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## The proliferation of gynaecological scientific societies and their financial transparency: an Italian survey

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SCHOLARONE™  
Manuscripts

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3 1 THE PROLIFERATION OF GYNAECOLOGICAL SCIENTIFIC SOCIETIES: AN  
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5 2 ITALIAN SURVEY  
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## 23 ABSTRACT

24 **Objectives:** To determine the number of Italian obstetrical and gynaecological societies and  
25 to ascertain the level of financial transparency, particularly of those associations providing  
26 CME activities.

27 **Design:** Internet-based national survey.

28 **Setting:** Academic obstetrical and gynaecological department.

29 **Participants:** Currently active, not privately owned, non-religious, apolitical, obstetrical and  
30 gynaecological associations.

31 **Intervention:** Scientific societies were identified using a combination of search terms,  
32 examining the website of the two main Italian obstetrical and gynaecological organisations,  
33 and through direct contacts. Individual societies' websites were searched and scrutinised by  
34 two independent investigators.

35 **Primary and secondary outcome measures:** Number of Italian obstetrical and  
36 gynaecological, and overspecialised organisations; variation in the number of associations  
37 over time; provision of CME activity; declaration of competing interests of board members;  
38 published annual financial balance; details of restricted and unrestricted industry grants or  
39 individual donations; quantification of industry support for educational events.

40 **Results:** The initial web search yielded 55 professional obstetrical and gynaecological  
41 associations, but eight were excluded for various reasons. Of the remaining 47 professional  
42 associations 18 covered both obstetrics and gynaecology, four were overspecialised in  
43 obstetrics, 25 in gynaecology, and 46 provided CME activities. The number of societies has  
44 quadrupled in the last 35 years, increasing at a mean rate of one additional society per year.  
45 The headquarters of the associations were hosted at the offices of a professional congress

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3 46 organiser in 13 instances, and advertisements or links to industry products were present in 12  
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5 47 societies' websites. No information was publicly available regarding competing interests and  
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7 48 source of funding.  
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10 49 **Conclusions:** The number of obstetrical and gynaecological societies is remarkably high in  
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12 50 Italy, particularly in the gynaecological area. This may result in wastage of resources.  
13  
14 51 Transparency of societies regarding financial issues and competing interests is non-existent,  
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16 52 and health authorities' interventions seem warranted, especially considering that almost all  
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18 53 associations provide CME activities.  
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## 54 STRENGTHS AND LIMITATIONS OF THE STUDY

- 55 • Different search strategies were adopted to identify all currently active Italian  
56 obstetrical and gynaecological scientific societies, i.e., Internet, executive personnel of  
57 the two main national organisations, and direct contacts with some presidents and  
58 past-presidents.
- 59 • Two independent investigators retrieved information, and data were abstracted on  
60 standardised forms.
- 61 • Taking a selected picture of a specific country is a limit of the study that impedes  
62 generalisation of the findings.

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## 64 CONTRIBUTION TO AUTHORSHIP

65 PVe, PVi and ES conceived and planned the article. All the authors searched the web to  
66 identify Italian obstetrical and gynaecological societies. PVe and MPF scrutinised the  
67 societies' websites, retrieved and tabulated data. All the authors interpreted the data. PVe  
68 drafted the manuscript and PVi, MPF, and ES revised it. All the authors approved the final  
69 version of the manuscript.

70

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72 This research received no specific grant from any funding agency in the public, commercial  
73 or not-for-profit sectors.

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## 75 COMPETING INTEREST STATEMENT

76 All authors have completed the ICMJE uniform disclosure form at  
77 [www.icmje.org/coi\\_disclosure.pdf](http://www.icmje.org/coi_disclosure.pdf) and declare: no support from any organisation for the  
78 submitted work; no financial relationships with any organisations that might have an interest  
79 in the submitted work in the previous three years; no other relationships or activities that  
80 could appear to have influenced the submitted work; PVe is associate editor of Human  
81 Reproduction Update and past president of the World Endometriosis Society; PVi is associate  
82 editor of Human Reproduction; ES is deputy editor of Human Reproduction.

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## 84 ETHICAL APPROVAL STATEMENT

85 Ethic Committee's approval was not required for this survey.

## 86 INTRODUCTION

87 The core mission of medical societies is dissemination of scientific information. They foster  
88 research in distinct fields of medicine, promote medical education, and develop clinical  
89 guidelines. Authoritative medical associations are also influential in modulating practice,  
90 counselling administrators, advising politicians regarding public healthcare programmes, and  
91 regulating professional conduct. Thus, the social role of these organisations entails  
92 exceedingly important clinical and ethical implications.[1]

93 The past decades have witnessed a tendency toward proliferation of medical societies  
94 focussed on subspecialty areas or even single diseases, paralleling the general trend of modern  
95 medicine in the direction of over-specialisation. The intrinsic benefit of creating small and  
96 overspecialised associations is the possibility of increasing knowledge on specific disorders.  
97 However, compared with major national and international organisations, small societies may  
98 have lesser impact regarding public advocacy, information of healthcare decision makers, and  
99 definition of public health systems' strategies. Moreover, small societies generally have  
100 restricted financial resources, thus their possibility to fund research seems limited. In this  
101 regard, the proliferation of overspecialised medical associations could also be viewed as a  
102 potential wastage of precious resources that could be invested more efficiently in the interest  
103 of patients.

104 In addition, the quality of the information disseminated by small scientific  
105 organisations should be scrutinised with particular care. Intellectual independence is essential,  
106 especially when providing continuing medical education (CME) activity,[2] but  
107 fragmentation and overspecialisation may expose medical societies to increased financial  
108 vulnerability and, hypothetically, this could result in an increase in the risk of undue  
109 influence of pharmaceutical, biotechnology, and device industries. Overall, competing

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3 110 interests of professional medical societies are more serious than individual ones.[3] However,  
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5 111 contrary to the great attention given to individual and institutional competing interests, those  
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7 112 of professional medical associations have received little coverage in spite of the above ethical  
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9 113 implications and the potential substantial consequences on prescribing practices.[3] Although  
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11 114 competing interests and bias are not synonymous, the former is a demonstrated risk factor for  
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13 115 the latter.[2]

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17 116 The phenomenon of proliferation of professional organisations appears particularly  
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19 117 flourishing in the gynaecological field, probably owing to the multitude of issues regarding  
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21 118 women's health. Therefore, we decided to conduct a survey in order to examine the condition  
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23 119 of obstetrical and gynaecological societies in Italy. The primary objectives were to determine  
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25 120 the overall number of associations and to verify whether a trend exists towards an increase in  
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27 121 the number of overspecialised organisations over time. Secondary aims were to ascertain the  
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29 122 societies' level of transparency regarding general competing interests and funding from  
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31 123 industry, and to evaluate if a relation exists between the provision of CME activity and the  
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33 124 degree of financial transparency.

## 34 35 36 37 38 125 METHODS

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40 126 This survey was conducted retrieving and analysing information from the Internet. As  
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42 127 publicly available data were used, the present study was exempt from Ethics Committee's  
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44 128 approval. The study was restricted to professional organisations currently active in Italy.  
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46 129 Combinations of Italian terms "obstetrics", "obstetrical", "gynaecology", "gynaecological",  
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48 130 "society", "association", "federation", "organisation", "Italian", and "Italy" were used. In  
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50 131 addition, the websites of the two major national obstetrical and gynaecological societies  
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52 132 (Società Italiana di Ginecologia e Ostetricia, SIGO; Associazione Ostetrici Ginecologi  
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54 133 Ospedalieri Italiani, AOGOI) were examined with the objective of identifying all the  
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3 134 affiliated overspecialised organisations in the field. All authors independently conducted the  
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5 135 initial search from October 31 to November 7, 2014. After completion of the list of  
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7 136 associations, these were categorised, based on their name, into combined obstetrical and  
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9 137 gynaecological, obstetrical only, and gynaecological only organisations.

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12 Individual societies' websites were then independently searched and scrutinised from  
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14 139 November 8 to December 12, 2014 by two authors (PVe and MPF), in order to verify the  
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16 140 correctness of the initial categorisation, and to ascertain whether the association was public,  
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18 141 and with a defined mission, a regular board, and published bylaws. Individual or privately  
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20 142 owned organisations, those not specifically aimed at physicians, and those with a religious or  
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22 143 political profile were excluded. Moreover, data were collected on standardised abstraction  
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24 144 forms regarding the year of establishment of the society, provision of CME activity, whether  
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26 145 the headquarters was independent or located at the offices of a professional congress  
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28 146 organiser, and if advertisements or links to industry websites were present. In cases where the  
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30 147 information on year of establishment was missing, the executive staffs of the above two major  
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32 148 national obstetrical and gynaecological societies were consulted by emails and phone calls.  
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34 149 Moreover, PVe contacted directly the presidents and selected board members of some  
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36 150 associations in order to obtain missing data from original documents.

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39 151 We planned to assess financial transparency examining the societies' websites for the  
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41 152 following data and information: published annual financial balance, declaration of competing  
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43 153 interests of board members and executive personnel, details of restricted and unrestricted  
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45 154 industry grants or individual donations, and quantification of industry support for annual  
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47 155 meetings, courses, and other educational events.  
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3 156 A final extraction form was compiled from the two separate evaluation forms, with  
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5 157 correction or resolution of any discrepancies between abstractors by consensus reached after  
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7 158 discussion or further conjoint re-examination of selected societies' websites.  
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10 159 The chi-squared test based on a 1x2 table was used to examine the distribution of  
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12 160 obstetrical only and gynaecological only associations at the end of the study period. A  
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14 161 balanced distribution (expected probability = 0.5) was considered a reasonable assumption.  
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## 17 162 RESULTS

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20 163 The initial web search yielded 55 professional obstetrical and gynaecological associations, but  
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22 164 two were immediately excluded because they were renowned as being privately owned  
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24 165 (Società Italiana Studi di Medicina della Riproduzione, SISMeR) or individually conducted  
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26 166 (Fondazione Graziottin per la Cura del Dolore nella Donna). Examination of societies'  
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28 167 websites resulted in the exclusion of three organisations with defined socio-political or  
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30 168 religious characteristics (Associazione Italiana Ginecologi Ostetrici Cattolici, AICOG;  
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32 169 Società Italiana Procreazione Responsabile, SIPRe; Libera Associazione Italiana Ginecologi  
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34 170 per l'Applicazione della Legge 194/78, LAIGA). Another association was excluded as  
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36 171 apparently not currently active (Società Italiana di Endoscopia e Laserterapia in Ginecologia,  
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38 172 SIELG). Only one reviewer excluded two further organisations. Conjoint re-examination of  
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40 173 the two websites demonstrated that the activity of one association (Fondazione Confalonieri  
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42 174 Ragonese) was limited to drafting clinical practice recommendations on behalf of AOGOI,  
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44 175 whereas the activity of the other one (Associazione Italiana di Ostetricia, AIO) was aimed  
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46 176 mainly at midwives rather than physicians. A shared decision was taken to exclude also these  
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48 177 latter two organisations.  
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54 178 Summary characteristics of the remaining 47 professional associations are shown in  
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56 179 Table 1. Individual societies' details are included in online supplementary Table 2.  
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180 TABLE 1. Summary characteristics of professional obstetrical and gynaecological associations extracted from societies' websites. Italy, December 2014.

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182	Clinical and	No.	CME	Online	Online	Disclosure of	Disclosure of	Disclosure of	Offices with	Advertisements
183	research area	with	activity*	society	annual	competing	financial support	industry	professional	or links to
184		website		bylaws	financial	interests of	(industry grants	support for	congress	industries'
185					balance	presidents, board	and individual	conferences	organiser and	websites
186						members and	donations)		CME provider	
187						executive staff				
189	Obstetrics and	15	18	13	not available	not available	not available	not available	5	8
190	gynaecology									
191	(n=18)									
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193										
194	Obstetrics	3	4	2	not available	not available	not available	not available	1	0
195	only									
196	(n=4)									
197	Gynaecology	22	24	17	not available	not available	not available	not available	7	4
198	only									
199	(n=25)									
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202 Data are numbers.

203 \*When an association's website was not found, CME activity was identified scrutinising the online programmes of the society's conferences and courses.

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3 204 A total of 24 organisations are currently affiliated with SIGO ([http://www.sigo.it/societa-](http://www.sigo.it/societa-affiliate/)  
4 [affiliate/](http://www.sigo.it/societa-affiliate/)), and seven with AOGOI  
5 205 (<http://www.aogoi.it/opencms/sezioniOriz/societaAffiliate/index.html>). Eighteen "generalist"  
6 206 associations covered both obstetrics and gynaecology (the two major plus 16 minor societies),  
7 207 four were overspecialised in obstetrical topics only, and 25 were overspecialised in  
8 208 gynaecological topics only. In this latter group, seven organisations dealt with infertility.  
9 209 After exclusion of the 18 "generalist" organisations, the distribution of societies' main topics  
10 210 was substantially skewed towards gynaecology (25/29; 86%). This finding is significantly  
11 211 different from the expected 50% ( $\chi^2_1 = 15.21$ ;  $P < .0001$ ). A total of 423 board members were  
12 212 identified, including the presidential trios, treasures and secretaries. Forty-eight members  
13 213 were included at the same time in the board of two distinct organisations, 14 members in the  
14 214 board of three organisations, and five in the board of four organisations.  
15 215

16 216 Forty-six associations provided CME activities. Seven societies did not appear to have  
17 217 a website. In these cases, CME activity was identified scrutinising the online programmes of  
18 218 the societies' conferences and courses. In 12 cases, including those in which a website could  
19 219 not be found, the year of establishment of the association was obtained from SIGO or AOGOI  
20 220 executive personnel, and from direct contacts between PVE and presidents or past-presidents.  
21 221 In the period 1980-2014 the number of Italian obstetrical and gynaecological societies has  
22 222 quadrupled, starting from 12 and increasing at a mean rate of one additional society per year  
23 223 in the last 35 years (Figure 1).

24 224 Society's bylaws were published online in 32/40 (80%) identified websites. The  
25 225 headquarters of the associations were independent in 27/40 instances, and hosted at the offices  
26 226 of a professional congress organiser in the remaining 13. Advertisements or links to industry  
27 227 products were present in 12/40 societies' websites. No information was publicly available in  
28 228 any website regarding the source of financial support of the society, as in no case was the

229 annual financial balance published online, and no data was accessible on restricted and  
230 unrestricted industry grants or individual donations, as well as industry sponsorship for annual  
231 meetings, courses, or other educational events. Moreover, competing interests of board  
232 members and executive staff were not disclosed.

## 233 DISCUSSION

234 The results of the present survey on Italian obstetrical and gynaecological societies depict an  
235 academic scenario that warrants consideration. A remarkably high number of organisations  
236 was identified, characterised by a progressive and impressive increase over time, especially  
237 during the last decades. Taking a selected picture of a specific country is a limit of our study  
238 that impedes generalisation of the findings. However, we considered this survey as a sort of  
239 pilot study that allowed us defining the general structure of an investigation of this type,  
240 identifying reasonable endpoints and specific problems. We are not aware of similar surveys  
241 published in the scientific literature, and plan to extend the study to other countries based on  
242 the scheme here tested.

243 The observed disproportion in the distribution of overspecialised associations  
244 decidedly cannot be explained by unequal distribution of the clinical content of the two main  
245 areas of the addressed specialty, obstetrics and gynaecology. Thus, it could be hypothesised  
246 that Italian gynaecologists were more scientifically proactive compared with their obstetrical  
247 colleagues, but we could not find evidence supporting this interpretation. Indeed, searching  
248 PubMed for “obstetrics AND Italy” and “gynaecology AND Italy” yielded a fairly similar  
249 number of publications, that is, 8056 compared with 8352 (51% versus 49%; accessed on  
250 March 24, 2015). An alternative theoretical explanation of this odd observation is that  
251 commercial sponsorship skewed the topics in favour of disorders from which a larger profit  
252 could be made. In this regard, gynaecology might reveal a more lucrative medical area

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3 253 compared with obstetrics, at least in terms of market for several costly new drugs, surgical  
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5 254 devices, and diagnostic tools. The first Open Payment data shows that several manufacturers  
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7 255 of drugs or devices for gynaecologists are among the top highest spending US companies by  
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9 256 payment to physicians, and gynaecology is second only to orthopaedic surgery in terms of  
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11 257 highest value of shares held by physicians.[4] Nonetheless, a direct relation between the  
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13 258 number of existing scientific societies in a given specialty area and the degree of industry  
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15 259 influence on the relevant medical community appears very difficult to demonstrate.

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19 260 The financial transparency of the included organisations could not be assessed, as we  
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21 261 were unable to retrieve relevant, publicly available information. This could be regarded as a  
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23 262 further weakness of the study, but we believe that this is indeed a crucial finding, and that  
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25 263 bringing such an issue into the spotlight could be important *per se*, especially when CME  
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27 264 activity is involved. Seven associations did not even appear to have a website, thus equalling  
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29 265 total lack of publicly available information of any kind. Unfortunately, online publishing of  
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31 266 annual budgets and data regarding financial support is not a legal requirement for Italian  
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33 267 scientific societies, and we could not identify alternative sources of information. Therefore,  
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35 268 we could not verify if and to what extent financial relations were in place between Italian  
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37 269 obstetrical and gynaecological associations and industry, and we are unable to reject the  
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39 270 hypothesis that they do not exist. According to Kassirer, "the extent of financial support of  
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41 271 these organisations and the connections between industry support and any possible influence  
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43 272 on society policies and practices are a closely guarded secret".[5]

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49 273 Almost all the identified societies provided CME activity through conferences and  
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51 274 courses. Lack of disclosure, in societies' websites, regarding industry support for scientific  
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53 275 events involving CME activity (or lack of a website) is neither surprising nor unlawful, but  
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55 276 raises ethical concerns. Some relevant information can be retrieved from the website of the  
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57 277 Agenzia Nazionale per i Servizi Sanitari Regionali (Age.na.s), which manages the national  
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3 278 CME program on behalf of the Italian Ministry of Health. However, data are uneasy to  
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5 279 retrieve and apparently not systematically or promptly updated. Moreover, although the  
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7 280 industries sponsoring the events are listed, the financial support is expressed as a relative  
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9 281 percentage of an overall budget that is not quantified  
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11 282 ([http://ecm.agenas.it/BancaDati/SB\\_Lista\\_Cerca\\_Accr.asp](http://ecm.agenas.it/BancaDati/SB_Lista_Cerca_Accr.asp); accessed on March 23, 2015). We  
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13 283 also tried to retrieve relevant information directly from individual regional administrations,  
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15 284 but without success.

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19 285 Independently of legal requirements, we believe that scientific societies should  
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21 286 provide data on industry support of CME activity spontaneously, and should publish it on  
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23 287 their websites.[6, 7] This seems particularly important when the organisations providing CME  
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25 288 activity do not have independent headquarters, but are hosted by professional congress  
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27 289 organisers (13 cases in our survey, 8 of which in the gynaecological group), or when  
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29 290 advertisements or links to industries' products are included in their websites.

