

a prolonged stay and/or at risk of colonization due to prolonged exposure to broad-spectrum antibiotics, use of invasive medical devices (vascular access lines, catheters, etc.) or immunosuppression. The target patients were oncological patients and patients admitted to the paediatric intensive care unit.<sup>6</sup> The isolation of the first 2 VRE strains required changing or surveillance protocol to include these organisms. This new strategy not only allowed the detection of colonization by VRE, but also its transmission. Since we did not have data on the local prevalence of colonization by VRE, we could not determine whether the source of the spread was the strains involved in the cases of bacteraemia, the strains detected shortly after the modification of the protocol or even strains from other colonized patients whose carriage status would have been unknown because they predated the corrected surveillance protocol. This makes the change to the protocol all the more important, for while data from the EARS-Net and our own experience suggest that the local prevalence of VRE is low, the fact is that we did not know the baseline prevalence of VRE colonization in the population served by our hospital. After the correction to our protocol, we know with certainty that the prevalence is low, although we need to interpret this figure in the context of the containment measures that have been implemented. Our findings highlight the importance of surveillance of multidrug-resistant bacteria, even those with low rates of resistance at the local level, for the purpose of responding efficiently to their dissemination or to possible outbreaks.

## References

1. Eliecer Cano M, Domínguez MA, Ezpeleta Baquedano C, Martínez Martínez L, Padilla Ortega B, Ramírez de Arellano E. Cultivos de vigilancia epidemiológica de bacterias resistentes a los antimicrobianos de interés nosocomial. Martínez Martínez L (coordinador). Procedimiento de Microbiología Clínica. Cercenado E, Cantón (editores). Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica (SEIMC). 2007.
2. Bou Arévalo G, Chávez Sánchez F, Oliver Palomo A, Oteo Iglesias J. Métodos microbiológicos para la vigilancia del estado de portador de bacterias multirresistentes. 55. Oteo Iglesias J (coordinador). Procedimientos en Microbiología Clínica. Cercenado Mansilla E, Cantón Moreno R (editores). Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica (SEIMC). 2015.
3. Oteo J, Bou G, Chaves F, Oliver A. Métodos microbiológicos para la vigilancia del estado de portador de bacterias multirresistentes. *Enferm Infecc Microbiol Clin*. 2017;35:667–75.
4. Antimicrobial resistance surveillance in Europe 2014. Annual report of the European Antimicrobial Resistance Surveillance Network (EARS-Net). Surveillance reports. Available from: <http://ecdc.europa.eu> [accessed 2.03.18].
5. Tacconelli E, Cataldo MA, Dancer SJ, de Angelis G, Falcone M, Frank U, et al. ESCMID guidelines for the management of the infection control measures to reduce transmission of multidrug-resistant gram-negative bacteria in hospitalized patients. *Clin Microbiol Infect*. 2014;20 Suppl. 1:1–55.
6. Sadowska-klasa A, Piekarska A, Prejzner W, Bieniaszewska M, Hellmann A. Colonization with multidrug-resistant bacteria increase the risk of complications and a fatal outcome after allogeneic hematopoietic cell transplantation. *Ann Hematol*. 2018;97:509–17.

María José González-Abad\*, Mercedes Alonso Sanz

Sección de Microbiología, Servicio de Análisis Clínicos, Hospital Infantil Universitario Niño Jesús, Madrid, Spain

\* Corresponding author.

E-mail address: [mjglezabad@yahoo.es](mailto:mjglezabad@yahoo.es)

(M.J. González-Abad).

2341-2879/

© 2019 Published by Elsevier España, S.L.U. on behalf of Asociación Española de Pediatría. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

## Use of complementary and alternative medicine in the infant population in the Spanish National Health Survey<sup>☆</sup>



### Utilización de medicina complementaria y alternativa en la población infantil de la Encuesta Nacional de Salud de España

Dear Editor:

Complementary and alternative medicine (CAM), also referred to as “natural therapies”, encompass a heterogeneous group of therapies, practices and products used with

the aim of improving the health and wellbeing of the user and that are not part of conventional medicine.<sup>1</sup> In some countries where their use has a long historical tradition they are known as “traditional medicine”.

The estimates on the use of CAM vary substantially between countries and based on the study design. A systematic review in the European Union found a prevalence of 0.3–86% (Spain, 15–47%).<sup>2</sup> In the United States, the prevalence of its use has been estimated at 38% in adults and 12% in children. The use of CAM is associated with middle age, female sex and a middle-to-high socioeconomic status.<sup>1</sup>

There is considerable diversity in the legislation regulating the use of CAM in countries in the European Union.<sup>3</sup> In Spain, there is no specific national law regulating natural therapies. Nevertheless, Law 16/2003 and Royal Decree 1.277/2003 regulate the safety and quality of health care facilities, and it falls to the authority of autonomous region governments to authorise the opening of non-conventional treatment facilities.<sup>4</sup> Based on this legislation, these facilities should be led by a medical professional.

