru	2494	4.19 %
5	Colombia	2026	3.40 %
6	Ecuador	1542	2.59 %
7	United States	1288	2.16 %
8	Chile	1147	1.93 %
9	Venezuela	980	1.65 %
10	Bolivia	891	1.50 %

- Second most viewed, “Y tú... ¿cómo realizas la punción del talón?” (“So... how do you perform the heel puncture?”), which has received 9901 visits and aims to disseminate the contraindications and good practices related with this procedure according to the reports of the Joanna Briggs Institute (Table 2).

DISCUSSION

The results of our study evince the potential of social networks to disseminate and share studies related to evidence-based practices, which was consistent with the findings of previous studies at the international level^{11,13,16} and domestic nursing blogs.⁶ In addition, it demonstrated the efficacy and therefore the need to design a coordinated strategy for the publication of contents in blogs and their dissemination through social networks for the purpose of promoting the spread of scientific evidence on child health.¹² At present, there are still barriers¹⁶ to the use of social platforms for the diffusion and consumption of scientific evidence on health care practices, chief among them the perceived reliability¹ and quality of the information obtained from these sources.^{9,17} These facts highlight an opening for the design of future research studies and the need to incorporate new educational strategies at the level of official institutions to include training on digital platform skills in the field of health care.

Identifying which posts have had the greatest impact on readers and establishing the profiles of users can help us design new lines of inquiry and develop content strategies for the blog.

Our study revealed a gradual increase of the international audience and the permanence of followers of *Cuidando neonatos* among the Latin American population compared to previous studies related to the blog.^{14,15}

There are several possible limitations related to the methodology used in this research inherent to Google Analytics and Directorio Blogger. First of all, these tools cannot be used to determine the pro-

Table 2. Posts related to evidence-based care published in the blog *Cuidando neonatos*

Page views (n)	Post title	Date of publication	Source of information
13 649	RCP neonatal. ¿Repasamos conceptos claves?	04/06/2017	Asociación Española de Pediatría
9901	Y tú... ¿cómo realizas la punción del talón	05/11/2017	Joanna Briggs Institute
8922	Recomendaciones para prevenir la retinopatía de la prematuridad	22/02/2016	Asociación Española de Pediatría
6581	Guía para madres que amamantan	26/03/2017	Clinical Practice Guideline of the National health System of Spain
6726	Nuestros cuidados al final de la vida	02/10/2016	Sociedad Española de Neonatología
6542	Evitemos la neumonía asociada a VMC. ¡Está en nuestras manos!	22/01/2017	Ministerio de Sanidad, Política Social e Igualdad
5892	Libro blanco de la muerte súbita infantil	01/06/2016	Asociación Española de Pediatría
5739	Unidades de neonatología. Recomendaciones y estándares de calidad	05/06/2016	Ministry of Health, Social Policy and Equality of Spain
5280	Algoritmo reanimación neonatal	05/01/2015	Sociedad Española de Neonatología
4093	Guía de Práctica Clínica: Bronquiolitis aguda	29/02/2016	Clinical Practice Guideline of the National health System of Spain
4039	Guía: Prevención de úlceras por presión en Pediatría	19/10/2015	Clinical Practice Guideline of the National health System of Spain
3386	¿Conocéís la nueva guía sobre lactancia materna de la OMS?	08/07/2018	World Health Organization
3230	Método canguro durante procedimientos dolorosos	29/04/2018	Cochrane
3051	Seguridad Neonatal	01/08/2016	Ministry of Health, Social Services and Equality of Spain
2966	¿Conoces la nueva Guía de Práctica Clínica sobre lactancia materna?	23/04/2017	Clinical Practice Guideline of the National health System of Spain
2314	Mejora tus cuidados: Enfermería basada en la evidencia	15/01/2017	Asociación Española de Pediatría
2270	Recomendaciones CDC: Prevención de infecciones en accesos	20/04/2015	CDC
2262	Recomendaciones para profesionales sanitarios que atienden a madres lactantes que precisan ingreso, pruebas...	30/07/2017	Asociación Española de Pediatría
2351	Método canguro. Guía práctica (OMS)	23/07/2015	World Health Organization
1900	Bronquiolitis: ¿Conoces qué evidencia existe en cada práctica que realizas?	11/03/2018	Cochrane
1345	OMS: dudas y mitos sobre inmunización y seguridad de las	15/04/2018	World Health Organization
1245	#Detrasdel20: Valoración y manejo del dolor en Neonatología y Pediatría	25/03/2018	Cochrane Joanna Briggs Institute UpToDate
1070	¿Tomas tus decisiones según la mejor evidencia?	07/01/2018	Cochrane
921	Guía para padres: encefalopatía hipóxica-isquémica e hipotermia terapéutica	08/06/2015	Clinical Practice Guideline of the National health System of Spain
915	¿Contacto piel con piel durante las cesáreas?	17/12/2017	Asociación Española de Pediatría
902	Cuidados desde el nacimiento	09/03/2015	Ministry of Health and Social Policy of Spain

file of blog users (health care provider, parent, caregiver...). Secondly, the mere fact of accessing the contents published in a blog on results of research and health information with evidence of a high-quality does not in and of itself prove a shift towards evidence-based clinical practice. Despite these limitations, the results of our study evince the need to continue investigating the use of blogs and social networks for the diffusion of scientific evidence on health care. Such research can provide the foundation for additional qualitative studies analysing whether the consumption of content published in health blogs leads to changes in clinical practice and in turn to improved health outcomes in the paediatric population.

CONCLUSIONS

We may conclude that data on the reach of the entries posted in the *Cuidando neonatos* blog and

disseminated through social networks show that blogging can be a tool that facilitates the consumption of information and therefore the implementation of evidence-based care in the field of neonatology.

It is our duty as health providers to develop skills in digital media allowing us to exploit the opportunities afforded by information and communication technologies to share high-quality information on health care and to disseminate and promote the consumption of evidence-based care contents.

CONFLICTS OF INTEREST

The author has no conflicts of interest to declare in relation to the preparation and publication of this article. A poster on the subject of the study was presented on the I Jornada de Cuidados de Salud Basados en la Evidencia de la Comunidad Valenciana, where it received an award for the second best poster.

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