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33 291 Competing interests of members of societies' boards and executive committees were  
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35 292 not disclosed, and this appears somewhat concerning.[1, 8, 9] In general, finding experts  
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37 293 without competing interests is difficult, and ideally they could all be concentrated in the  
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39 294 boards of a few major obstetrical and gynaecological societies. The multiplication of boards  
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41 295 and committees needed as a consequence of the proliferation of smaller organisations,  
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43 296 particularly in the gynaecological area, implies that most of their directors and executives will  
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45 297 have competing interests, simply because there are no sufficient experts without them to cover  
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47 298 the available positions. This may have implications regarding a series of societal activities,  
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49 299 including the production of practice guidelines.[10] This issue could be emphasised if  
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51 300 members with competing interests serve in the board of more than one association.  
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3 301 According to Moynihan,[11] the pharmaceutical industry is currently attempting an  
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5 302 audacious repositioning, that is acting as a partner with health services in the provision of  
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7 303 patient care instead of the supplier of one element of it. Therefore, the marketing divisions of  
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9 304 pharmaceutical industries and device producers appear to be increasingly targeting medical  
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11 305 societies in addition to individual physicians. Within this strategy, establishing solid ties may  
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13 306 reveal easier with smaller rather than larger associations. Moreover, the proliferation of  
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15 307 professional organisations might also result in an overall increase in medical overuse.  
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17 308 Therefore, it is currently unclear if the observed progressive growth in the number of  
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19 309 gynaecological associations, together with the relative congresses and courses, does more  
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21 310 good than harm to the end user, that is, the patient.[12] Future research should aim at  
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23 311 verifying whether this phenomenon results exclusively in enhanced knowledge and translates  
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25 312 in better care of women's health, or if it also facilitates the dissemination of partly biased  
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27 313 information within the scientific community.  
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32 314 Finally, Italian scientists should lobby for transparency on public disclosure of  
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34 315 competing interests of societies providing CME activity, and should put pressure on the  
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36 316 Ministry of Health, asking to grant CME credits to conferences and educational events only  
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38 317 provided that attendees are rendered fully and publicly aware of financial connections  
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40 318 between the organising scientific society and industry, including quantitative information  
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42 319 regarding the monetary support to the considered meetings.[13, 14] Of note, a policy on  
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44 320 rigorous control over competing interests has been adopted by some surgical scientific  
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46 321 societies, without detrimental consequences in terms of finances, membership, attendance at  
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48 322 annual meetings, or leadership recruitment.[15-17] More in general, a sort of Sunshine Act  
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50 323 focussed on scientific societies, in addition to that aimed at individual doctors, and with  
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52 324 potential application to multiple settings and jurisdictions, could reveal of great benefit for  
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54 325 patients, practicing physicians, and clinical investigators.[8, 9, 13] Although disclosure does  
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3 326 not resolve or eliminate competing interests,[18, 19] a complete lack of publicly available and  
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5 327 easily retrievable information on the above issues, nowadays appears hardly justifiable and  
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7 328 ethically questionable.  
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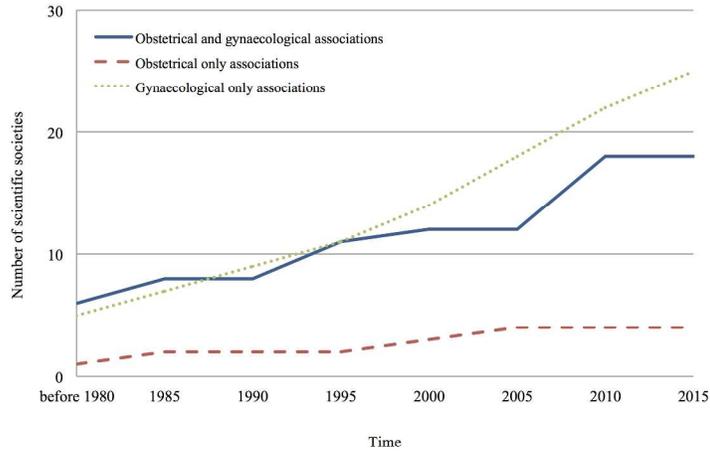
## 371 FIGURE LEGEND

372 Variation in the number of Italian obstetrical and gynaecological societies over time.

373 Continuous line, associations covering both obstetrics and gynaecology; dashed line,

374 obstetrical only associations; dotted line, gynaecological only associations.

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209x297mm (300 x 300 DPI)

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TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014.

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
AGEO Associazione Ginecologi Extra Ospedalieri (Association of off hospital gynaecologists) <a href="http://www.ageo-federazione.it">http://www.ageo-federazione.it</a>	1996	Yes	Yes	No	No	No	No	Yes	No
AGICO Associazione Ginecologi Consultoriali (Association of family clinic gynaecologists) <a href="http://www.agico.it/Agico-2007/home.asp">http://www.agico.it/Agico-2007/home.asp</a>	1985	Yes	Yes	No	No	No	No	No	Yes
AGIF Associazione Ginecologi Italiani in Formazione (Association of in-training Italian gynaecologists) <a href="http://www.giovaniginecologi.org/home/">http://www.giovaniginecologi.org/home/</a>	2009	Yes	Yes	No	No	No	No	Yes	No
AGITE Associazione Ginecologi Territoriali (Association of territorial gynaecologists) <a href="http://www.agite.eu/">http://www.agite.eu/</a>	2007	Yes	Yes	No	No	No	No	No	No

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
AGUI Associazione Ginecologi Universitari Italiani (Association of Italian academic gynaecologists) <a href="http://www.aguionline.it/">http://www.aguionline.it/</a>	1992	Yes	Yes	No	No	No	No	Yes	Yes
AIGE Associazione Italiana di Ginecologia Endocrinologica (Italian association of gynaecological endocrinology) <a href="http://www.ginendo.it/">http://www.ginendo.it/</a>	2003	Yes	No	No	No	No	No	No	No
AIPE Associazione Italiana pre-eclampsia (Italian Branch of the International Society for the Study of Hypertension in Pregnancy) <a href="http://www.preeclampsia.it/">http://www.preeclampsia.it/</a>	2005	Yes	No	No	No	No	No	No	No
AIUG Associazione Italiana di Urologia Ginecologica e del Pavimento Pelvico (Italian association of gynaecologic urology and of pelvic floor) <a href="http://www.aiug.eu/aiug.asp">http://www.aiug.eu/aiug.asp</a>	1989	Yes	No	No	No	No	No	No	Yes

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
AOGOI Associazione Ostetrici Ginecologi Ospedalieri Italiani (Association of hospital Italian gynaecologists and obstetricians) <a href="http://www.aogoi.it/">http://www.aogoi.it/</a>	1948	Yes	Yes	No	No	No	No	No	Yes
ATGO Associazione Triveneta di Ginecologia e Ostetricia (North-eastern association of gynaecology and obstetrics) <a href="http://www.atgo.it/">http://www.atgo.it/</a>	1934	Yes	No	No	No	No	No	No	Yes
CECOS Centro Studi e Conservazione Ovociti e Sperma Umani (Center for the study and preservation of human oocytes and sperm) <a href="http://www.cecos.it/">http://www.cecos.it/</a>	1984	Yes	Yes	No	No	No	No	No	Yes
CIGO Confederazione Italiana Ginecologi Ospedalieri (Italian confederation of hospital gynaecologists) <a href="http://www.cigonline.it/">http://www.cigonline.it/</a>	2008	Yes	Yes	No	No	No	No	No	Yes

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
FIOG Federazione Italiana di Ostetricia e Ginecologia (Italian federation of obstetrics and gynaecology) <a href="http://www.fiogonline.it/">http://www.fiogonline.it/</a>	2008	Yes	Yes	No	No	No	No	Yes	No
GILT Ginecologi Liguri del Territorio (Territorial gynaecologists of Liguria)	1994	Yes <sup>†</sup>	No website found						
GLUP Gruppo di lavoro in uroginecologia pavimento pelvico (Working group in pelvic floor urogynaecology) <a href="http://dev-test.glup.it/">http://dev-test.glup.it/</a>	2010	Yes	Yes	No	No	No	No	Yes	No
GREG Gruppo Romano di Endoscopia Ginecologica (Roman group of gynaecological endoscopy)	1995	Yes <sup>†</sup>	No website found						

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
LAMM Società Laziale Abruzzese Marchigiana Molisana di Ostetricia e Ginecologia (Lazio, Abruzzo, Marche, and Molise society of obstetrics and gynaecology)	1971	Yes <sup>†</sup>	No website found						
PRO-FERT Società Italiana di Conservazione della Fertilità (Italian society for the preservation of fertility) <a href="http://profert.org/">http://profert.org/</a>	2007	Yes	Yes	No	No	No	No	No	No
SCCL Società Campano Calabro Lucana di Ostetricia e Ginecologia (Campania, Calabria, and Lucania society of obstetrics and gynaecology)	1947	Yes <sup>†</sup>	No website found						
SEGI Società Italiana di Endoscopia Ginecologica (Italian society of gynaecological endoscopy) <a href="http://www.segionline.it/">http://www.segionline.it/</a>	2000	Yes	Yes	No	No	No	No	No	Yes

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
SIC Società Italiana Contraccezione (Italian society for contraception) <a href="http://www.sicontraccezione.it/">http://www.sicontraccezione.it/</a>	2004	Yes	Yes	No	No	No	No	Yes	No
SICHIG Società Italiana di Chirurgia Ginecologica (Italian society of gynaecological surgery) <a href="http://www.sichig.it/">http://www.sichig.it/</a>	1989	Yes	Yes	No	No	No	No	No	No
SICMIG Scuola Italiana di Chirurgia Mini Invasiva Ginecologica (Italian school of minimally invasive gynaecological surgery) <a href="http://www.sicmig.org/">http://www.sicmig.org/</a>	2005	Yes	Yes	No	No	No	No	Yes	No
SICPCV Società Italiana di Colposcopia e Patologia Cervico Vaginale (Italian society of colposcopy and cervical and vaginal pathology) <a href="http://www.colposcopiaitaliana.it/">http://www.colposcopiaitaliana.it/</a>	1980	Yes	Yes	No	No	No	No	No	No

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
SIDIP Società Italiana di Diagnosi Prenatale e Medicina Materno Fetale (Italian society of prenatal diagnosis and feto-maternal medicine) <a href="http://www.ilfeto.it/site/">http://www.ilfeto.it/site/</a>	1998	Yes	Yes	No	No	No	No	No	No
SIDR Società Italiana della Riproduzione (Italian society of reproduction) <a href="http://www.sidr.it/cms/view.html">http://www.sidr.it/cms/view.html</a>	1999	Yes	Yes	No	No	No	No	Yes	No
SIEOG Società Italiana di Ecografia Ostetrica e Ginecologica e Metodologie Biofisiche (Italian society of obstetrical and gynaecological ultrasonography and bio-physical methodologies) <a href="http://www.sieog.it/">http://www.sieog.it/</a>	1984	Yes	Yes	No	No	No	No	No	Yes
SIEPAM Società Italiana Endometriosi e Patologia Mestruale (Italian society of endometriosis and menstrual disorders) <a href="http://www.siepam.it/">http://www.siepam.it/</a>	2014	Yes	No	No	No	No	No	Yes	No

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
SIERR Società Italiana di Embriologia, Riproduzione e Ricerca (Italian society of embryology, reproduction and research) <a href="http://www.sierr.it/">http://www.sierr.it/</a>	1998	Yes	Yes	No	No	No	No	No	No
SIFES E MR Società Italiana di Fertilità e Sterilità e Medicina della Riproduzione (Italian society of fertility, sterility and reproductive medicine) <a href="http://sifes.it/">http://sifes.it/</a>	1965	Yes	Yes	No	No	No	No	No	No
SIFIOG Società Italiana di Fitoterapia e Integratori in Ostetricia e Ginecologia (Italian society of phytoterapeutics and supplements in obstetrics and gynaecology) <a href="http://www.sifiog.it/">http://www.sifiog.it/</a>	2008	Yes	No	No	No	No	No	Yes	No
SIFR Società Italiana di Fisiopatologia della Riproduzione (Italian society for pathophysiology of reproduction)	1982	Yes <sup>†</sup>	No website found						

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
SIGIA Società Italiana di Ginecologia dell'Infanzia e dell'Adolescenza (Italian society of childhood and adolescent gynaecology) <a href="http://www.sigia.it/">http://www.sigia.it/</a>	1978	Yes	Yes	No	No	No	No	No	No
SIGITE Società Italiana di Ginecologia della Terza Età (Italian society for third age gynaecology) <a href="http://www.sigite.it/drupal/index.php">http://www.sigite.it/drupal/index.php</a>	1991	Yes	Yes	No	No	No	No	No	No
SIGO Società Italiana di Ginecologia e Ostetricia (Italian society of gynaecology and obstetrics) <a href="http://www.sigo.it/home/">http://www.sigo.it/home/</a>	1892	Yes	Yes	No	No	No	No	No	Yes
SIM Società Italiana della Menopausa (Italian society of menopause) <a href="http://www.simenopausa.it/">http://www.simenopausa.it/</a>	2011	Yes	No	No	No	No	No	Yes	No

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

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SIMP Società Italiana di Medicina Perinatale (Italian society of perinatal medicine) <a href="http://www.simponline.it/site/home.asp">http://www.simponline.it/site/home.asp</a>	1984	Yes	Yes	No	No	No	No	Yes	No
SIOG Società Italiana di Oncologia Ginecologica (Italian society of gynaecological oncology) <a href="http://www.siog.it">http://www.siog.it</a>	1977	Yes	Yes	No	No	No	No	No	Yes
SIOS Società Italiana Ospedaliera Sterilità (Italian hospital society for sterility) <a href="http://www.siosteril.it/">http://www.siosteril.it/</a>	2003	Yes	Yes	No	No	No	No	No	No
SIPGO Società Italiana per la Psicosomatica in Ginecologia e Ostetricia (Italian society for psychosomatics in gynaecology and obstetrics) <a href="http://www.sipgo.org/">http://www.sipgo.org/</a>	1993	Yes	Yes	No	No	No	No	No	No

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

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SIPO Società Italiana Policistosi Ovarica (Italian society of polycystic ovary syndrome)	2012	Yes <sup>†</sup>	No website found						
SIPPO Società Italiana di Psicoprofilassi Ostetrica (Italian society for obstetrical psycho-prophylaxis)	1966	Yes <sup>†</sup>	No website found						
SIPUF Società Italiana di Pelvi Perineologia e Urologia Femminile e Funzionale (Italian society of pelvi-perineology and female and functional urology) <a href="http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do">http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do</a>	2007	Yes	Yes	No	No	No	No	Yes	No
SIRONG Società Italiana per la Ricerca Ostetrico-Neonatale-Ginecologica (Italian society for the obstetrical, neonatal, and gynaecological research) <a href="http://www.sirong.it/">http://www.sirong.it/</a>	2008	Yes	Yes	No	No	No	No	No	Yes

TABLE 2. Details of the characteristics of professional obstetrical and gynaecological associations extracted from individual societies' websites.\*

Italy, December 2014 (continued).

Name of the association/society	Established Year	CME activity	Online society bylaws	Online annual financial balance	Disclosure of competing interests of presidents, board members, and executive staff	Disclosure of financial support (industry grants and individual donations)	Disclosure of industry support for conferences	Offices with professional congress organiser and CME provider	Advertisements or links to industries' websites
SIUD Società italiana di urodinamica (Italian society of urodynamics) <a href="http://www.siud.it/">http://www.siud.it/</a>	1977	Yes	Yes	No	No	No	No	No	No
SLOG Società Lombarda di Ostetricia e Ginecologia (Lumbardy society of obstetrics and gynaecology) <a href="http://www.slog.org/">http://www.slog.org/</a>	1950	Yes	Yes	No	No	No	No	No	No
SMIC Società Medica Italiana per la Contraccezione (Italian medical society for contraception) <a href="http://www.smicontraccezione.it/">http://www.smicontraccezione.it/</a>	2006	No	No	No	No	No	No	No	No

\*In 12 cases, including those in which a website was not found, the year of establishment of the association/society was obtained from the two major national professional associations (i.e., Società Italiana di Ginecologia and Ostetricia and Associazione Ostetrici e Ginecologi Ospedalieri Italiani), and presidents or past presidents of the societies.

†When an association's website was not found, CME activity was identified scrutinising the online programmes of the society's conferences and courses.

# BMJ Open

## The proliferation of gynaecological scientific societies and their financial transparency: an Italian survey

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2015-008370.R1
Article Type:	Research
Date Submitted by the Author:	14-Jul-2015
Complete List of Authors:	Vercellini, Paolo; Università degli Studi, Department of Women's and Children's Health Viganò, Paola; San Raffaele Scientific Institute, Frattaruolo, Maria; Università degli Studi, Department of Women's and Children's Health Somigliana, Edgardo; Fondazione Ca' Granda Ospedale Maggiore Policlinico, Department of Women's and Children's Health
<b>Primary Subject Heading</b>:	Obstetrics and gynaecology
Secondary Subject Heading:	Medical education and training, Ethics
Keywords:	SCIENTIFIC SOCIETIES, OBSTETRICS, GYNAECOLOGY, COMPETING INTERESTS

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Manuscripts

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3 1 THE PROLIFERATION OF GYNAECOLOGICAL SCIENTIFIC SOCIETIES AND THEIR  
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5 2 FINANCIAL TRANSPARENCY: AN ITALIAN SURVEY  
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11 4 Paolo Vercellini, M.D. <sup>1,2</sup>

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14 5 Paola Viganò, Ph.D. <sup>2,3</sup>

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17 6 Maria Pina Frattaruolo, M.D. <sup>1,2</sup>

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20 7 Edgardo Somigliana, M.D., Ph.D. <sup>2,4</sup>

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34 13 IRCCS Ca' Granda - Ospedale Maggiore Policlinico, via Manfredi Fanti 6, 20122 Milan,  
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48 19 Tel: +39.02.5503.2917; fax: +39.02.5503.2331; e-mail: [paolo.vercellini@unimi.it](mailto:paolo.vercellini@unimi.it)

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51 20 Key words: scientific societies, obstetrics, gynaecology, competing interests.

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54 21 Word count: 4132

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## 23 ABSTRACT

24 **Objectives:** To determine the number of Italian obstetrical and gynaecological societies, and  
25 to ascertain their financial transparency.

26 **Design:** Internet-based national survey and website content analysis.

27 **Setting:** Academic obstetrical and gynaecological department.

28 **Participants:** Currently active, not privately owned, non-religious, apolitical, obstetrical and  
29 gynaecological associations.

30 **Intervention:** Scientific societies were identified using combinations of search terms, and  
31 examining the website of the two main Italian obstetrical and gynaecological organisations.  
32 Individual societies' websites were scrutinised by two independent investigators.

33 **Primary and secondary outcome measures:** Number of Italian obstetrical and  
34 gynaecological associations and its variation over time; 12 information categories defining the  
35 general characteristics of the societies and their websites, and the financial transparency of the  
36 associations.