A situation analysis on natural therapies in Spain assessed 139 therapies used in the country and concluded that the

<sup>☆</sup> Please cite this article as: Tornero Patricio S, Charris-Castro L, García Gosalbes J. Utilización de medicina complementaria y alternativa en la población infantil de la Encuesta Nacional de Salud de España. *An Pediatr (Barc)*. 2019;91:268–271.

**Table 1** Bivariate analysis of visits in the past 12 months to complementary/alternative medicine providers by age group based on data from the 2011–2012 and 2017 NHSS.

NHSS year	Population	Homeopathy appointments					Acupuncture appointments					Naturopathy appointments					Other CAM appointments				
		Yes		No		$\chi^2$ test	Yes		No		$\chi^2$ test	Yes		No		$\chi^2$ test	Yes		No		$\chi^2$ test
		<i>n</i>	%	<i>n</i>	%	<i>P</i>	<i>n</i>	%	<i>n</i>	%	<i>P</i>	<i>n</i>	%	<i>n</i>	%	<i>P</i>	<i>n</i>	%	<i>n</i>	%	<i>P</i>
2011/12	Aged less than 15 years	172	2.4	7042	97.6	<.001	10	0.1	7203	99.9	<.001	39	0.5	7175	99.5	<.001	48	0.7	7165	99.3	<.001
	Aged 15 or more years	505	1.3	38211	98.7		395	1.0	38323	99.0		420	1.1	38298	98.9		596	1.5	38119	98.5	
2017	Aged less than 15 years	90	1.3	6882	98.7	0.055	9	0.1	6963	99.9	<.001	28	0.4	6944	99.6	<.001	68	1.0	6904	99.0	<.001
	Aged 15 or more years	404	1.0	38664	99.0		476	1.2	38593	98.8		454	1.2	38614	98.8		852	2.2	38217	97.8	
2011/12 vs 2017	Total population 2011/2012	677	1.5	45253	98.5	<.001	405	0.9	45526	99.1	.008	459	1.0	45473	99.0	.473	644	1.4	45284	98.6	<.001
	Total population 2017	494	1.1	45546	98.9		485	1.1	45556	98.9		482	1.0	45558	99.0		920	2.0	45121	98.0	
	Aged less than 15 years 2011/2012	172	2.4	7042	97.6	<.001	10	0.1	7203	99.9	.876	39	0.5	7175	99.5	0.227 (.227)	48	0.7	7165	99.3	.041
	Aged less than 15 years 2017	90	1.3	6882	98.7		9	0.1	6963	99.9		28	0.4	6944	99.6		68	1.0	6904	99.0	

CAM, complementary and alternative medicine; NHSS, National Health Survey of Spain (data available from the 2011/2012 edition).

**Table 2** Bivariate analysis of the consumption of homeopathic and natural medicinal products in the past 2 weeks by age group based on data from the 2006, 2011–2012 and 2017 NHSS.

NHSS year	Population	Homeopathic products					Natural medicine products				
		Yes		No		$\chi^2$ test <i>P</i>	Yes		No		$\chi^2$ test <i>P</i>
		<i>N</i> <sup>o</sup>	%	<i>N</i> <sup>o</sup>	%		<i>N</i> <sup>o</sup>	%	<i>N</i> <sup>o</sup>	%	
2006	Age < 15 years	94	1.4	6758	98.6	.429	82	1.2	6772	98.8	<.001
	Age ≥ 15 years	466	1.3	36 651	98.7		1588	4.3	35 535	95.7	
2011–2012	Age < 15 years	108	1.5	7107	98.5	<.001	65	0.9	7150	99.1	<.001
	Age ≥ 15 years	394	1.0	38 329	99.0		929	2.4	37 790	97.6	
2017	Age < 15 years	65	0.9	6907	99.1	.007	59	0.8	6913	99.2	<.001
	Age ≥ 15 years	251	0.6	38 811	99.4		843	2.2	38 218	97.8	
2006 vs 2011–2012 vs 2017	Total population 2006	560	1.3	43 409	98.7	<.001	1670	3.8	42 307	96.2	<.001
	Total population 2011–2012	502	1.1	45 436	98.9		994	2.2	44 940	97.8	
	Total population 2017	316	0.7	45 718	99.3		902	2	45 131	98.0	
	Age < 15 years 2006	94	1.4	6758	98.6	.007	82	1.2	6772	98.8	.080
	Age < 15 years 2011–2012	108	1.5	7107	98.5		65	0.9	7150	99.1	
	Age < 15 years 2017	65	0.9	6907	99.1		59	0.8	6913	99.2	

NHSS, National Health Survey of Spain.

available scientific evidence on their efficacy was scarce at best. Although in most cases these therapies are harmless, they are not completely free of risk.<sup>5</sup>

With the aim of gaining knowledge on the use of CAM in the paediatric population of Spain, we analysed the data for the variables “visits to CAM professionals in the past 12 months” and “consumption of homeopathic and natural medicinal products in the past 2 weeks” obtained in the National Health Surveys of Spain conducted by the Instituto Nacional de Estadística (National Institute of Statistics) for years 2006, 2011–2012 and 2017.<sup>6</sup> The first variable was not documented in the 2006 edition of the survey. We performed bivariate analyses using the  $\chi^2$  test with the R statistical software, version 3.5.1. To this end, we created contingency tables with the data obtained in the surveys (absolute and relative frequencies). We defined statistical significance as a *p*-value of less than 0.05.