37 **Results:** The initial web search yielded 56 professional obstetrical and gynaecological  
38 associations but nine were excluded for various reasons. Of the remaining 47 professional  
39 associations, 17 covered both obstetrics and gynaecology, four were specialised in obstetrics,  
40 26 in gynaecology and 46 provided CME activities. The number of societies has quadrupled  
41 in the last 35 years, increasing at a mean rate of one additional society per year. The  
42 headquarters of the associations were located in the offices of a professional congress  
43 organiser in 15 instances, and advertisements or links to industry products were present in 12  
44 societies' websites. Bylaws were accessible in 32 websites. No information was publicly

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3 45 available regarding competing interests, financial statements, and quantitative external  
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5 46 funding.  
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8 47 **Conclusions:** The number of obstetrical and gynaecological societies is remarkably high in  
9  
10 48 Italy, particularly in the gynaecological area. This may result in waste of resources. Despite  
11  
12 49 CME activity provision, transparency of societies regarding financial issues and competing  
13  
14 50 interests was almost non-existent, thus substantiating several investigators' concerns on the  
15  
16 51 risk of blurring the distinction between education and marketing. Policies regulating  
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18 52 interactions between medical associations and industry are available and should be  
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21 53 implemented.  
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## 54 STRENGTHS AND LIMITATIONS OF THE STUDY

- 55 • Different search strategies were adopted to identify all currently active Italian  
56 obstetrical and gynaecological scientific societies, i.e., Internet, executive personnel of  
57 the two main national organisations, and direct contacts with some presidents and  
58 past-presidents.
- 59 • Two independent investigators retrieved information, abstracted data on standardised  
60 forms and conducted a website content analysis on 12 items regarding the general  
61 characteristics of the medical associations and their websites, as well as societies'  
62 financial transparency.
- 63 • Taking a selected picture of a specific country is a limitation of the study and impedes  
64 generalisation of the findings.

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66 ETHICAL APPROVAL STATEMENT

67 The Ethic Committee’s approval was not required for this survey.

For peer review only

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## 68 INTRODUCTION

69 The core mission of medical societies is dissemination of scientific information.[1, 2] They  
70 foster research in distinct fields of medicine, promote medical education, and develop clinical  
71 guidelines. Authoritative medical associations are also influential in modulating practice,  
72 counselling administrators, advising politicians regarding public healthcare programmes, and  
73 regulating professional conduct. Thus, the social role of these organisations entails  
74 exceedingly important clinical and ethical implications.[1-4]

75 However, some authors maintain that economical aspects are progressively eroding  
76 the moral foundations of medical associations, increasing the tension between self-interest  
77 and ethical principles. [1] In particular, a progressive imbalance has been observed in funding  
78 derived from membership dues and grants and contracts awarded by government or charitable  
79 foundations, in favour of support from for-profit organisations [1, 5-7]. This situation may  
80 generate a conflict of interest (COI), which has been defined as “a set of circumstances that  
81 creates a risk that professional judgment or actions regarding a primary interest will be unduly  
82 influenced by a secondary interest”. [8] The primary interest of a scientific society is to  
83 promote the highest quality of care also through the education of its members. [9] The  
84 secondary interest is, in this case, the financial well-being of the society together with the  
85 financial profit of some commercial entities. A COI may occur not only if a professional  
86 medical organisation (PMA) receives money from manufacturers of drugs or devices used in  
87 the same medical area of interest as the society, but also when individual officers of the  
88 organisation have personal financial ties to industries that could influence their actions and  
89 decisions within the PMA. Of note, COI is a condition, not a behaviour. In other words, when  
90 a COI exists, no actual unethical conduct has necessarily arisen. [5] However, although COI  
91 and bias are not synonymous, the former is a demonstrated risk factor for the latter.[10]

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3 92 Two different approaches have been suggested to deal with COIs of PMAs, i.e., a  
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5 93 divestment strategy (progressively discontinuing commercial support), and a management  
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7 94 strategy (disclosing COIs and adopting rules to limit their potentially pernicious effects).[5, 9]  
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10 95 As the operating budget of many PMAs is substantially based on industry funding, the latter  
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12 96 policy has generally been preferred, purportedly to ensure stability in organisation functioning  
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14 97 and avoid curtailments in services to members. [1, 5-7, 11] To be efficient, any strategy to  
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16 98 “manage” COIs about interactions with industry, should be based on thorough financial  
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18 99 transparency, particularly, but not exclusively, regarding commercial support of annual  
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20 100 meetings. In fact, most PMAs base their financial sustainability on revenues from periodic  
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22 101 congresses, as in these occasions industry generally purchases exhibit hall space, sponsors  
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24 102 conference sessions or satellite symposia, pays the registration fee for a variable number of  
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26 103 attendees, and buys advertising opportunities.[2, 9, 12, 13].  
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30 104 Complicating further the above scenario, the past decades have witnessed a tendency  
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32 105 toward proliferation of medical societies focussed on subspecialty areas or even single  
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34 106 diseases, paralleling the general trend of modern medicine in the direction of over-  
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36 107 specialisation. The intrinsic benefit of creating small and subspecialty associations is the  
37  
38 108 possibility of increasing knowledge on specific disorders. However, compared with major  
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40 109 national and international organisations, small societies may have less impact regarding  
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42 110 public advocacy, information of healthcare decision makers, and definition of public health  
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44 111 system strategies. Moreover, small societies generally have restricted financial resources, thus  
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46 112 their possibility to fund research seems limited. In this regard, the proliferation of  
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48 113 subspecialty medical associations could also be viewed as a potential waste of precious  
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50 114 resources that could be invested more efficiently in the interest of patients.  
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55 115 In addition, the quality of the information disseminated by small scientific  
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57 116 organisations should be scrutinised with particular care. Intellectual independence is essential,  
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3 117 especially when providing continuing medical education (CME) activity,[10, 14-16] but  
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5 118 fragmentation and subspecialisation may expose medical societies to increased financial  
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7 119 vulnerability and, hypothetically, this could result in an increase in the risk of undue influence  
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9 120 of pharmaceutical, biotechnology, and device industries. Noteworthy, the percentage of the  
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11 121 overall national funding for CME activities provided by industry is particularly high in Italy,  
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13 122 with reported figures varying from 60%[17] to almost 100%[18] of the total expenditure.

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17 123 The phenomenon of proliferation of professional organisations appears to be  
18  
19 124 particularly intense in the gynaecological field, probably owing to the multitude of issues  
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21 125 regarding women's health. Therefore, we decided to conduct a survey in order to examine the  
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23 126 condition of obstetrical and gynaecological societies in Italy. The primary objectives were to  
24  
25 127 determine the overall number of associations and to verify whether a trend exists towards an  
26  
27 128 increase in the number of subspecialty organisations over time. Secondary aims were to  
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29 129 ascertain the societies' level of transparency regarding general competing interests and  
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31 130 funding from industry, and to evaluate if a relation exists between the provision of CME  
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33 131 activity and the degree of financial transparency.

## 34 35 36 37 38 132 METHODS

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41 133 This survey was conducted by retrieving and analysing information from the Internet. As  
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43 134 publicly available data were used, the present study was exempt from the Ethics Committee's  
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45 135 approval. The study was restricted to professional organisations currently active in Italy.  
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47 136 Websites were identified using 'Google', consistently ranked as the most popular search  
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49 137 engine (<http://www.google.com>). Combinations of Italian terms "obstetrics", "obstetrical",  
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51 138 gynaecology", "gynaecological", "society", "association", "federation", "organisation",  
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53 139 "Italian", and "Italy" were used. In addition, the websites of the two major national obstetrical  
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55 140 and gynaecological societies (Società Italiana di Ginecologia e Ostetricia, SIGO;  
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3 141 Associazione Ostetrici Ginecologi Ospedalieri Italiani, AOGOI) were examined with the  
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5 142 objective of identifying all the affiliated subspecialty organisations in the field. All authors  
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7 143 independently conducted the initial search from October 31 to November 7, 2014. After  
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9 144 completion of the list of associations, these were categorised, based on their name, into  
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11 145 combined obstetrical and gynaecological, obstetrical only, and gynaecological only  
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13 146 organisations.

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17 147 Individual societies' websites were then independently scrutinised from November 8  
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19 148 to December 12, 2014, and from June 15 to 19, 2015, by two authors (PVe and MPF), in  
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21 149 order to verify the correctness of the initial categorisation, and to ascertain whether the  
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23 150 association was public, and with a defined mission and a regular board. Individual or  
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25 151 privately owned organisations, those not specifically aimed at physicians, and those with a  
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27 152 religious or political profile were excluded. Moreover, information was collected on  
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29 153 standardised abstraction forms on 12 items defining two domains, i.e., i) the general  
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31 154 characteristics of the society and its website (year of establishment; whether the headquarters  
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33 155 were independent or located in the offices of a professional congress organiser and accredited  
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35 156 CME provider; online availability of society's bylaws; provision of CME activity; inclusion of  
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37 157 sponsored sessions or symposia in the society's last annual meeting program; presence on  
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39 158 society's website of industry advertisement or links to industries' websites), and ii) the  
40  
41 159 financial transparency of the association (discussion of financial COIs in society's bylaws;  
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43 160 adoption of a policy for interactions with industry; availability of financial COI disclosures of  
44  
45 161 presidential trio, board members and executive staff; online availability of annual financial  
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47 162 statement; disclosure of restricted and unrestricted industry grants and individual donations;  
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49 163 indication of industry sponsorship in the last annual meeting program based on informative  
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51 164 printed text in addition to mere logo inclusion).

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3 165 In cases where the information on a PMA's year of establishment was missing, the  
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5 166 executive staff of the above two major national obstetrical and gynaecological societies were  
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7 167 consulted by email and telephone. Moreover, PVe directly contacted the presidents and  
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9 168 selected board members of some associations in order to obtain missing data from original  
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11 169 documents. A final extraction form was compiled from the two separate evaluation forms,  
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13 170 with correction or resolution of any discrepancies between abstractors by consensus reached  
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15 171 after discussion or further joint re-examination of selected societies' websites.  
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19 172 In addition, we used the Health on the Net Foundation Code of Conduct [19] for  
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21 173 medical websites, with the objective of examining the degree of transparency of the  
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23 174 healthcare information provided on the websites of the two major national obstetrical and  
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25 175 gynaecological associations, SIGO and AOGOI. The HONcode is an instrument developed to  
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27 176 assess the intent of a website to publish accurate information, and it includes items on  
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29 177 transparency, financial disclosure, and advertising policy [19].  
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## 33 178 RESULTS

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36 179 The initial web search yielded 56 professional obstetrical and gynaecological associations, but  
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38 180 two were immediately excluded because they were known to be privately owned (Società  
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40 181 Italiana Studi di Medicina della Riproduzione, SISMeR) or individually managed  
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42 182 (Fondazione Graziottin per la Cura del Dolore nella Donna). Examination of societies'  
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44 183 websites resulted in the exclusion of three organisations with defined socio-political or  
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46 184 religious characteristics (Associazione Italiana Ginecologi Ostetrici Cattolici, AICOG;  
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48 185 Società Italiana Procreazione Responsabile, SIPRe; Libera Associazione Italiana Ginecologi  
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50 186 per l'Applicazione della Legge 194/78, LAIGA). One association was excluded because its  
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52 187 activities were unclear and not consistent with those of a regular scientific society  
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54 188 (Confederazione Italiana Ginecologi Ospedalieri, CIGO). Another association was apparently  
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3 189 no longer currently active (Società Italiana di Endoscopia e Laserterapia in Ginecologia,  
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5 190 SIELG). Only one reviewer excluded two other organisations. Joint re-examination of the two  
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7 191 websites demonstrated that the activity of one association (Fondazione Confalonieri  
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9 192 Ragonese) was limited to drafting clinical practice recommendations on behalf of AOGOI,  
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11 193 whereas the activity of the other one (Associazione Italiana di Ostetricia, AIO) was aimed  
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13 194 mainly at midwives rather than physicians. A shared decision was taken to exclude the latter  
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15 195 two organisations.

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19 196 Summary characteristics of the remaining 47 professional associations are shown in  
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21 197 Table 1. Individual societies' details regarding the general characteristics of the associations  
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23 198 and their websites as well as PMAs' financial transparency are included in online  
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26 199 Supplementary table 1.  
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TABLE 1. General characteristics and financial transparency of Italian professional obstetrical and gynaecological associations extracted from their websites.

Clinical and research area	No. with website	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity*	Sponsored session/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COIs of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
Obstetrics and gynaecology (n=17)	14	7	12	17	4	8	0	0	0	0	0	8
Obstetrics only (n=4)	4	1	2	4	0	0	0	0	0	0	0	0
Gynaecology only (n=26)	23	7	18	25	5	4	0	0	0	1	0	7

Data are numbers. COI = conflict of interest. CME = continuing medical education. PMA = professional medical association.

\*When an association's website was not found or when the information was not indicated on website, CME activity was identified scrutinising the online programmes of the society's conferences and courses.

† Specific directives regulating professional obstetrical and gynaecological associations' conduct in case of private/commercial financial support.

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3 227 A total of 24 organisations were affiliated with SIGO (<http://www.sigo.it/societa-affiliate/>),  
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5 228 and six with AOGOI (<http://www.aogoi.it/opencms/sezioniOriz/societaAffiliate/index.html>).  
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7 229 Seventeen "generalist" associations covered both obstetrics and gynaecology (the two main  
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9 230 ones plus 15 minor societies), four were specialised in obstetrical areas only, and 26 were  
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11 231 specialised in gynaecological areas only. In this latter group, seven organisations dealt with  
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13 232 infertility, four with pelvic and endoscopic surgery, four with urogynaecology, and two with,  
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15 233 respectively, cervical pathology, contraception, and climacteric. After exclusion of the 17  
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17 234 "generalist" organisations, the distribution of societies' main area of interest was substantially  
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19 235 skewed towards gynaecology (26/30; 87%).  
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24 236 Six societies did not appear to have a website. In 12 cases, including those in which a  
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26 237 website could not be found, the year of establishment of the association was obtained from  
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28 238 SIGO or AOGOI executive personnel, and from direct contact between PVE and presidents or  
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30 239 past-presidents. In the period 1980-2014 the number of Italian obstetrical and gynaecological  
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32 240 societies has quadrupled, starting from 12 and increasing at a mean rate of one society per  
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34 241 year in the last 35 years (Figure 1).  
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38 242 The headquarters of the associations were independent in 26/41 instances, and located  
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40 243 in the offices of a professional congress organiser and accredited CME provider in the  
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42 244 remaining 15. Society's bylaws were published online on 32/41 (78%) of the identified  
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44 245 websites. Forty-six associations provided CME activities. When an official society's website  
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46 246 was not identified or when the information was not indicated on website, CME activity was  
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48 247 verified by scrutinising the online programmes of the societies' conferences and courses. A  
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50 248 total of 9/46 associations included sponsored sessions or symposia in their last annual meeting  
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52 249 program. Advertisements or links to industry products were present on 12/41 societies'  
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54 250 websites (8 in the obstetrical and gynaecological subgroup and 4 in the gynaecological only  
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56 251 subgroup).  
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3 252 With regard to financial transparency, in none of the 32 bylaws posted online was the  
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5 253 issue of COIs mentioned. No association had apparently developed a policy for interactions  
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7 254 with industry. A total of 423 board members were identified, including the presidential trios,  
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9 255 treasures and secretaries. Forty-eight members were included at the same time on the board of  
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11 256 two distinct organisations, 14 members on the board of three organisations, and five on the  
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13 257 board of four organisations. The competing interest disclosures of board members and  
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15 258 executive staff were never posted on societies' websites.

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19 259 The annual financial statement was published online in only one case and, with this  
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21 260 exception, no information was publicly available on any other website regarding the society's  
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23 261 source of financial support, as no data was accessible on restricted and unrestricted industry  
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25 262 grants or individual donations, nor on industry sponsorship for the last annual meetings,  
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27 263 courses, or other educational events.

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31 264 Evaluation of transparency of SIGO and AOGOI websites according to the HONcode  
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33 265 principles [19] identified the some lack of information. In particular, neither website  
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35 266 attributed certain health/medical information to an author; the sources of the funding of both  
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37 267 sites were not clearly described; advertising was not always identified as such; and the sites  
38  
39 268 were part of a link/banner exchange but there was no specific description about the site  
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41 269 advertising policy. Moreover, the AOGOI website contained information from external  
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43 270 source, but no reference to the source was made, whereas the SIGO website did not provide  
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45 271 the last modification date and made claims relating to the benefit or performance of a specific  
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47 272 medical treatment, commercial product or service based on the author's personal research or  
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49 273 opinion.

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54 274 Both websites provided free CME e-learning courses supported by pharmaceutical  
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56 275 industries manufacturing drugs or commercial products used specifically in those medical  
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3 276 areas on which courses were focused. Finally, the SIGO website included descriptions of  
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5 277 some campaigns supported by industries with direct or indirect interests in related medical  
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7 278 fields.

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10 279 DISCUSSION

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13 280 The results of the present survey on Italian obstetrical and gynaecological societies and  
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15 281 content analysis of their websites depict an academic scenario that warrants consideration. A  
16  
17 282 remarkably high number of organisations was identified, characterised by a progressive and  
18  
19 283 impressive increase over time, especially during the last decades. Of note, the gynaecological  
20  
21 284 subgroup was characterised by several replications, particularly in the fertility and sterility,  
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23 285 pelvic and endoscopic surgery, and urogynaecology areas. The reason for these duplications is  
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25 286 not readily understandable, because a single, large organisation would probably be more  
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27 287 efficacious in accomplishing the mission of the society, centralising resources and reducing  
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29 288 costs.

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34 289 The observed disproportion in the distribution of subspecialty associations decidedly  
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36 290 cannot be explained by unequal distribution of the clinical content of the two main areas of  
37  
38 291 the addressed specialty, obstetrics and gynaecology. Thus, it could be hypothesised that  
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40 292 Italian gynaecologists were more scientifically proactive compared with their obstetrical  
41  
42 293 colleagues, but we could not find evidence to support this interpretation. An alternative  
43  
44 294 theoretical explanation of this odd observation is that commercial sponsorship skewed the  
45  
46 295 topics in favour of disorders from which a larger profit could be made. In this regard,  
47  
48 296 gynaecology might prove a more lucrative medical area compared with obstetrics, at least in  
49  
50 297 terms of markets for several costly new drugs, surgical devices, and diagnostic tools. The first  
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52 298 Open Payment data shows that several manufacturers of drugs or devices for gynaecologists  
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54 299 are among the top highest spending US companies for payment to physicians, and  
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3 300 gynaecology is second only to orthopaedic surgery in terms of the highest value of shares held  
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5 301 by physicians.[20] Nonetheless, a direct relation between the number of existing scientific  
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7 302 societies in a given specialty area and the degree of industry influence on its medical  
8  
9 303 community appears difficult to demonstrate.

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12 304 Financial transparency of the organisations included was almost non-existent, as we  
13  
14 305 were unable to retrieve relevant, publicly available information, with the exception of the  
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16 306 annual financial statement of a single, small gynaecological association. Six associations did  
17  
18 307 not appear to have a website, thus providing no publicly available information. Unfortunately,  
19  
20 308 online publishing of annual budgets and data regarding financial support is not a legal  
21  
22 309 requirement for Italian scientific societies, and we could not identify alternative sources of  
23  
24 310 information. We could not verify if and to what extent financial relations were in place  
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26 311 between Italian obstetrical and gynaecological associations and industry, and we are unable to  
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28 312 reject the hypothesis that they did not exist. This also applies to commercial support of annual  
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30 313 meetings and educational events, although in this case the obstetrical and gynaecological area  
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32 314 would constitute an exception with respect to data on overall industry funding of Italian CME  
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34 315 activities.[17, 18]

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37 316 We used websites as the main source of information regarding a society's financial  
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39 317 transparency. It could be argued that websites can be useful to identify national PMAs, but  
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41 318 they provide no accurate specific information on COIs and commercial funding. This  
42  
43 319 constitutes a limitation of our study, as we could have sent a questionnaire directly to  
44  
45 320 individual medical organisations or interviewed the president and executive officers.  
46  
47 321 However, the aim of our survey was to verify whether information regarding COIs of board  
48  
49 322 members and industry support of Italian gynaecological societies was easily and publicly  
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51 323 accessible, which nowadays means posted on a society's website [16]. The concept of  
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53 324 transparency should not imply the need for individual investigation into a society's board  
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3 325 members or executive staff by doctors and citizens to acquire this type of information, not to  
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5 326 mention the unlikelihood of actually obtaining the data of interest.  
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8 327 Almost all the identified societies provided CME activity through conferences and  
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10 328 courses. Lack of disclosure, in societies' websites, regarding industry support for scientific  
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12 329 events involving CME activity (or lack of a website) is neither surprising nor unlawful, but  
13  
14 330 raises ethical concerns. Some relevant information can be retrieved from the website of the  
15  
16 331 Agenzia Nazionale per i Servizi Sanitari Regionali (Age.na.s), which manages the national  
17  
18 332 CME program on behalf of the Italian Ministry of Health. However, data are not easy to  
19  
20 333 retrieve and apparently not systematically updated. Moreover, although the industries  
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22 334 sponsoring the events are listed, the financial support is expressed as a relative percentage of  
23  
24 335 an overall budget that is not quantified  
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26 336 ([http://ecm.agenas.it/BancaDati/SB\\_Lista\\_Cerca\\_Accr.asp](http://ecm.agenas.it/BancaDati/SB_Lista_Cerca_Accr.asp); accessed on March 23, 2015). We  
27  
28 337 also tried to retrieve relevant information directly from individual regional authorities, but  
29  
30 338 without success. Independently of legal requirements, we believe that scientific societies  
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32 339 should provide data on industry support of CME activity spontaneously, and should post it on  
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34 340 their websites. This seems particularly important when the organisations delivering CME  
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36 341 activity, which is a source of income for the provider, do not have independent headquarters,  
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38 342 but are hosted by professional congress organisers that may receive money also from  
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40 343 pharmaceutical companies and manufacturers of medical devices,[21, 22] or when  
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42 344 advertisements or links to industry products are included in their websites. However, without  
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44 345 a formal evaluation of CME “products” (i.e., scientific quality and compliance with society  
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46 346 mandate), no conclusions can be drawn.  
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53 347 Competing interests of members of the boards and executive committees of a society  
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55 348 were also not disclosed, and this appears somewhat concerning.[1, 5, 9] In general, finding  
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57 349 experts without competing interests is difficult, and ideally they would all be concentrated in  
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3 350 the boards of a few major obstetrical and gynaecological societies. The multiplication of  
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5 351 boards and committees needed as a consequence of the proliferation of smaller organisations,  
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7 352 particularly in the gynaecological area, implies that most of their directors and executives will  
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9 353 have COIs, simply because there are not sufficient experts without COIs to cover all the  
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11 354 available positions. This may have implications regarding a society's activities, including the  
12  
13 355 development of practice guidelines.[23] This issue would be greater if members with COIs  
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15 356 serve on the board of more than one association.  
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19 357 Taking a selected picture of a specific country is a limit of our study that impedes  
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21 358 generalisation of the findings. However, we considered this survey as a sort of pilot study that  
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23 359 allowed us to define a general scheme to be adopted for an investigation of this type,  
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25 360 identifying reasonable endpoints and specific information categories. We are not aware of  
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27 361 similar surveys published in the scientific literature, and believe that the model tested by us  
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29 362 could also be used to investigate the condition of PMAs in different specialties and different  
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31 363 countries.  
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35 364 Rothman and co-workers described in detail the many potential threats to PMAs'  
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37 365 integrity, identified specific COIs that may affect the organisations' activity, and formulated  
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39 366 guidelines to prevent undue industry influence aimed at divestment from commercial support  
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41 367 rather than management of financial competing interests.[2] In fact, the authors maintain that  
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43 368 "PMAs should work toward a complete ban on pharmaceutical and medical device industry  
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45 369 funding (\$0), except for income from journal advertising and exhibit hall fees".[2]  
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49 370 The Council of Medical Specialty Societies has issued a code for interactions with  
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51 371 companies that includes seven core principles covering COI, financial disclosure, independent  
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53 372 program development, and independent leadership.[24] With regard to transparency, the code  
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55 373 states that "Societies will make their conflict of interest policies and/or forms available to  
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3 374 their members and the public”, and “Societies will disclose company support (at a minimum  
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5 375 educational grants, corporate sponsorships, charitable contributions, and support of research  
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7 376 grants), making this information available to their members and the public”, and “Societies  
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9 377 will disclose all financial and uncompensated relationships that key society leaders and  
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11 378 members of the board of directors of the society’ membership organization have with  
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13 379 companies, making this information available to their members and the public”. [24] Up to  
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15 380 now, the code has been signed by 32 member societies of the Council and by 17 non-member  
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17 381 societies.[25]

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21 382 Examples already exist of PMAs disclosing on their website the breakdown of  
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23 383 industry contribution toward the consolidated revenue of the society, as well as disclosure  
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25 384 statements reported by each member of the board of directors [26], and publishing in meeting  
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27 385 programs the company from which payment is received, the amount of payment by  
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29 386 categories, and the specific type of relationship held with the company.[27] A policy on  
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31 387 rigorous control over COIs has been implemented by several medical and surgical scientific  
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33 388 societies,[18, 26-32] in some cases without detrimental consequences in terms of finances,  
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35 389 membership, attendance at annual meetings, or leadership recruitment.[27, 29, 30]

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40 390 According to Moynihan,[33] the pharmaceutical industry is currently attempting an  
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42 391 audacious repositioning, that is acting as a partner with health services in the provision of  
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44 392 patient care instead of the supplier of one element of it. Therefore, the sales and marketing  
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46 393 departments of pharmaceutical industries and device manufacturers appear to be increasingly  
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48 394 targeting medical societies in addition to individual physicians.[3-5, 9] Within this strategy,  
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50 395 establishing solid ties may prove easier with smaller rather than larger associations.  
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52 396 Moreover, the proliferation of professional organisations might also result in an overall  
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54 397 increase in medical overuse. Therefore, it is currently unclear if the observed progressive  
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56 398 growth in the number of gynaecological associations, together with the relative congresses  
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3 399 and courses, does more good than harm to patients.[34] Future research should aim at  
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5 400 verifying whether this phenomenon results exclusively in enhanced knowledge and translates  
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7 401 into better care of women's health, or if it facilitates the dissemination of partly biased  
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9 402 information within the scientific community.

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13 403 Italian scientists should lobby for transparency of public disclosure of COIs of  
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15 404 societies providing CME activity and on implementation of efficient societies' policies for  
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17 405 interactions with industry. Moreover, the Ministry of Health should only grant CME credits to  
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19 406 conferences and educational events provided that attendees are fully and publicly aware of  
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21 407 financial connections between the scientific society and any industry involved, including  
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23 408 quantitative information regarding funding for the meetings.[35-37] More in general, a sort of  
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25 409 Sunshine Act focussed on scientific societies and educational activity, in addition to that  
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27 410 aimed at individual doctors, and with potential application to multiple settings and  
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29 411 jurisdictions, could prove of great benefit for patients, practising physicians, and clinical  
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31 412 investigators. A complete lack of transparency on the above issues nowadays appears hardly  
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33 413 justifiable and ethically questionable. In fact, COIs of PMAs are more serious than individual  
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35 414 ones, because, where distorted information is disseminated at educational events, the effect  
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37 415 would be multiplied with potential substantial consequences on prescribing practices of many  
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39 416 of the society's members.[3-5] Moreover, the definition of "conflict of interest" itself, in the  
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41 417 case of PMAs, may be somewhat misleading as it has been pointed out that a medical  
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43 418 organisation's commitment to patients and public health is a moral duty and not a mere  
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45 419 interest.[5]

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49 420 Collaboration between PMAs and research and development departments of  
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51 421 pharmacological companies and medical devices manufactures is very important for the  
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53 422 advancement of medicine. This form of interaction is welcome in the interest of patients and  
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55 423 society. On the other hand, collaboration between PMAs and company marketing departments  
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3 424 on CME events and society annual meetings, may blur the distinction between the interest of  
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5 425 the PMA, which is education, and that of industry, which is selling products.  
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8 426 Despite individual or organisational COIs, the officers of many medical associations  
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10 427 may well be disinterested and passionate, and provide valuable activities for the benefit of  
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12 428 society members. However, members of PMAs are not the end users of drugs and devices  
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14 429 marketed by industry; rather they are the gatekeepers entrusted to make evidence-based  
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16 430 recommendations to the real end user, that is, the patient.[9] When the citizens eventually  
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18 431 have to pay the bill, either directly or indirectly through national health systems, the conduct  
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20 432 of PMAs may not be only based on the presumed good faith of their officers, but should  
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22 433 contemplate the provision of publicly available and easily accessible data on financial  
23  
24 434 competing interests. Transparency and disclosures do not eliminate COIs,[38, 39] but may  
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26 435 enable doctors and lay people to contextualise the scientific information disseminated in  
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28 436 various ways by medical organisations, putting it in the right perspective.  
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## 437 CONTRIBUTION TO AUTHORSHIP

438 PVe, PVi and ES conceived and planned the article. All the authors searched the web to  
439 identify Italian obstetrical and gynaecological societies. PVe and MPF scrutinised the  
440 societies' websites, retrieved and tabulated data. All the authors interpreted the data. PVe  
441 drafted the manuscript and all the authors revised it. All the authors approved the final version  
442 of the manuscript.

443

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447

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449 All authors have completed the ICMJE uniform disclosure form at  
450 [www.icmje.org/coi\\_disclosure.pdf](http://www.icmje.org/coi_disclosure.pdf) and declare: no support from any organisation for the  
451 submitted work; no financial relationships with any organisations that might have an interest  
452 in the submitted work in the previous three years; no other relationships or activities that  
453 could appear to have influenced the submitted work; PVe is associate editor of Human  
454 Reproduction Update and past president of the World Endometriosis Society; PVi is associate  
455 editor of Human Reproduction; ES is deputy editor of Human Reproduction.

## 456 DATA SHARING STATEMENT

457 There are no data in addition to those presented in this report. No statistical testing is  
458 reported.

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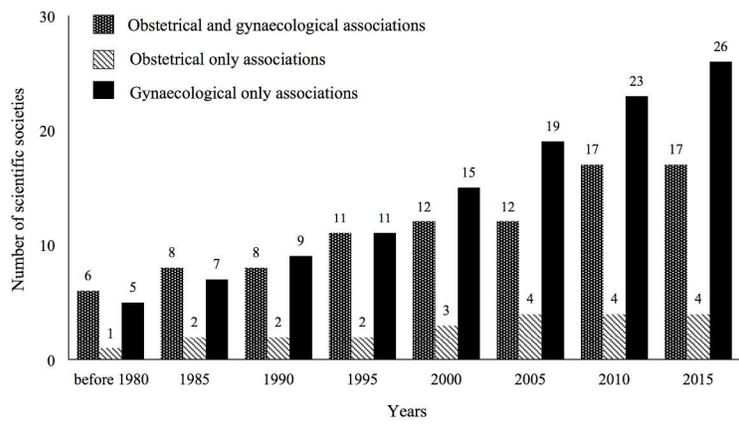
## 556 FIGURE LEGEND

557 Variation in the number of Italian obstetrical and gynaecological societies over time. The

558 number on top of each column is the number of societies.

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Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites.\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
AGEO Associazione Ginecologi Extra Ospedalieri (Association of off hospital gynaecologists) <a href="http://www.ageo-federazione.it">http://www.ageo-federazione.it</a>	1996	Yes	Yes	Yes	No	No	No	No	No	No	No	No
AGICO Associazione Ginecologi Consultoriali (Association of family clinic gynaecologists) <a href="http://www.agico.it/Agico-2007/home.asp">http://www.agico.it/Agico-2007/home.asp</a>	1985	Yes	Yes	Yes	No	Yes	No	No	No	No	No	Yes
AGIF Associazione Ginecologi Italiani in Formazione (Association of in-training Italian gynaecologists) <a href="http://www.giovaniginecologi.org/home/">http://www.giovaniginecologi.org/home/</a>	2009	Yes	Yes	Yes	No	No	No	No	No	No	No	Yes
AGITE Associazione Ginecologi Territoriali (Association of territorial gynaecologists) <a href="http://www.agite.eu/">http://www.agite.eu/</a>	2007	Yes	Yes	Yes	No	Yes	No	No	No	No	No	Yes
AGUI Associazione Ginecologi Universitari Italiani (Association of Italian academic gynaecologists) <a href="http://www.aguionline.it/">http://www.aguionline.it/</a>	1992	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COIs of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
AIGE Associazione Italiana di Ginecologia Endocrinologica (Italian association of gynaecological endocrinology) <a href="http://www.ginendo.it/">http://www.ginendo.it/</a>	2003	No	No	Yes	No	No	N.A.	No	No	No	No	Yes
AIPE Associazione Italiana pre-eclampsia (Italian Branch of the International Society for the Study of Hypertension in Pregnancy) <a href="http://www.preeclampsia.it/">http://www.preeclampsia.it/</a>	2005	No	No	Yes	No	No	N.A.	No	No	No	No	No
AIUG Associazione Italiana di Urologia Ginecologica e del Pavimento Pelvico (Italian association of gynaecologic urology and of pelvic floor) <a href="http://www.aiug.eu/aiug.asp">http://www.aiug.eu/aiug.asp</a>	1989	No	No	Yes	Yes	Yes	N.A.	No	No	No	No	No
AOGOI Associazione Ostetrici Ginecologi Ospedalieri Italiani (Association of hospital Italian gynaecologists and obstetricians) <a href="http://www.aogoi.it/">http://www.aogoi.it/</a>	1948	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
ATGO Associazione Triveneta di Ginecologia e Ostetricia (North-eastern association of gynaecology and obstetrics) <a href="http://www.atgo.it/">http://www.atgo.it/</a>	1934	No	No	Yes	No	Yes	N.A.	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
CECOS Centro Studi e Conservazione Ovociti e Sperma Umani (Center for the study and preservation of human oocytes and sperm) <a href="http://www.cecos.it/">http://www.cecos.it/</a>	1984	No	Yes	Yes	No	Yes	No	No	No	No	No	No
FIOG Federazione Italiana di Ostetricia e Ginecologia (Italian federation of obstetrics and gynaecology) <a href="http://www.fiogonline.it/">http://www.fiogonline.it/</a>	2008	Yes	Yes	Yes	No	No	No	No	No	No	No	No
GILT Ginecologi Liguri del Territorio (Territorial gynaecologists of Liguria)	1994	No website found		Yes <sup>‡</sup>	No	No website found					No	
GISCi Gruppo Italiano Screening del Cervicocarcinoma (Cervical cancer screening Italian group) <a href="http://www.gisci.it/">http://www.gisci.it/</a>	1996	No	Yes	Yes	Yes	No	No	No	No	Yes	No	Yes
GLUP Gruppo di lavoro in uroginecologia pavimento pelvico (Working group in pelvic floor urogynaecology) <a href="http://dev-test.glup.it/">http://dev-test.glup.it/</a>	2010	Yes	Yes	Yes	No	No	No	No	No	No	No	No
GREG Gruppo Romano di Endoscopia Ginecologica (Roman group of gynaecological endoscopy)	1995	No website found		Yes <sup>‡</sup>	No	No website found					No	

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
LAMM Società Laziale Abruzzese Marchigiana Molisana di Ostetricia e Ginecologia (Lazio, Abruzzo, Marche, and Molise society of obstetrics and gynaecology)	1971	No website found		Yes <sup>‡</sup>	No	No website found						No
PRO-FERT Società Italiana di Conservazione della Fertilità (Italian society for the preservation of fertility) <a href="http://profert.org/">http://profert.org/</a>	2007	No	Yes	Yes	No	No	No	No	No	No	No	No
SCCL Società Campano Calabro Lucana di Ostetricia e Ginecologia (Campania, Calabria, and Lucania society of obstetrics and gynaecology)	1947	No website found		Yes <sup>‡</sup>	No	No website found						No
SEGi Società Italiana di Endoscopia Ginecologica (Italian society of gynaecological endoscopy) <a href="http://www.segionline.it/">http://www.segionline.it/</a>	2000	No	Yes	Yes	Yes	Yes	No	No	No	No	No	No
SIC Società Italiana Contraccezione (Italian society for contraception) <a href="http://www.sicontraccezione.it/">http://www.sicontraccezione.it/</a>	2004	Yes	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SICHIG Società Italiana di Chirurgia Ginecologica (Italian society of gynaecological surgery) <a href="http://www.sichig.it/">http://www.sichig.it/</a>	1989	No	Yes	Yes	No	No	No	No	No	No	No	No
SICMIG Scuola Italiana di Chirurgia Mini Invasiva Ginecologica (Italian school of minimally invasive gynaecological surgery) <a href="http://www.sicmig.org/">http://www.sicmig.org/</a>	2005	Yes	Yes	Yes	No	No	No	No	No	No	No	No
SICPCV Società Italiana di Coloscopia e Patologia Cervico Vaginale (Italian society of colposcopy and cervical and vaginal pathology) <a href="http://www.coloscopiaitaliana.it/">http://www.coloscopiaitaliana.it/</a>	1980	No	Yes	Yes	No	No	No	No	No	No	No	No
SIDIP Società Italiana di Diagnosi Prenatale e Medicina Materno Fetale (Italian society of prenatal diagnosis and feto-maternal medicine) <a href="http://www.ilfeto.it/site/">http://www.ilfeto.it/site/</a>	1998	No	Yes	Yes	No	No	No	No	No	No	No	No
SIDR Società Italiana della Riproduzione (Italian society of reproduction) <a href="http://www.sidr.it/cms/view.html">http://www.sidr.it/cms/view.html</a>	1999	Yes	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIEOG Società Italiana di Ecografia Ostetrica e Ginecologica e Metodologie Biofisiche (Italian society of obstetrical and gynaecological ultrasonography and biophysical methodologies) <a href="http://www.sieog.it/">http://www.sieog.it/</a>	1984	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
SIEPAM Società Italiana Endometriosi e Patologia Mestruale (Italian society of endometriosis and menstrual disorders) <a href="http://www.siepam.it/">http://www.siepam.it/</a>	2014	Yes	No	Yes	No	No	N.A.	No	No	No	No	Yes
SIERR Società Italiana di Embriologia, Riproduzione e Ricerca (Italian society of embryology, reproduction and research) <a href="http://www.sierr.it/">http://www.sierr.it/</a>	1998	No	Yes	Yes	No	No	No	No	No	No	No	Yes
SIFES E MR Società Italiana di Fertilità e Sterilità e Medicina della Riproduzione (Italian society of fertility, sterility and reproductive medicine) <a href="http://sifes.it/">http://sifes.it/</a>	1965	No	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIFIOG Società Italiana di Fitoterapia e Integratori in Ostetricia e Ginecologia (Italian society of phytoterapeutics and supplements in obstetrics and gynaecology) <a href="http://www.sifiog.it/">http://www.sifiog.it/</a>	2008	Yes	No	Yes	No	No	N.A.	No	No	No	No	No
SIFR Società Italiana di Fisiopatologia della Riproduzione (Italian society for pathophysiology of reproduction)	1982	No website found		Yes <sup>‡</sup>	Yes	No website found						No
SIGIA Società Italiana di Ginecologia dell'Infanzia e dell'Adolescenza (Italian society of childhood and adolescent gynaecology) <a href="http://www.sigia.it/">http://www.sigia.it/</a>	1978	No	Yes	Yes	No	No	No	No	No	No	No	No
SIGITE Società Italiana di Ginecologia della Terza Età (Italian society for third age gynaecology) <a href="http://www.sigite.it/drupal/index.php">http://www.sigite.it/drupal/index.php</a>	1991	No	Yes	Yes	No	No	No	No	No	No	No	Yes