The prevalence of children that had sought care in homeopathy clinics decreased from 2.4% in the 2011–2012 survey to 1.3% in the 2017 survey (*P* < .001). This decrease had also occurred in the total population, and was in contrast with the stability in time of the visits to naturopathy and acupuncture providers and with the increase in the use of “other” therapies (Table 1). The proportion of individuals that made appointments for CAM services was higher in the adult population for all modalities analysed except homeopathy, with a higher proportion of users in the group aged less than 15 years. While the proportion of boys aged less than 15 years that used homeopathy services was significantly greater compared to that of adult men (2011–2012 survey: 2.4% vs 0.7% [*P* < .001]; 2017 survey: 1.5% vs 0.6% [*P* < .001]), in the female population there were no statistically significant differences between these age groups in the 2011–2012 survey (*P* = .061), while in the 2017 survey, the proportion of attendance to homeopathy clinics was lower in girls aged less than 15 years (1.0% vs 1.5%; *P* = .043). These differences between age groups are mainly due to a higher

use of homeopathy services by adult women compared to adult men, as the bivariate analyses of attendance to CAM clinics by sex performed in the subset of the population aged less than 15 years revealed no statistically significant differences in any of the 2 surveys included in these analyses.

The consumption of homeopathic and natural products in the 2 weeks prior to the survey revealed a progressive decrease from the 2006 to the 2017 surveys (Table 2). Children aged less than 15 years proportionally consumed more homeopathic products and fewer natural products compared to adults, with no statistically significant differences in the bivariate analysis by sex performed in the paediatric population.

The estimated use of CAM based on the last 3 national health surveys in Spain was lower compared to the prevalence found by other studies conducted in Spain and other countries. The limitations inherent in the use of surveys for data collection and differences in the designs of studies on the use of CAM hinder the estimation and comparison of its prevalence. Homeopathy is the type of CAM used most frequently by the paediatric population in Spain, with a proportion of users exceeding the proportion in the adult population, which, given the lack of adequate scientific evidence to corroborate its benefits, highlights the urgent need for specific regulation of its use in order to guarantee, at least, the safety of these treatments.

## References

1. National Center for Complementary and Integrative Health. The use of complementary and alternative medicine in the United States. 2013. Available from: <http://nccam.nih.gov/news/camstats/2007/camsurvey.fs1.htm> [accessed 10.08.18].
2. Eardley S, Bishop FL, Prescott P, Cardini F, Brinkhaus B, Santos-Rey K, et al. A systematic literature review of complementary and alternative medicine prevalence in EU. *Forsch*

- Komplementärmed. 2012;19:18–28. Available from: <http://www.karger.com/doi/10.1159/000342708> [accessed 10.08.18].
3. Wiesener S, Falkenberg T, Hegyi G, Hök J, Roberti di Sarsina P, Fønnebo V. Legal status and regulation of complementary and alternative medicine in Europe. *Forsch Komplementärmed.* 2012;19:29–36. Available from: <https://www.karger.com/Article/Abstract/343125> [accessed 10.08.18].
  4. Ministerio de Sanidad y Consumo. Real Decreto 1277/2003, de 10 de octubre, por el que se establecen las bases generales sobre autorización de centros, servicios y establecimientos sanitarios. *Boletín Oficial del Estado*; 2013. Available from: <https://www.boe.es/buscar/act.php?id=BOE-A-2003-19572> [accessed 10.08.18].
  5. Ministerio de Sanidad, Política Social e Igualdad del Gobierno de España. Análisis de la situación de las terapias naturales. 2011. Available from: <http://www.mspsi.gob.es/novedades/docs/analisisSituacionTNatu.pdf> [accessed 10.08.18].
  6. Instituto Nacional Estadística, España. Encuesta Nacional de Salud. 2018. Available from: [http://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica\\_C&cid=1254736176783&menu=resultados&secc=1254736195650&idp=1254735573175](http://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176783&menu=resultados&secc=1254736195650&idp=1254735573175) [accessed 27.07.18].

Sebastián Tornero Patricio<sup>a,\*</sup>, Liliana Charris-Castro<sup>b</sup>, Julia García Gozalbes<sup>c</sup>

<sup>a</sup> *Centro de Salud El Porvenir, Distrito Sevilla de Atención Primaria, Servicio Andaluz de Salud, Sevilla, Spain*

<sup>b</sup> *Unidad de Cuidados Intensivos, Hospital Universitario Virgen del Rocío, Servicio Andaluz de Salud, Sevilla, Spain*

<sup>c</sup> *Dispositivo de Cuidados Críticos y Urgencias (DCCU), Área de Gestión Sanitaria Sur de Sevilla, Servicio Andaluz de Salud, Sevilla, Spain*

\* Corresponding author.

*E-mail address:* [sebastornero@yahoo.es](mailto:sebastornero@yahoo.es)

(S. Tornero Patricio).

2341-2879/

© 2019 Published by Elsevier España, S.L.U. on behalf of Asociación Española de Pediatría. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).