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Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIGO Società Italiana di Ginecologia e Ostetricia (Italian society of gynaecology and obstetrics) <a href="http://www.sigo.it/home/">http://www.sigo.it/home/</a>	1892	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
SIM Società Italiana della Menopausa (Italian society of menopause) <a href="http://www.simenopausa.it/">http://www.simenopausa.it/</a>	2011	Yes	No	Yes	No	No	N.A.	No	No	No	No	No
SIMP Società Italiana di Medicina Perinatale (Italian society of perinatal medicine) <a href="http://www.simponline.it/site/home.asp">http://www.simponline.it/site/home.asp</a>	1984	Yes	Yes	Yes	No	No	No	No	No	No	No	No
SIOG Società Italiana di Oncologia Ginecologica (Italian society of gynaecological oncology) <a href="http://www.siog.it">http://www.siog.it</a>	1977	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes
SIOS Società Italiana Ospedaliera Sterilità (Italian hospital society for sterility) <a href="http://www.siosteril.it/">http://www.siosteril.it/</a>	2003	No	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIPGO Società Italiana per la Psicopatologia in Ginecologia e Ostetricia (Italian society for psychosomatics in gynaecology and obstetrics) <a href="http://www.sipgo.org/">http://www.sipgo.org/</a>	1993	No	Yes	Yes	No	No	No	No	No	No	No	No
SIPO Società Italiana Policistici Ovarica (Italian society of polycystic ovary syndrome)	2012	No website found		Yes <sup>‡</sup>	No	No website found						No
SIPPO Società Italiana di Psicoprofilassi Ostetrica (Italian society for obstetrical psycho-prophylaxis) <a href="http://www.sippo.eu/">http://www.sippo.eu/</a>	1966	No	No	Yes <sup>‡</sup>	No	No	N.A.	No	No	No	No	No
SIPUF Società Italiana di Pelvi Perineologia e Urologia Femminile e Funzionale (Italian society of pelvi-perineology and female and functional urology) <a href="http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do">http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do</a>	2007	Yes	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIRONG Società Italiana per la Ricerca Ostetrico-Neonatale-Ginecologica (Italian society for the obstetrical, neonatal, and gynaecological research) <a href="http://www.sirong.it/">http://www.sirong.it/</a>	2008	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes
SIUD Società italiana di urodinamica (Italian society of urodynamics) <a href="http://www.siud.it/">http://www.siud.it/</a>	1977	No	Yes	Yes	Yes	No	No	No	No	No	No	Yes
SLOG Società Lombarda di Ostetricia e Ginecologia (Lumbardy society of obstetrics and gynaecology) <a href="http://www.slog.org/">http://www.slog.org/</a>	1950	No	Yes	Yes	No	No	No	No	No	No	No	No
SMIC Società Medica Italiana per la Contraccezione (Italian medical society for contraception) <a href="http://www.smicontraccezione.it/">http://www.smicontraccezione.it/</a>	2006	No	No	No	N.A.	No	N.A.	No	No	No	No	N.A.

\*In 12 cases, including those in which a website was not found, the year of establishment of the association/society was obtained from the two major national professional associations (i.e., Società Italiana di Ginecologia and Ostetricia and Associazione Ostetrici e Ginecologi Ospedalieri Italiani), and presidents or past presidents of the societies.

<sup>†</sup> Specific directives regulating professional obstetrical and gynaecological associations' conduct in case of private financial support.

<sup>‡</sup> When an association's website was not found or when the information was not indicated on website, CME activity was identified by scrutinising the online programmes of the society's conferences and courses.

COI = conflict of interest. CME = continuing medical education. PMA = professional medical association. N.A. = not applicable.

# BMJ Open

## The proliferation of gynaecological scientific societies and their financial transparency: an Italian survey

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<b>Primary Subject Heading</b>:	Obstetrics and gynaecology
Secondary Subject Heading:	Medical education and training, Ethics
Keywords:	SCIENTIFIC SOCIETIES, OBSTETRICS, GYNAECOLOGY, COMPETING INTERESTS

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Manuscripts

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3 1 THE PROLIFERATION OF GYNAECOLOGICAL SCIENTIFIC SOCIETIES AND THEIR  
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5 2 FINANCIAL TRANSPARENCY: AN ITALIAN SURVEY  
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20 Key words: scientific societies, obstetrics, gynaecology, competing interests.

21 Word count: 4298

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## 23 ABSTRACT

24 **Objectives:** To determine the number of Italian obstetrical and gynaecological societies, and  
25 to ascertain their financial transparency.

26 **Design:** Internet-based national survey and website content analysis.

27 **Participants:** Currently active, not privately owned, non-religious, apolitical, obstetrical and  
28 gynaecological associations.

29 **Methods:** Scientific societies were identified using combinations of search terms, and  
30 examining the website of the two main Italian obstetrical and gynaecological organisations.

31 Individual societies' websites were scrutinised by two independent investigators.

32 **Primary and secondary outcome measures:** Number of Italian obstetrical and  
33 gynaecological associations and its variation over time; 12 information categories defining the  
34 general characteristics of the societies and their websites, and the financial transparency of the  
35 associations.

36 **Results:** The initial web search yielded 56 professional obstetrical and gynaecological  
37 associations but nine were excluded for various reasons. Of the remaining 47 professional  
38 associations, 17 covered both obstetrics and gynaecology, four were specialised in obstetrics,  
39 26 in gynaecology and 46 provided CME activities. The number of societies has quadrupled  
40 in the last 35 years, increasing at a mean rate of one additional society per year. The  
41 headquarters of the associations were located in the offices of a professional congress  
42 organiser in 15 instances, and advertisements or links to industry products were present in 12  
43 societies' websites. Bylaws were accessible in 32 websites. No information was publicly  
44 available regarding competing interests, financial statements, and quantitative external  
45 funding.

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3 46 **Conclusions:** The number of obstetrical and gynaecological societies is remarkably high in  
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5 47 Italy, particularly in the gynaecological area. This may result in waste of resources. Despite  
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7 48 CME activity provision, transparency of societies regarding financial issues and competing  
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9 49 interests was almost non-existent. This may be associated with the risk of blurring the  
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11 50 distinction between education and marketing. Policies addressing the issue of interactions  
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14 51 between medical associations and industry are available and should be implemented.  
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3 52 STRENGTHS AND LIMITATIONS OF THE STUDY  
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- 6 53 • Different search strategies were adopted to identify all currently active Italian  
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8 54 obstetrical and gynaecological scientific societies, i.e., Internet, executive personnel of  
9  
10 55 the two main national organisations, and direct contacts with some presidents and  
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12 56 past-presidents.  
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14  
15 57 • Two independent investigators retrieved information, abstracted data on standardised  
16  
17 58 forms and conducted a website content analysis on 12 items regarding the general  
18  
19 59 characteristics of the medical associations and their websites, as well as societies'  
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21 60 financial transparency.  
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25 61 • The data presented describe a selected picture of a specific medical specialty in Italy.  
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27 62 The findings cannot be generalised to other medical specialties and other countries.  
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64 ETHICAL APPROVAL STATEMENT

65 The Ethic Committee’s approval was not required for this survey.

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## 66 INTRODUCTION

67 A core mission of medical societies is dissemination of scientific information.[1, 2] They  
68 foster research in distinct fields of medicine, promote medical education, and develop clinical  
69 guidelines. Authoritative medical associations are also influential in modulating practice,  
70 counselling administrators, advising politicians regarding public healthcare programmes, and  
71 regulating professional conduct. Thus, the social role of these organisations entails  
72 exceedingly important clinical and ethical implications.[1-4]

73 However, some authors maintain that economical aspects are progressively eroding  
74 the moral foundations of medical associations, increasing the tension between self-interest  
75 and ethical principles. [1] In particular, a progressive imbalance has been observed in funding  
76 derived from membership dues and grants and contracts awarded by government or charitable  
77 foundations, in favour of support from for-profit organisations [1, 5-7]. This situation may  
78 generate a conflict of interest (COI), which has been defined as “a set of circumstances that  
79 creates a risk that professional judgment or actions regarding a primary interest will be unduly  
80 influenced by a secondary interest”. [8] The primary interest of a scientific society is to  
81 promote the highest quality of care also through the education of its members. [9] The  
82 secondary interest is, in this case, the financial well-being of the society together with the  
83 financial profit of some commercial entities. A COI may occur not only if a professional  
84 medical organisation (PMA) receives money from manufacturers of drugs or devices used in  
85 the same medical area of interest as the society, but also when individual officers of the  
86 organisation have personal financial ties to industries that could influence their actions and  
87 decisions within the PMA. Of note, COI is a condition, not a behaviour. In other words, when  
88 a COI exists, no actual unethical conduct has necessarily arisen. [5] However, although COI  
89 and bias are not synonymous, the former is a demonstrated risk factor for the latter.[10]

Two different approaches have been suggested to deal with COIs of PMAs, i.e., a divestment strategy (progressively discontinuing commercial support), and a management strategy (disclosing COIs and adopting rules to limit their potentially pernicious effects).[5, 9] As the operating budget of many PMAs is substantially based on industry funding, the latter policy has generally been preferred, purportedly to ensure stability in organisation functioning and avoid curtailments in services to members. [1, 5-7, 11] To be efficient, any strategy to “manage” COIs about interactions with industry, should be based on thorough financial transparency, particularly, but not exclusively, regarding commercial support of annual meetings. In fact, most PMAs base their financial sustainability on revenues from periodic congresses, as in these occasions industry generally purchases exhibit hall space, sponsors conference sessions or satellite symposia, pays the registration fee for a variable number of attendees, and buys advertising opportunities.[2, 9, 12, 13].

Complicating further the above scenario, the past decades have witnessed a tendency toward proliferation of medical societies focussed on subspecialty areas or even single diseases, paralleling the general trend of modern medicine in the direction of over-specialisation. [14] The intrinsic benefit of creating small and subspecialty associations is the possibility of increasing knowledge on specific disorders. However, compared with major national and international organisations, small societies may have less impact regarding public advocacy, information of healthcare decision makers, and definition of public health system strategies. Moreover, small societies generally have restricted financial resources, thus their possibility to fund research seems limited. In this regard, the proliferation of subspecialty medical associations could also be viewed as a potential waste of precious resources that could be invested more efficiently in the interest of patients.

In addition, the quality of the information disseminated by scientific organisations should be scrutinised with care. Intellectual independence is essential, especially when

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3 115 providing continuing medical education (CME) activity,[10, 15-17] but fragmentation and  
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5 116 subspecialisation may expose medical societies to increased financial vulnerability and,  
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7 117 hypothetically, this could result in an increase in the risk of undue influence of  
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9 118 pharmaceutical, biotechnology, and device industries. Noteworthy, the percentage of the  
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11 119 overall national funding for CME activities provided by industry is particularly high in Italy,  
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13 120 with reported figures varying from 60%[18] to almost 100%[19] of the total expenditure.

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17 121 The phenomenon of proliferation of professional organisations appears to be  
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19 122 particularly intense in the gynaecological field, probably owing to the multitude of issues  
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21 123 regarding women's health. Therefore, we decided to conduct a survey in order to examine the  
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23 124 condition of obstetrical and gynaecological societies in Italy. The primary objectives were to  
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25 125 determine the overall number of associations and to verify whether a trend exists towards an  
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27 126 increase in the number of subspecialty organisations over time. Secondary aims were to  
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29 127 ascertain the societies' level of transparency regarding general competing interests and  
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31 128 funding from industry, and to evaluate if a relation exists between the provision of CME  
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33 129 activity and the degree of financial transparency.

## 34 35 36 37 38 130 METHODS

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41 131 This survey was conducted by retrieving and analysing information from the Internet. As  
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43 132 publicly available data were used, the present study was exempt from the Ethics Committee's  
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45 133 approval. The study was restricted to professional organisations currently active in Italy.  
46  
47 134 Websites were identified using 'Google', consistently ranked as the most popular search  
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49 135 engine (<http://www.google.com>). [20] The following Italian search terms and phrases were  
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51 136 used: "Italian obstetrical and gynaecological societies", "obstetrical and gynaecological  
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53 137 societies AND Italy", " Italian obstetrical and gynaecological associations", "obstetrical and  
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55 138 gynaecological associations AND Italy", "Italian obstetrical and gynaecological federations",  
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3 139 “obstetrical and gynaecological federations AND Italy”, “Italian obstetrical and  
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5 140 gynaecological organisations”, “obstetrical and gynaecological organisations AND Italy”. In  
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7 141 addition, the websites of the two major national obstetrical and gynaecological societies  
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9 142 (Società Italiana di Ginecologia e Ostetricia, SIGO; Associazione Ostetrici Ginecologi  
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11 143 Ospedalieri Italiani, AOGOI) were examined with the objective of identifying all the  
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13 144 subspecialty organisations in the field affiliated to SIGO and AOGOI. All authors  
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15 145 independently conducted the initial search from October 31 to November 7, 2014. After  
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17 146 completion of the list of associations, these were categorised, based on their name, into  
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19 147 combined obstetrical and gynaecological, obstetrical only, and gynaecological only  
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21 148 organisations.

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26 149 Individual societies’ websites were then independently scrutinised from November 8  
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28 150 to December 12, 2014, and from June 15 to 19, 2015, by two authors (PVe and MPF), in  
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30 151 order to verify the correctness of the initial categorisation, and to ascertain whether the  
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32 152 association was public (i.e., not privately owned by single individuals), and with a defined  
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34 153 mission and a regular board, including a president, a treasurer, a secretary, and an executive  
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36 154 committee. Individual or privately owned organisations, those not specifically aimed at  
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38 155 physicians, and those with a religious or political profile were excluded. Moreover,  
39  
40 156 information was collected on standardised abstraction forms on 12 items defining two  
41  
42 157 domains, i.e., i) the general characteristics of the society and its website (year of  
43  
44 158 establishment; whether the headquarters were independent or located in the offices of a  
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46 159 professional congress organiser and accredited CME provider; online availability of society's  
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48 160 bylaws; provision of CME activity; inclusion of sponsored sessions or symposia in the  
49  
50 161 society's last annual meeting program; presence on society's website of industry advertisement  
51  
52 162 or links to industries' websites), and ii) the financial transparency of the association  
53  
54 163 (discussion of financial COIs in society's bylaws; adoption of a policy for interactions with  
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3 164 industry; availability of financial COI disclosures of presidential trio (president, past  
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5 165 president, and president-elect), board members and executive staff; online availability of  
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7 166 annual financial statement; disclosure of restricted and unrestricted industry grants and  
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9  
10 167 individual donations; indication of industry sponsorship in the last annual meeting program  
11  
12 168 based on informative printed text in addition to mere logo inclusion).

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15 169 In cases where the information on a PMA's year of establishment was missing, the  
16  
17 170 executive staff of the above two major national obstetrical and gynaecological societies were  
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19 171 consulted by email and telephone. Moreover, PVe directly contacted the presidents and  
20  
21 172 selected board members of some associations in order to obtain missing data from original  
22  
23 173 documents. A final extraction form was compiled from the two separate evaluation forms,  
24  
25 174 with correction or resolution of any discrepancies between abstractors by consensus reached  
26  
27 175 after discussion or further joint re-examination of selected societies' websites.

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31 176 In addition, two authors independently used the Health on the Net Foundation Code of  
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33 177 Conduct [21] for medical websites, with the objective of examining the degree of  
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35 178 transparency of the healthcare information provided on the websites of the two major national  
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37 179 obstetrical and gynaecological associations, SIGO and AOGOI. The HONcode is an  
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39 180 instrument developed to assess the intent of a website to publish accurate information, and it  
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41 181 includes items on transparency, financial disclosure, and advertising policy [21].

## 42 43 44 45 182 RESULTS

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48 183 The initial web search yielded 56 professional obstetrical and gynaecological associations, but  
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50 184 two were immediately excluded because they were known to be privately owned (Società  
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52 185 Italiana Studi di Medicina della Riproduzione, SISMeR) or individually managed  
53  
54 186 (Fondazione Graziottin per la Cura del Dolore nella Donna). Examination of societies'  
55  
56 187 websites resulted in the exclusion of three organisations with defined socio-political or  
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3 188 religious characteristics (Associazione Italiana Ginecologi Ostetrici Cattolici, AICOG;  
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5 189 Società Italiana Procreazione Responsabile, SIPRe; Libera Associazione Italiana Ginecologi  
6  
7 190 per l'Applicazione della Legge 194/78, LAIGA). One association (Confederazione Italiana  
8  
9 191 Ginecologi Ospedalieri, CIGO) was excluded because its activities were unclear and not  
10  
11 192 typical of a regular scientific society (e.g., organisation of conferences and development of  
12  
13 193 clinical recommendations). Another association was apparently no longer currently active  
14  
15 194 (Società Italiana di Endoscopia e Laserterapia in Ginecologia, SIELG). Only one reviewer  
16  
17 195 excluded two other organisations. Joint re-examination of the two websites demonstrated that  
18  
19 196 the activity of one association (Fondazione Confalonieri Ragonese) was limited to drafting  
20  
21 197 clinical practice recommendations on behalf of AOGOI, whereas the activity of the other one  
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23 198 (Associazione Italiana di Ostetricia, AIO) was aimed mainly at midwives rather than  
24  
25 199 physicians. A shared decision was taken to exclude the latter two organisations.

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30 200 Summary characteristics of the remaining 47 professional associations are shown in  
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32 201 Table 1. Individual societies' details regarding the general characteristics of the associations  
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34 202 and their websites as well as PMAs' financial transparency are included in online  
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36 203 Supplementary table 1.  
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204 TABLE 1. General characteristics and financial transparency of Italian professional obstetrical and gynaecological associations extracted from their websites.

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206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
Clinical and research area	No. with website	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity*	Sponsored session/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COIs of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program							
Obstetrics and gynaecology (n=17)	14	7	12	17	4	8	0	0	0	0	0	8							
Obstetrics only (n=4)	4	1	2	4	0	0	0	0	0	0	0	0							
Gynaecology only (n=26)	23	7	18	25	5	4	0	0	0	1	0	7							

227 Data are numbers. COI = conflict of interest. CME = continuing medical education. PMA = professional medical association.

228 \*When an association's website was not found or when the information was not indicated on website, CME activity was identified scrutinising the online programmes of the society's conferences and courses.

230 † Specific directives regulating professional obstetrical and gynaecological associations' conduct in case of private/commercial financial support.

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3 231 A total of 24 organisations were affiliated with SIGO (<http://www.sigo.it/societa-affiliate/>),  
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5 232 and six with AOGOI (<http://www.aogoi.it/opencms/sezioniOriz/societaAffiliate/index.html>).  
6  
7 233 Seventeen "generalist" associations covered both obstetrics and gynaecology (the two main  
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9 234 ones plus 15 minor societies), four were specialised in obstetrical areas only, and 26 were  
10  
11 235 specialised in gynaecological areas only. In this latter group, seven organisations dealt with  
12  
13 236 infertility, four with pelvic and endoscopic surgery, four with urogynaecology, and two with,  
14  
15 237 respectively, cervical pathology, contraception, and climacteric. After exclusion of the 17  
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17 238 "generalist" organisations, the distribution of societies' main area of interest was substantially  
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19 239 skewed towards gynaecology (26/30; 87%).  
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24 240 Six societies did not appear to have a website. In 12 cases, including those in which a  
25  
26 241 website could not be found, the year of establishment of the association was obtained from  
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28 242 SIGO or AOGOI executive personnel, and from direct contact between PVE and presidents or  
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30 243 past-presidents. In the period 1980-2014 the number of Italian obstetrical and gynaecological  
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32 244 societies has quadrupled, starting from 12 and increasing at a mean rate of one society per  
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34 245 year in the last 35 years (Figure 1).  
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37 246 The headquarters of the associations were independent in 26/41 instances, and located  
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39 247 in the offices of a professional congress organiser and accredited CME provider in the  
40  
41 248 remaining 15. Society's bylaws were published online on 32/41 (78%) of the identified  
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43 249 websites. Forty-six associations provided CME activities. When an official society's website  
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45 250 was not identified or when the information was not indicated on website, CME activity was  
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47 251 verified by scrutinising the online programmes of the societies' conferences and courses. A  
48  
49 252 total of 9/46 associations included sponsored sessions or symposia in their last annual meeting  
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51 253 program. Advertisements or links to industry products were present on 12/41 societies'  
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53 254 websites (8 in the obstetrical and gynaecological subgroup and 4 in the gynaecological only  
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55 255 subgroup).  
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3 256 With regard to financial transparency, in none of the 32 bylaws posted online was the  
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5 257 issue of COIs mentioned. No association had apparently developed a policy for interactions  
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7 258 with industry. A total of 423 board members were identified, including the presidential trios,  
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9 259 treasures and secretaries. Forty-eight members were included at the same time on the board of  
10  
11 260 two distinct organisations, 14 members on the board of three organisations, and five on the  
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13 261 board of four organisations. The competing interest disclosures of board members and  
14  
15 262 executive staff were never posted on societies' websites.  
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19 263 The annual financial statement was published online in only one case and, with this  
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21 264 exception, no information was publicly available on any other website regarding the society's  
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23 265 source of financial support, as no data was accessible on restricted and unrestricted industry  
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25 266 grants or individual donations, nor on industry sponsorship for the last annual meetings,  
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27 267 courses, or other educational events.  
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31 268 Evaluation of transparency of SIGO and AGOI websites according to the HONcode  
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33 269 principles [21] identified lack of information (Supplementary table 2). In particular, neither  
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35 270 website attributed certain health/medical information to an author; the sources of the funding  
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37 271 of both sites were not clearly described; advertising was not always identified as such; and the  
38  
39 272 sites were part of a link/banner exchange but there was no specific description about the site  
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41 273 advertising policy. Moreover, the AGOI website contained information from external  
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43 274 source, but no reference to the source was made, whereas the SIGO website did not provide  
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45 275 the last modification date and made claims relating to the benefit or performance of a specific  
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47 276 medical treatment, commercial product or service based on the author's personal research or  
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49 277 opinion.  
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54 278 Both websites provided free CME e-learning courses supported by pharmaceutical  
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56 279 industries manufacturing drugs or commercial products used specifically in those medical  
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280 areas on which courses were focused. Finally, the SIGO website included descriptions of  
281 some campaigns supported by industries with direct or indirect interests in related medical  
282 fields.

## 283 DISCUSSION

284 The results of the present survey on Italian obstetrical and gynaecological societies and  
285 content analysis of their websites depict an academic scenario that warrants consideration. A  
286 remarkably high number of organisations was identified, characterised by a progressive and  
287 impressive increase over time, especially during the last decades. We do not have a clear  
288 explanation for this phenomenon. According to the list of member societies of the  
289 Federazione delle Società Medico-Scientifiche Italiane (Italian Federation of Medical-  
290 Scientific Societies; FISM), which includes Italian medical and scientific societies involved in  
291 medical education or research activities of national interest, this situation does not seem to be  
292 generalizable to other medical specialties. [22] Of note, the gynaecological subgroup was  
293 characterised by several replications, particularly in the fertility and sterility, pelvic and  
294 endoscopic surgery, and urogynaecology areas. The reason for these duplications is not  
295 readily understandable, because a single, large organisation would probably be more  
296 efficacious in accomplishing the mission of the society, centralising resources and reducing  
297 costs.

298 The observed disproportion in the distribution of subspecialty associations decidedly  
299 cannot be explained by unequal distribution of the clinical content of the two main areas of  
300 the addressed specialty, obstetrics and gynaecology. Thus, it could be hypothesised that  
301 Italian gynaecologists were more scientifically proactive compared with their obstetrical  
302 colleagues, but we could not find evidence to support this interpretation. An alternative  
303 theoretical explanation of this observation is that commercial sponsorship skewed the topics

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3 304 in favour of disorders from which a larger profit could be made. In this regard, gynaecology  
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5 305 might prove a more lucrative medical area compared with obstetrics, at least in terms of  
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7 306 markets for several costly new drugs, surgical devices, and diagnostic tools. However, we  
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9 307 have no data to support this hypothesis.

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12 308 In the USA, the first Open Payment data shows that several manufacturers of drugs or  
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14 309 devices for gynaecologists are among the top highest spending US companies for payment to  
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16 310 physicians, and gynaecology is second only to orthopaedic surgery in terms of the highest  
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18 311 value of shares held by physicians.[23] Nonetheless, a direct relation between the number of  
19  
20 312 existing scientific societies in a given specialty area and the degree of industry influence on  
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22 313 its medical community appears difficult to demonstrate, and we are not alleging that any of  
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24 314 the considered societies have engaged in any misconduct or have agreed to tailor their CME  
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26 315 activity in accordance with a sponsor's preference.

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29 316 Financial transparency of the organisations included was almost non-existent, as we  
30  
31 317 were unable to retrieve relevant, publicly available information, with the exception of the  
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33 318 annual financial statement of a single, small gynaecological association. Six associations did  
34  
35 319 not appear to have a website, thus providing no publicly available information. Unfortunately,  
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37 320 online publishing of annual budgets and data regarding financial support is not a legal  
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39 321 requirement for Italian scientific societies, and we could not identify alternative sources of  
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41 322 information. We could not verify if and to what extent financial relations were in place  
42  
43 323 between Italian obstetrical and gynaecological associations and industry, and we are unable to  
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45 324 reject the hypothesis that they did not exist. This also applies to commercial support of annual  
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47 325 meetings and educational events, although in this case the obstetrical and gynaecological area  
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49 326 would constitute an exception with respect to data on overall industry funding of Italian CME  
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51 327 activities.[18, 19]  
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3 328 We used websites as the main source of information regarding a society's financial  
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5 329 transparency. It could be argued that websites can be useful to identify national PMAs, but  
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7 330 they provide no accurate specific information on COIs and commercial funding. This  
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9 331 constitutes a limitation of our study, as we could have sent a questionnaire directly to  
10  
11 332 individual medical organisations or interviewed the president and executive officers.  
12  
13 333 However, the aim of our survey was to verify whether information regarding COIs of board  
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15 334 members and industry support of Italian gynaecological societies was easily and publicly  
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17 335 accessible, which nowadays means posted on a society's website [17]. The concept of  
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19 336 transparency should not imply the need for individual investigation into a society's board  
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21 337 members or executive staff by doctors and citizens to acquire this type of information.  
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26 338 Almost all the identified societies provided CME activity through conferences and  
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28 339 courses. Lack of disclosure, in societies' websites, regarding industry support for scientific  
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30 340 events involving CME activity (or lack of a website) is neither surprising nor unlawful, but  
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32 341 raises ethical concerns. Some relevant information can be retrieved from the website of the  
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34 342 Agenzia Nazionale per i Servizi Sanitari Regionali (Age.na.s), which manages the national  
35  
36 343 CME program on behalf of the Italian Ministry of Health. However, although the industries  
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38 344 sponsoring the events are listed, the financial support is expressed as a relative percentage of  
39  
40 345 an overall budget that is not quantified  
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42 346 ([http://ecm.agenas.it/BancaDati/SB\\_Lista\\_Cerca\\_Accr.asp](http://ecm.agenas.it/BancaDati/SB_Lista_Cerca_Accr.asp); accessed on March 23, 2015).  
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47 347 Independently of legal requirements, we believe that scientific societies should  
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49 348 provide data on industry support of CME activity spontaneously, and should post it on their  
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51 349 websites. This seems particularly important when the organisations delivering CME activity,  
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53 350 which is a source of income for the provider, do not have independent headquarters, but are  
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55 351 hosted by professional congress organisers that may receive money also from pharmaceutical  
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57 352 companies and manufacturers of medical devices,[24, 25] or when advertisements or links to  
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3 353 industry products are included in their websites. However, without a formal evaluation of  
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5 354 CME “products” (i.e., scientific quality and compliance with society mandate), no  
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7 355 conclusions can be drawn.  
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10 356 Competing interests of members of the boards and executive committees of a society  
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12 357 were also not disclosed, and this appears somewhat concerning.[1, 5, 9] In general, finding  
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14 358 experts without competing interests is difficult, and ideally they would all be concentrated in  
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16  
17 359 the boards of a few major obstetrical and gynaecological societies. The multiplication of  
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19 360 boards and committees needed as a consequence of the proliferation of smaller organisations,  
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21 361 particularly in the gynaecological area, implies that most of their directors and executives will  
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23 362 have COIs, simply because there are not sufficient experts without COIs to cover all the  
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26 363 available positions. This may have implications regarding a society’s activities, including the  
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28 364 development of practice guidelines.[26] This issue would be greater if members with COIs  
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30 365 serve on the board of more than one association.  
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33 366 Taking a selected picture of a specific country is a limit of our study that impedes  
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35 367 generalisation of the findings. However, we considered that this survey allowed us to define a  
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37 368 general scheme to be adopted for an investigation of this type, identifying reasonable  
38  
39 369 endpoints and specific information categories. We are not aware of similar surveys published  
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41 370 in the scientific literature, and believe that this scheme could also be used to investigate the  
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43 371 condition of PMAs in different specialties and different countries.  
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47 372 Rothman and co-workers described in detail the many potential threats to PMAs'  
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49 373 integrity, identified specific COIs that may affect the organisations' activity, and formulated  
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51 374 guidelines to prevent undue industry influence aimed at divestment from commercial support  
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53 375 rather than management of financial competing interests.[2] In fact, the authors maintain that  
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3 376 "PMAs should work toward a complete ban on pharmaceutical and medical device industry  
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5 377 funding (\$0), except for income from journal advertising and exhibit hall fees".[2]  
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8 378 The Council of Medical Specialty Societies was created in USA in 1965 with the  
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10 379 objective of providing an independent forum for cross-specialty collaboration in order to  
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12 380 influence policy on issues with a nationwide scope, such as medical education and  
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14 381 accreditation. The Council has issued a code for interactions with companies that includes  
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16 382 seven core principles covering COI, financial disclosure, independent program development,  
17  
18 383 and independent leadership.[27] With regard to transparency, the code states that "Societies  
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20 384 will make their conflict of interest policies and/or forms available to their members and the  
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22 385 public", and "Societies will disclose company support (at a minimum educational grants,  
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24 386 corporate sponsorships, charitable contributions, and support of research grants), making this  
25  
26 387 information available to their members and the public", and "Societies will disclose all  
27  
28 388 financial and uncompensated relationships that key society leaders and members of the board  
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30 389 of directors of the society' membership organization have with companies, making this  
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32 390 information available to their members and the public". [27] Up to now, the code has been  
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34 391 signed by 32 North-American member societies of the Council and by 17 North-American  
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36 392 non-member societies.[28]  
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42 393 Examples already exist of PMAs disclosing on their website the breakdown of  
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44 394 industry contribution toward the consolidated revenue of the society, as well as disclosure  
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46 395 statements reported by each member of the board of directors [29], and publishing in meeting  
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48 396 programs the company from which payment is received, the amount of payment by  
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50 397 categories, and the specific type of relationship held with the company.[30] A policy on  
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52 398 rigorous control over COIs has been implemented by several medical and surgical scientific  
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54 399 societies,[19, 29-35] in some cases without detrimental consequences in terms of finances,  
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56 400 membership, attendance at annual meetings, or leadership recruitment.[30, 32, 33]  
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3 401 According to Moynihan,[36] the pharmaceutical industry is currently attempting an  
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5 402 “audacious repositioning”, that is acting as a partner with health services in the provision of  
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7 403 patient care instead of the supplier of one element of it. Therefore, the sales and marketing  
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9 404 departments of pharmaceutical industries and device manufacturers appear to be increasingly  
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11 405 targeting medical societies in addition to individual physicians.[3-5, 9] Within this strategy,  
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13 406 establishing solid ties may prove easier with smaller rather than larger associations.  
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15 407 Moreover, the proliferation of professional organisations might also result in an overall  
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17 408 increase in medical overuse. Therefore, it is currently unclear if the observed progressive  
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19 409 growth in the number of gynaecological associations, together with the relative congresses  
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21 410 and courses, does more good than harm to patients.[37] Future research should aim at  
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23 411 verifying whether this phenomenon results exclusively in enhanced knowledge and translates  
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25 412 into better care of women's health, or if it facilitates the dissemination of partly biased  
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27 413 information within the scientific community.

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32 414 Italian scientists should lobby for transparency of public disclosure of COIs of  
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34 415 societies providing CME activity and on implementation of efficient societies' policies for  
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36 416 interactions with industry. Moreover, the Ministry of Health should only grant CME credits to  
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38 417 conferences and educational events provided that attendees are fully and publicly aware of  
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40 418 financial connections between the scientific society and any industry involved, including  
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42 419 quantitative information regarding funding for the meetings.[38-40] More in general, a sort of  
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44 420 Sunshine Act [41] focussed on scientific societies and educational activity, in addition to that  
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46 421 aimed at individual doctors, and with potential application to multiple settings and  
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48 422 jurisdictions, could prove of great benefit for patients, practising physicians, and clinical  
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50 423 investigators. A complete lack of transparency on the above issues nowadays appears hardly  
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52 424 justifiable and ethically questionable. In fact, COIs of PMAs are more serious than individual  
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54 425 ones, because, where distorted information is disseminated at educational events, the effect  
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3 426 would be multiplied with potential substantial consequences on prescribing practices of many  
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5 427 of the society's members.[3-5] Moreover, the definition of “conflict of interest” itself, in the  
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7 428 case of PMAs, may be somewhat misleading as it has been pointed out that a medical  
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9 429 organisation’s commitment to patients and public health is a moral duty and not a mere  
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11 430 interest.[5]

14 431 Collaboration between PMAs and research and development departments of  
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16 432 pharmacological companies and medical devices manufactures is very important for the  
17  
18 433 advancement of medicine. This form of interaction is welcome in the interest of patients and  
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20 434 society. On the other hand, collaboration between PMAs and company marketing departments  
21  
22 435 on CME events and society annual meetings, may blur the distinction between the interest of  
23  
24 436 the PMA, which is education, and that of industry, which is selling products.

28 437 Despite individual or organisational COIs, the officers of many medical associations  
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30 438 may well be disinterested and passionate, and provide valuable activities for the benefit of  
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32 439 society members. However, members of PMAs are not the end users of drugs and devices  
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34 440 marketed by industry; rather they are the gatekeepers entrusted to make evidence-based  
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36 441 recommendations to the real end user, that is, the patient.[9] When the citizens eventually  
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38 442 have to pay the bill, either directly or indirectly through national health systems, the conduct  
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40 443 of PMAs may not be only based on the presumed good faith of their officers, but should  
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42 444 contemplate the provision of publicly available and easily accessible data on financial  
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44 445 competing interests. Transparency and disclosures do not eliminate COIs,[42, 43] but may  
45  
46 446 enable doctors and lay people to contextualise the scientific information disseminated in  
47  
48 447 various ways by medical organisations, putting it in the right perspective.

## 448 CONTRIBUTION TO AUTHORSHIP

449 PVe, PVi and ES conceived and planned the article. All the authors searched the web to  
450 identify Italian obstetrical and gynaecological societies. PVe and MPF scrutinised the  
451 societies' websites, retrieved and tabulated data. All the authors interpreted the data. PVe  
452 drafted the manuscript and all the authors revised it. All the authors approved the final version  
453 of the manuscript.

454

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458

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460 All authors have completed the ICMJE uniform disclosure form at  
461 [www.icmje.org/coi\\_disclosure.pdf](http://www.icmje.org/coi_disclosure.pdf) and declare: no support from any organisation for the  
462 submitted work; no financial relationships with any organisations that might have an interest  
463 in the submitted work in the previous three years; no other relationships or activities that  
464 could appear to have influenced the submitted work; PVe is associate editor of Human  
465 Reproduction Update and past president of the World Endometriosis Society; PVi is associate  
466 editor of Human Reproduction; ES is deputy editor of Human Reproduction.

## 467 DATA SHARING STATEMENT

468 There are no data in addition to those presented in this report. No statistical testing is  
469 reported.

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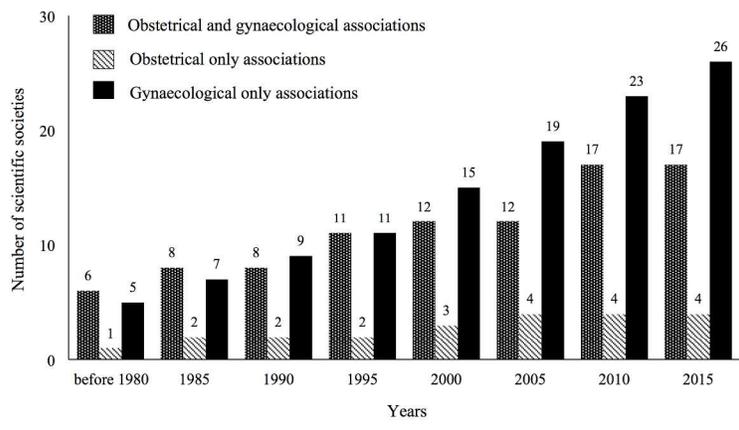
## 569 FIGURE LEGEND

570 Variation in the number of Italian obstetrical and gynaecological societies over time. The

571 number on top of each column is the number of societies.

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Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites.\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
AGEO Associazione Ginecologi Extra Ospedalieri (Association of off hospital gynaecologists) <a href="http://www.ageo-federazione.it">http://www.ageo-federazione.it</a>	1996	Yes	Yes	Yes	No	No	No	No	No	No	No	No
AGICO Associazione Ginecologi Consultoriali (Association of family clinic gynaecologists) <a href="http://www.agico.it/Agico-2007/home.asp">http://www.agico.it/Agico-2007/home.asp</a>	1985	Yes	Yes	Yes	No	Yes	No	No	No	No	No	Yes
AGIF Associazione Ginecologi Italiani in Formazione (Association of in-training Italian gynaecologists) <a href="http://www.giovaniginecologi.org/home/">http://www.giovaniginecologi.org/home/</a>	2009	Yes	Yes	Yes	No	No	No	No	No	No	No	Yes
AGITE Associazione Ginecologi Territoriali (Association of territorial gynaecologists) <a href="http://www.agite.eu/">http://www.agite.eu/</a>	2007	Yes	Yes	Yes	No	Yes	No	No	No	No	No	Yes
AGUI Associazione Ginecologi Universitari Italiani (Association of Italian academic gynaecologists) <a href="http://www.aguionline.it/">http://www.aguionline.it/</a>	1992	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COIs of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
AIGE Associazione Italiana di Ginecologia Endocrinologica (Italian association of gynaecological endocrinology) <a href="http://www.ginendo.it/">http://www.ginendo.it/</a>	2003	No	No	Yes	No	No	N.A.	No	No	No	No	Yes
AIPE Associazione Italiana pre-eclampsia (Italian Branch of the International Society for the Study of Hypertension in Pregnancy) <a href="http://www.preeclampsia.it/">http://www.preeclampsia.it/</a>	2005	No	No	Yes	No	No	N.A.	No	No	No	No	No
AIUG Associazione Italiana di Urologia Ginecologica e del Pavimento Pelvico (Italian association of gynaecologic urology and of pelvic floor) <a href="http://www.aiug.eu/aiug.asp">http://www.aiug.eu/aiug.asp</a>	1989	No	No	Yes	Yes	Yes	N.A.	No	No	No	No	No
AOGOI Associazione Ostetrici Ginecologi Ospedalieri Italiani (Association of hospital Italian gynaecologists and obstetricians) <a href="http://www.aogoi.it/">http://www.aogoi.it/</a>	1948	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
ATGO Associazione Triveneta di Ginecologia e Ostetricia (North-eastern association of gynaecology and obstetrics) <a href="http://www.atgo.it/">http://www.atgo.it/</a>	1934	No	No	Yes	No	Yes	N.A.	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
CECOS Centro Studi e Conservazione Ovociti e Sperma Umani (Center for the study and preservation of human oocytes and sperm) <a href="http://www.cecos.it/">http://www.cecos.it/</a>	1984	No	Yes	Yes	No	Yes	No	No	No	No	No	No
FIOG Federazione Italiana di Ostetricia e Ginecologia (Italian federation of obstetrics and gynaecology) <a href="http://www.fiogonline.it/">http://www.fiogonline.it/</a>	2008	Yes	Yes	Yes	No	No	No	No	No	No	No	No
GILT Ginecologi Liguri del Territorio (Territorial gynaecologists of Liguria)	1994	No website found		Yes <sup>‡</sup>	No	No website found					No	
GISCi Gruppo Italiano Screening del Cervicocarcinoma (Cervical cancer screening Italian group) <a href="http://www.gisci.it/">http://www.gisci.it/</a>	1996	No	Yes	Yes	Yes	No	No	No	No	Yes	No	Yes
GLUP Gruppo di lavoro in uroginecologia pavimento pelvico (Working group in pelvic floor urogynaecology) <a href="http://dev-test.glup.it/">http://dev-test.glup.it/</a>	2010	Yes	Yes	Yes	No	No	No	No	No	No	No	No
GREG Gruppo Romano di Endoscopia Ginecologica (Roman group of gynaecological endoscopy)	1995	No website found		Yes <sup>‡</sup>	No	No website found					No	

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
LAMM Società Laziale Abruzzese Marchigiana Molisana di Ostetricia e Ginecologia (Lazio, Abruzzo, Marche, and Molise society of obstetrics and gynaecology)	1971	No website found		Yes <sup>‡</sup>	No	No website found						No
PRO-FERT Società Italiana di Conservazione della Fertilità (Italian society for the preservation of fertility) <a href="http://profert.org/">http://profert.org/</a>	2007	No	Yes	Yes	No	No	No	No	No	No	No	No
SCCL Società Campano Calabro Lucana di Ostetricia e Ginecologia (Campania, Calabria, and Lucania society of obstetrics and gynaecology)	1947	No website found		Yes <sup>‡</sup>	No	No website found						No
SEGi Società Italiana di Endoscopia Ginecologica (Italian society of gynaecological endoscopy) <a href="http://www.segionline.it/">http://www.segionline.it/</a>	2000	No	Yes	Yes	Yes	Yes	No	No	No	No	No	No
SIC Società Italiana Contraccezione (Italian society for contraception) <a href="http://www.sicontraccezione.it/">http://www.sicontraccezione.it/</a>	2004	Yes	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SICHIG Società Italiana di Chirurgia Ginecologica (Italian society of gynaecological surgery) <a href="http://www.sichig.it/">http://www.sichig.it/</a>	1989	No	Yes	Yes	No	No	No	No	No	No	No	No
SICMIG Scuola Italiana di Chirurgia Mini Invasiva Ginecologica (Italian school of minimally invasive gynaecological surgery) <a href="http://www.sicmig.org/">http://www.sicmig.org/</a>	2005	Yes	Yes	Yes	No	No	No	No	No	No	No	No
SICPCV Società Italiana di Colposcopia e Patologia Cervico Vaginale (Italian society of colposcopy and cervical and vaginal pathology) <a href="http://www.colposcopiaitaliana.it/">http://www.colposcopiaitaliana.it/</a>	1980	No	Yes	Yes	No	No	No	No	No	No	No	No
SIDIP Società Italiana di Diagnosi Prenatale e Medicina Materno Fetale (Italian society of prenatal diagnosis and feto-maternal medicine) <a href="http://www.ilfeto.it/site/">http://www.ilfeto.it/site/</a>	1998	No	Yes	Yes	No	No	No	No	No	No	No	No
SIDR Società Italiana della Riproduzione (Italian society of reproduction) <a href="http://www.sidr.it/cms/view.html">http://www.sidr.it/cms/view.html</a>	1999	Yes	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIEOG Società Italiana di Ecografia Ostetrica e Ginecologica e Metodologie Biofisiche (Italian society of obstetrical and gynaecological ultrasonography and biophysical methodologies) <a href="http://www.sieog.it/">http://www.sieog.it/</a>	1984	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
SIEPAM Società Italiana Endometriosi e Patologia Mestruale (Italian society of endometriosis and menstrual disorders) <a href="http://www.siepam.it/">http://www.siepam.it/</a>	2014	Yes	No	Yes	No	No	N.A.	No	No	No	No	Yes
SIERR Società Italiana di Embriologia, Riproduzione e Ricerca (Italian society of embryology, reproduction and research) <a href="http://www.sierr.it/">http://www.sierr.it/</a>	1998	No	Yes	Yes	No	No	No	No	No	No	No	Yes
SIFES E MR Società Italiana di Fertilità e Sterilità e Medicina della Riproduzione (Italian society of fertility, sterility and reproductive medicine) <a href="http://sifes.it/">http://sifes.it/</a>	1965	No	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of presidents, board members, and executive staff discussed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIFIOG Società Italiana di Fitoterapia e Integratori in Ostetricia e Ginecologia (Italian society of phytoterapeutics and supplements in obstetrics and gynaecology) <a href="http://www.sifiog.it/">http://www.sifiog.it/</a>	2008	Yes	No	Yes	No	No	N.A.	No	No	No	No	No
SIFR Società Italiana di Fisiopatologia della Riproduzione (Italian society for pathophysiology of reproduction)	1982	No website found		Yes <sup>‡</sup>	Yes	No website found						No
SIGIA Società Italiana di Ginecologia dell'Infanzia e dell'Adolescenza (Italian society of childhood and adolescent gynaecology) <a href="http://www.sigia.it/">http://www.sigia.it/</a>	1978	No	Yes	Yes	No	No	No	No	No	No	No	No
SIGITE Società Italiana di Ginecologia della Terza Età (Italian society for third age gynaecology) <a href="http://www.sigite.it/drupal/index.php">http://www.sigite.it/drupal/index.php</a>	1991	No	Yes	Yes	No	No	No	No	No	No	No	Yes

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIGO Società Italiana di Ginecologia e Ostetricia (Italian society of gynaecology and obstetrics) <a href="http://www.sigo.it/home/">http://www.sigo.it/home/</a>	1892	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
SIM Società Italiana della Menopausa (Italian society of menopause) <a href="http://www.simenopausa.it/">http://www.simenopausa.it/</a>	2011	Yes	No	Yes	No	No	N.A.	No	No	No	No	No
SIMP Società Italiana di Medicina Perinatale (Italian society of perinatal medicine) <a href="http://www.simponline.it/site/home.asp">http://www.simponline.it/site/home.asp</a>	1984	Yes	Yes	Yes	No	No	No	No	No	No	No	No
SIOG Società Italiana di Oncologia Ginecologica (Italian society of gynaecological oncology) <a href="http://www.siog.it">http://www.siog.it</a>	1977	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes
SIOS Società Italiana Ospedaliera Sterilità (Italian hospital society for sterility) <a href="http://www.siosteril.it/">http://www.siosteril.it/</a>	2003	No	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIPGO Società Italiana per la Psicopatologia in Ginecologia e Ostetricia (Italian society for psychosomatics in gynaecology and obstetrics) <a href="http://www.sipgo.org/">http://www.sipgo.org/</a>	1993	No	Yes	Yes	No	No	No	No	No	No	No	No
SIPO Società Italiana Policistici Ovarica (Italian society of polycystic ovary syndrome)	2012	No website found		Yes <sup>‡</sup>	No	No website found						No
SIPPO Società Italiana di Psicoprofilassi Ostetrica (Italian society for obstetrical psycho-prophylaxis) <a href="http://www.sippo.eu/">http://www.sippo.eu/</a>	1966	No	No	Yes <sup>‡</sup>	No	No	N.A.	No	No	No	No	No
SIPUF Società Italiana di Pelvi Perineologia e Urologia Femminile e Funzionale (Italian society of pelvi-perineology and female and functional urology) <a href="http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do">http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do</a>	2007	Yes	Yes	Yes	No	No	No	No	No	No	No	No

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Supplementary table 1. Details of the characteristics of professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIRONG Società Italiana per la Ricerca Ostetrico-Neonatale-Ginecologica (Italian society for the obstetrical, neonatal, and gynaecological research) <a href="http://www.sirong.it/">http://www.sirong.it/</a>	2008	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes
SIUD Società italiana di urodinamica (Italian society of urodynamics) <a href="http://www.siud.it/">http://www.siud.it/</a>	1977	No	Yes	Yes	Yes	No	No	No	No	No	No	Yes
SLOG Società Lombarda di Ostetricia e Ginecologia (Lumbardy society of obstetrics and gynaecology) <a href="http://www.slog.org/">http://www.slog.org/</a>	1950	No	Yes	Yes	No	No	No	No	No	No	No	No
SMIC Società Medica Italiana per la Contracezione (Italian medical society for contraception) <a href="http://www.smicontraccezione.it/">http://www.smicontraccezione.it/</a>	2006	No	No	No	N.A.	No	N.A.	No	No	No	No	N.A.

\*In 12 cases, including those in which a website was not found, the year of establishment of the association/society was obtained from the two major national professional associations (i.e., Società Italiana di Ginecologia and Ostetricia and Associazione Ostetrici e Ginecologi Ospedalieri Italiani), and presidents or past presidents of the societies.

<sup>†</sup> Specific directives regulating professional obstetrical and gynaecological associations' conduct in case of private financial support.

<sup>‡</sup> When an association's website was not found or when the information was not indicated on website, CME activity was identified by scrutinising the online programmes of the society's conferences and courses.

COI = conflict of interest. CME = continuing medical education. PMA = professional medical association. N.A. = not applicable.

Supplementary table 2. Evaluation of the Società Italiana di Ginecologia e Ostetricia (SIGO) and the Associazione Ostetrici e Ginecologi Ospedalieri Italiani (AOGOI) websites according to the Health on the Net Foundation Code of Conduct (HONcode) principles.

Principles of HONcode Site Evaluation Form	SIGO	AOGOI
<b>Principle 1. Information must be authoritative</b>		
1. The site provides general information about the organization or individual responsible for its operation and content, and details about the editor or principal author are given with his/her credentials	Yes, an author's or editor's details with credentials are given	Yes, an author's or editor's details with credentials are given
2. The site provides medical/health information or advice	Some health/medical information is not attributed to an author	Some health/medical information is not attributed to an author
<b>Principle 2. Complementarity/Mission/Assistance</b>		
3. A statement declaring that information provided on the site is meant to complement and not replace any advice or information from a health professional is clearly provided	Yes	Yes
4. A statement describing the intended mission of the site is provided on the site	Yes	Yes
5. The site clearly mentions the intended audience of the site (general public, health professionals, students...)	Yes	Yes
<b>Principle 3. Privacy - Confidentiality</b>		
6. A Privacy/Confidentiality Policy regarding e-mail addresses, personal, non-personal and medical information is displayed on my website	Yes	Yes
7. Do my site and its mirrors respect the legal requirements, including those concerning medical and personal information privacy, that apply in the country and state of their location?	Yes	Yes
<b>Principle 4. Information must be documented: Referenced and dated</b>		
8. Is the last modification date provided for the site?	No	Yes, for all the pages of the site

Supplementary table 2. Evaluation of the Società Italiana di Ginecologia e Ostetricia (SIGO) and the Associazione Ostetrici e Ginecologi Ospedalieri Italiani (AOGOI) websites according to the Health on the Net Foundation Code of Conduct (HONcode) principles. Continued.

9. Does the site contain information from external sources?	Yes, a bibliographic reference to the source data is given	Yes, but no reference to the source is made
<b>Principle 5. Justification of claims</b>		
10. Does the site make claims relating to the benefit or performance of a specific medical treatment, commercial product or service?	Yes, the claims are based on the author's personal research or opinions	Yes, all claims are supported by clear references to scientific research results and/or published articles
<b>Principle 6. Website contact details</b>		
11. A valid email address for the webmaster or a link to a valid contact form is easily accessible throughout the site?	Yes	Yes
<b>Principle 7. Disclosure of funding sources</b>		
12. Is the source of the funding of my site clearly described?	No	No
<b>Principle 8. Advertising policy</b>		
13. The site displays advertising that, is a source of income	Advertising is not identified as such	Advertising is not identified as such
14. The site is part of a link/banner exchange	Yes, but there is no specific description about the site advertising policy	Yes, but there is no specific description about the site advertising policy
15. The site does not display advertising	There is no statement displayed	There is no statement displayed

# BMJ Open

## The proliferation of gynaecological scientific societies and their financial transparency: an Italian survey

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Manuscripts

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3 1 THE PROLIFERATION OF GYNAECOLOGICAL SCIENTIFIC SOCIETIES AND THEIR  
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5 2 FINANCIAL TRANSPARENCY: AN ITALIAN SURVEY  
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51 20 Key words: scientific societies, obstetrics, gynaecology, competing interests.

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54 21 Word count: ???

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## 23 ABSTRACT

24 **Objectives:** To determine the number of Italian obstetrical and gynaecological societies, and  
25 to ascertain their financial transparency.

26 **Design:** Internet-based national survey and website content analysis.

27 **Participants:** Currently active, not privately owned, non-religious, apolitical, obstetrical and  
28 gynaecological associations.

29 **Methods:** From October 2014 to June 2015, scientific societies were identified using  
30 combinations of search terms, and examining the website of the two main Italian obstetrical  
31 and gynaecological organisations. Individual societies' websites were scrutinised by two  
32 independent investigators.

33 **Primary and secondary outcome measures:** Number of Italian obstetrical and  
34 gynaecological associations and its variation over time; 12 information categories defining the  
35 general characteristics of the societies and their websites, and the financial transparency of the  
36 associations.

37 **Results:** The initial web search yielded 56 professional obstetrical and gynaecological  
38 associations but nine were excluded for various reasons. Of the remaining 47 professional  
39 associations, 17 covered both obstetrics and gynaecology, four were specialised in obstetrics,  
40 26 in gynaecology and 46 provided CME activities. The number of societies has quadrupled  
41 in the last 35 years, increasing at a mean rate of one additional society per year. The  
42 headquarters of the associations were located in the offices of a professional congress  
43 organiser in 15 instances, and advertisements or links to industry products were present in 12  
44 societies' websites. Bylaws were accessible in 32 websites. No information was publicly

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3 45 available regarding competing interests, financial statements, and quantitative external  
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5 46 funding.  
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8 47 **Conclusions:** The number of obstetrical and gynaecological societies is remarkably high in  
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10 48 Italy, particularly in the gynaecological area. This may result in waste of resources. Despite  
11  
12 49 CME activity provision, transparency of societies regarding financial issues and competing  
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14 50 interests was almost non-existent. This may be associated with the risk of blurring the  
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16 51 distinction between education and marketing. Policies addressing the interactions between  
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18 52 medical associations and industry are available and should be implemented.  
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## 53 STRENGTHS AND LIMITATIONS OF THE STUDY

- 54 • Different search strategies were adopted to identify all currently active Italian  
55 obstetrical and gynaecological scientific societies, i.e., Internet, executive personnel of  
56 the two main national organisations, and direct contacts with some presidents and  
57 past-presidents.
- 58 • Two independent investigators retrieved information, abstracted data on standardised  
59 forms and conducted a website content analysis on 12 items regarding the general  
60 characteristics of the medical associations and their websites, as well as societies'  
61 financial transparency.
- 62 • The data presented describe a selected picture of a specific medical specialty in Italy.  
63 The findings cannot be generalised to other medical specialties and other countries.

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65 ETHICAL APPROVAL STATEMENT

66 The Ethic Committee’s approval was not required for this survey.

For peer review only

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## 67 INTRODUCTION

68 A core mission of medical societies is dissemination of scientific information.[1, 2] They  
69 foster research in distinct fields of medicine, promote medical education, and develop clinical  
70 guidelines. Authoritative medical associations are also influential in modulating practice,  
71 counselling administrators, advising politicians regarding public healthcare programmes, and  
72 regulating professional conduct. Thus, the social role of these organisations entails  
73 exceedingly important clinical and ethical implications.[1-4]

74 However, some authors maintain that economic aspects are progressively eroding the  
75 moral foundations of medical associations, increasing the tension between self-interest and  
76 ethical principles. [1] In particular, a progressive imbalance has been observed in funding  
77 derived from membership dues and grants and contracts awarded by government or charitable  
78 foundations, in favour of support from for-profit organisations [1, 5-7]. This situation may  
79 generate a conflict of interest (COI), which has been defined as “a set of circumstances that  
80 creates a risk that professional judgment or actions regarding a primary interest will be unduly  
81 influenced by a secondary interest”. [8] The primary interest of a scientific society is to  
82 promote the highest quality of care also through the education of its members. [9] The  
83 secondary interest is, in this case, the financial well-being of the society together with the  
84 financial profit of some commercial entities. A COI may occur not only if a professional  
85 medical organisation (PMA) receives money from manufacturers of drugs or devices used in  
86 the same medical area of interest as the society, but also when individual officers of the  
87 organisation have personal financial ties to industries that could influence their actions and  
88 decisions within the PMA. Of note, COI is a condition, not a behaviour. In other words, when  
89 a COI exists, no actual unethical conduct has necessarily arisen. [5] However, although COI  
90 and bias are not synonymous, the former is a demonstrated risk factor for the latter.[10]

Two different approaches have been suggested to deal with COIs of PMAs, i.e., a divestment strategy (progressively discontinuing commercial support), and a management strategy (disclosing COIs and adopting rules to limit their potentially pernicious effects).[5, 9] As the operating budget of many PMAs is substantially based on industry funding, the latter policy has generally been preferred, purportedly to ensure stability in organisation functioning and avoid curtailments in services to members. [1, 5-7, 11] To be efficient, any strategy to “manage” COIs about interactions with industry, should be based on thorough financial transparency, particularly, but not exclusively, regarding commercial support of annual meetings. In fact, most PMAs base their financial sustainability on revenues from periodic congresses, as in these occasions industry generally purchases exhibit hall space, sponsors conference sessions or satellite symposia, pays the registration fee for a variable number of attendees, and buys advertising opportunities.[2, 9, 12, 13].

Complicating further the above scenario, the past decades have witnessed a tendency toward proliferation of medical societies focussed on subspecialty areas or even single diseases, paralleling the general trend of modern medicine in the direction of over-specialisation. [14] The intrinsic benefit of creating small and subspecialty associations is the possibility of increasing knowledge on specific disorders. However, compared with major national and international organisations, small societies may have less impact regarding public advocacy, information of healthcare decision makers, and definition of public health system strategies. Moreover, small societies generally have restricted financial resources, thus their possibility to fund research seems limited. In this regard, the proliferation of subspecialty medical associations could also be viewed as a potential waste of precious resources that could be invested more efficiently in the interest of patients.

In addition, the quality of the information disseminated by scientific organisations should be scrutinised with care. Intellectual independence is essential, especially when

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3 116 providing continuing medical education (CME) activity,[10, 15-17] but fragmentation and  
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5 117 subspecialisation may expose medical societies to increased financial vulnerability and,  
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7 118 hypothetically, this could result in an increase in the risk of undue influence of  
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9 119 pharmaceutical, biotechnology, and device industries. Noteworthy, the percentage of the  
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11 120 overall national funding for CME activities provided by industry is particularly high in Italy,  
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13 121 with reported figures varying from 60%[18] to almost 100%[19] of the total expenditure.

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17 122 The phenomenon of proliferation of professional organisations appears to be  
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19 123 particularly intense in the gynaecological field, probably owing to the multitude of issues  
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21 124 regarding women's health. Therefore, we decided to conduct a survey in order to examine the  
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23 125 condition of obstetrical and gynaecological societies in Italy. The primary objectives were to  
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25 126 determine the overall number of associations and to verify whether a trend exists towards an  
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27 127 increase in the number of subspecialty organisations over time. Secondary aims were to  
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29 128 ascertain the societies' level of transparency regarding general competing interests and  
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31 129 funding from industry, and to evaluate if a relation exists between the provision of CME  
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33 130 activity and the degree of financial transparency.

### 34 35 36 37 38 131 METHODS

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41 132 This survey was conducted by retrieving and analysing information from the Internet. As  
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43 133 publicly available data were used, the present study was exempt from the Ethics Committee's  
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45 134 approval. The study was restricted to professional organisations active during 2014 in Italy.  
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47 135 Websites were identified using 'Google', consistently ranked as the most popular search  
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49 136 engine (<http://www.google.com>). [20] The following Italian search terms and phrases were  
50  
51 137 used: "Italian obstetrical and gynaecological societies", "obstetrical and gynaecological  
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53 138 societies AND Italy", " Italian obstetrical and gynaecological associations", "obstetrical and  
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55 139 gynaecological associations AND Italy", "Italian obstetrical and gynaecological federations",  
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3 140 “obstetrical and gynaecological federations AND Italy”, “Italian obstetrical and  
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5 141 gynaecological organisations”, “obstetrical and gynaecological organisations AND Italy”. In  
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7 142 addition, the websites of the two major national obstetrical and gynaecological societies  
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9 143 (Società Italiana di Ginecologia e Ostetricia, SIGO; Associazione Ostetrici Ginecologi  
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11 144 Ospedalieri Italiani, AOGOI) were examined with the objective of identifying all the  
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13 145 subspecialty organisations in the field affiliated to SIGO and AOGOI. All authors  
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15 146 independently conducted the initial search from October 31 to November 7, 2014. After  
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17 147 completion of the list of associations, these were categorised, based on their name, into  
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19 148 combined obstetrical and gynaecological, obstetrical only, and gynaecological only  
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21 149 organisations.

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26 150 Individual societies’ websites were then independently scrutinised from November 8  
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28 151 to December 12, 2014, and from June 15 to 19, 2015, by two authors (PVe and MPF), in  
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30 152 order to verify the correctness of the initial categorisation, and to ascertain whether the  
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32 153 association was public (i.e., not privately owned by single individuals), and with a defined  
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34 154 mission and a regular board, including a president, a treasurer, a secretary, and an executive  
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36 155 committee. Individual or privately owned organisations, those not specifically aimed at  
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38 156 physicians, and those with a religious or political profile were excluded. Moreover,  
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40 157 information was collected on standardised abstraction forms on 12 items defining two  
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42 158 domains, i.e., i) the general characteristics of the society and its website (year of  
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44 159 establishment; whether the headquarters were independent or located in the offices of a  
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46 160 professional congress organiser and accredited CME provider; online availability of society's  
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48 161 bylaws; provision of CME activity; inclusion of sponsored sessions or symposia in the  
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50 162 society's last annual meeting program; presence on society's website of industry advertisement  
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52 163 or links to industries' websites), and ii) the financial transparency of the association  
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54 164 (discussion of financial COIs in society's bylaws; adoption of a policy for interactions with  
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3 165 industry; availability of financial COI disclosures of presidential trio (president, past  
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5 166 president, and president-elect), board members and executive staff; online availability of  
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7 167 annual financial statement; disclosure of restricted and unrestricted industry grants and  
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10 168 individual donations; indication of industry sponsorship in the last annual meeting program  
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12 169 based on informative printed text in addition to mere logo inclusion).

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15 170 In cases where the information on a PMA's year of establishment was missing, the  
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17 171 executive staff of the above two major national obstetrical and gynaecological societies were  
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19 172 consulted by email and telephone. Moreover, PVe directly contacted the presidents and  
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21 173 selected board members of some associations in order to obtain missing data from original  
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23 174 documents. A final extraction form was compiled from the two separate evaluation forms,  
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25 175 with correction or resolution of any discrepancies between abstractors by consensus reached  
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27 176 after discussion or further joint re-examination of selected societies' websites.

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31 177 In addition, two authors independently used the Health on the Net Foundation Code of  
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33 178 Conduct [21] for medical websites, with the objective of examining the degree of  
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35 179 transparency of the healthcare information provided on the websites of the two major national  
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37 180 obstetrical and gynaecological associations, SIGO and AOGOI. The HONcode is an  
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39 181 instrument developed to assess the intent of a website to publish accurate information, and it  
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41 182 includes items on transparency, financial disclosure, and advertising policy [21].

## 42 43 44 45 183 RESULTS

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48 184 The initial web search yielded 56 professional obstetrical and gynaecological associations, but  
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50 185 two were immediately excluded because they were known to be privately owned (Società  
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52 186 Italiana Studi di Medicina della Riproduzione, SISMeR) or individually managed  
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54 187 (Fondazione Graziottin per la Cura del Dolore nella Donna). Examination of societies'  
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56 188 websites resulted in the exclusion of three organisations with defined socio-political or  
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3 189 religious characteristics (Associazione Italiana Ginecologi Ostetrici Cattolici, AICOG;  
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5 190 Società Italiana Procreazione Responsabile, SIPRe; Libera Associazione Italiana Ginecologi  
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7 191 per l'Applicazione della Legge 194/78, LAIGA). One association (Confederazione Italiana  
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9 192 Ginecologi Ospedalieri, CIGO) was excluded because its activities were unclear and not  
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11 193 typical of a regular scientific society (e.g., organisation of conferences and development of  
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13 194 clinical recommendations). Another association was apparently no longer currently active  
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15 195 (Società Italiana di Endoscopia e Laserterapia in Ginecologia, SIELG). Only one reviewer  
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17 196 excluded two other organisations. Joint re-examination of the two websites demonstrated that  
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19 197 the activity of one association (Fondazione Confalonieri Ragonese) was limited to drafting  
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21 198 clinical practice recommendations on behalf of AOGOI, whereas the activity of the other one  
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23 199 (Associazione Italiana di Ostetricia, AIO) was aimed mainly at midwives rather than  
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25 200 physicians. A shared decision was taken to exclude the latter two organisations.

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30 201 Summary characteristics of the remaining 47 professional associations are shown in  
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32 202 Table 1. Individual societies' details regarding the general characteristics of the associations  
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34 203 and their websites as well as PMAs' financial transparency are included in online  
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36 204 Supplementary table 1.  
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205 TABLE 1. General characteristics and financial transparency of Italian professional obstetrical and gynaecological associations extracted from their websites.

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207	208	209	210	211	212	213	214	215	216	217	218	219	220
Clinical and research area	No. with website	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity*	Sponsored session/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COIs of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program	
221	222	223	224	225	226	227	228	229	230	231	232	233	234
Obstetrics and gynaecology (n=17)	14	7	12	17	4	8	0	0	0	0	0	8	
Obstetrics only (n=4)	4	1	2	4	0	0	0	0	0	0	0	0	
Gynaecology only (n=26)	23	7	18	25	5	4	0	0	0	1	0	7	

228 Data are numbers. COI = conflict of interest. CME = continuing medical education. PMA = professional medical association.

229 \*When an association's website was not found or when the information was not indicated on website, CME activity was identified scrutinising the online programmes of the society's conferences and courses.

231 † Specific directives regulating professional obstetrical and gynaecological associations' conduct in case of private/commercial financial support.

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3 232 A total of 24 organisations were affiliated with SIGO (<http://www.sigo.it/societa-affiliate/>),  
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5 233 and six with AOGOI (<http://www.aogoi.it/opencms/sezioniOriz/societaAffiliate/index.html>).  
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7 234 Seventeen "generalist" associations covered both obstetrics and gynaecology (the two main  
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9 235 ones plus 15 minor societies), four were specialised in obstetrical areas only, and 26 were  
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11 236 specialised in gynaecological areas only. In this latter group, seven organisations dealt with  
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13 237 infertility, four with pelvic and endoscopic surgery, four with urogynaecology, and two with,  
14  
15 238 respectively, cervical pathology, contraception, and climacteric. After exclusion of the 17  
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17 239 "generalist" organisations, the distribution of societies' main area of interest was substantially  
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19 240 skewed towards gynaecology (26/30; 87%).  
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24 241 Six societies did not appear to have a website. In 12 cases, including those in which a  
25  
26 242 website could not be found, the year of establishment of the association was obtained from  
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28 243 SIGO or AOGOI executive personnel, and from direct contact between PVE and presidents or  
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30 244 past-presidents. In the period 1980-2014 the number of Italian obstetrical and gynaecological  
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32 245 societies has quadrupled, starting from 12 and increasing at a mean rate of one society per  
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34 246 year in the last 35 years (Figure 1).  
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38 247 The headquarters of the associations were independent in 26/41 instances, and located  
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40 248 in the offices of a professional congress organiser and accredited CME provider in the  
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42 249 remaining 15. Society's bylaws were published online on 32/41 (78%) of the identified  
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44 250 websites. Forty-six associations organised conferences and provided CME activities. When an  
45  
46 251 official society's website was not identified or when the information was not indicated on  
47  
48 252 website, CME activity was verified by scrutinising the online programmes of the societies'  
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50 253 conferences and courses. A total of 9/46 associations included sponsored sessions or  
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52 254 symposia in their last annual meeting program. Advertisements or links to industry products  
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54 255 were present on 12/41 societies' websites (8 in the obstetrical and gynaecological subgroup  
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56 256 and 4 in the gynaecological only subgroup).  
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3 257 With regard to financial transparency, in none of the 32 developed bylaws was the  
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5 258 issue of COIs mentioned. No association had apparently developed a policy for interactions  
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7 259 with industry. A total of 423 board members were identified, including the presidential trios,  
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9 260 treasures and secretaries. Forty-eight members were included at the same time on the board of  
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11 261 two distinct organisations, 14 members on the board of three organisations, and five on the  
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13 262 board of four organisations. The competing interest disclosures of board members and  
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15 263 executive staff were never posted on societies' websites.  
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19 264 The annual financial statement was published online in only one case and, with this  
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21 265 exception, no information was publicly available on any other website regarding the society's  
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23 266 source of financial support, as no data was accessible on restricted and unrestricted industry  
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25 267 grants or individual donations, nor on industry sponsorship for the last annual meetings,  
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27 268 courses, or other educational events.  
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31 269 Evaluation of transparency of SIGO and AGOI websites according to the HONcode  
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33 270 principles [21] identified lack of information (Supplementary table 2). In particular, neither  
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35 271 website attributed certain health/medical information to an author; the sources of the funding  
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37 272 of both sites were not clearly described; advertising was not always identified as such; and the  
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39 273 sites were part of a link/banner exchange but there was no specific description about the site  
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41 274 advertising policy. Moreover, the SIGO website did not provide the last modification date and  
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43 275 made claims relating to the benefit or performance of a specific medical treatment,  
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45 276 commercial product or service based on the author's personal research or opinion.  
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49 277 Both websites provided free CME e-learning courses supported by pharmaceutical  
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51 278 industries manufacturing drugs or commercial products used specifically in those medical  
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53 279 areas on which courses were focused. Finally, the SIGO website included descriptions of  
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3 280 some campaigns supported by industries with direct or indirect interests in related medical  
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8 282 DISCUSSION

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11 283 The results of the present survey on Italian obstetrical and gynaecological societies and  
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13 284 content analysis of their websites depict an academic scenario that warrants consideration. A  
14  
15 285 remarkably high number of organisations was identified, characterised by a progressive and  
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17 286 impressive increase over time, especially during the last decades. We do not have a clear  
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19 287 explanation for this phenomenon. According to the list of member societies of the  
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21 288 Federazione delle Società Medico-Scientifiche Italiane (Italian Federation of Medical-  
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23 289 Scientific Societies; FISM), which includes Italian medical and scientific societies involved in  
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25 290 medical education or research activities of national interest, this situation does not seem to be  
26  
27 291 generalizable to other medical specialties. [22] Of note, the gynaecological subgroup was  
28  
29 292 characterised by several replications, particularly in the fertility and sterility, pelvic and  
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31 293 endoscopic surgery, and urogynaecology areas. The reason for these duplications is not  
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33 294 readily understandable, because a single, large organisation would probably be more  
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35 295 efficacious in accomplishing the mission of the society, centralising resources and reducing  
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37 296 costs.

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43 297 The observed disproportion in the distribution of subspecialty associations decidedly  
44  
45 298 cannot be explained by unequal distribution of the clinical content of the two main areas of  
46  
47 299 the addressed specialty, obstetrics and gynaecology. Thus, it could be hypothesised that  
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49 300 Italian gynaecologists were more scientifically proactive compared with their obstetrical  
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51 301 colleagues, but we could not find evidence to support this interpretation. An alternative  
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53 302 theoretical explanation of this observation is that commercial sponsorship skewed the topics  
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55 303 in favour of disorders from which a larger profit could be made. In this regard, gynaecology  
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3 304 might prove a more lucrative medical area compared with obstetrics, at least in terms of  
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5 305 markets for several costly new drugs, surgical devices, and diagnostic tools. However, we  
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7 306 have no data to support this hypothesis.  
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11 307 In the USA, the first Open Payment data shows that several manufacturers of drugs or  
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13 308 devices for gynaecologists are among the top highest spending US companies for payment to  
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15 309 physicians, and gynaecology is second only to orthopaedic surgery in terms of the highest  
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17 310 value of shares held by physicians.[23] Nonetheless, a direct relation between the number of  
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19 311 existing scientific societies in a given specialty area and the degree of industry influence on  
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21 312 its medical community appears difficult to demonstrate, and we are not alleging that any of  
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23 313 the considered societies have engaged in any misconduct or have agreed to tailor their CME  
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25 314 activity in accordance with a sponsor's preference.  
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29 315 Financial transparency of the organisations included was almost non-existent, as we  
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31 316 were unable to retrieve relevant, publicly available information, with the exception of the  
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33 317 annual financial statement of a single, small gynaecological association. Six associations did  
34  
35 318 not appear to have a website, thus providing no publicly available information. Unfortunately,  
36  
37 319 online publishing of annual budgets and data regarding financial support is not a legal  
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39 320 requirement for Italian scientific societies, and we could not identify alternative sources of  
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41 321 information. We could not verify if and to what extent financial relations were in place  
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43 322 between Italian obstetrical and gynaecological associations and industry, and we are unable to  
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45 323 reject the hypothesis that they did not exist. This also applies to commercial support of annual  
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47 324 meetings and educational events, although in this case the obstetrical and gynaecological area  
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49 325 would constitute an exception with respect to data on overall industry funding of Italian CME  
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51 326 activities.[18, 19]  
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3 327 We used websites as the main source of information regarding a society's financial  
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5 328 transparency. It could be argued that websites can be useful to identify national PMAs, but  
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7 329 they provide no accurate specific information on COIs and commercial funding. This  
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9 330 constitutes a limitation of our study, as we could have sent a questionnaire directly to  
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11 331 individual medical organisations or interviewed the president and executive officers.  
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13 332 However, the aim of our survey was to verify whether information regarding COIs of board  
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15 333 members and industry support of Italian gynaecological societies was easily and publicly  
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17 334 accessible, which nowadays means posted on a society's website [17]. The concept of  
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19 335 transparency should not imply the need for individual investigation into a society's board  
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21 336 members or executive staff by doctors and citizens to acquire this type of information.  
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26 337 Almost all the identified societies provided CME activity through conferences and  
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28 338 courses. Lack of disclosure, in societies' websites, regarding industry support for scientific  
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30 339 events involving CME activity (or lack of a website) is neither surprising nor unlawful, but  
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32 340 raises ethical concerns. Some relevant information can be retrieved from the website of the  
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34 341 Agenzia Nazionale per i Servizi Sanitari Regionali (Age.na.s), which manages the national  
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36 342 CME program on behalf of the Italian Ministry of Health. However, although the industries  
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38 343 sponsoring the events are listed, the financial support is expressed as a relative percentage of  
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40 344 an overall budget that is not quantified  
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42 345 ([http://ecm.agenas.it/BancaDati/SB\\_Lista\\_Cerca\\_Accr.asp](http://ecm.agenas.it/BancaDati/SB_Lista_Cerca_Accr.asp); accessed on March 23, 2015).  
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46 346 Independently of legal requirements, we believe that scientific societies should  
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48 347 provide data on industry support of CME activity spontaneously, and should post it on their  
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50 348 websites. This seems particularly important when the organisations delivering CME activity,  
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52 349 which is a source of income for the provider, do not have independent headquarters, but are  
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54 350 hosted by professional congress organisers that may receive money also from pharmaceutical  
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56 351 companies and manufacturers of medical devices,[24, 25] or when advertisements or links to  
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3 352 industry products are included in their websites. However, without a formal evaluation of  
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5 353 CME “products” (i.e., scientific quality and compliance with society mandate), no  
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7 354 conclusions can be drawn.  
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10 355 Competing interests of members of the boards and executive committees of a society  
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12 356 were also not disclosed, and this appears somewhat concerning.[1, 5, 9] In general, finding  
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14 357 experts without competing interests is difficult, and ideally they would all be concentrated in  
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16 358 the boards of a few major obstetrical and gynaecological societies. The multiplication of  
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18 359 boards and committees needed as a consequence of the proliferation of smaller organisations,  
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20 360 particularly in the gynaecological area, implies that most of their directors and executives will  
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22 361 have COIs, simply because there are not sufficient experts without COIs to cover all the  
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24 362 available positions. This may have implications regarding a society’s activities, including the  
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26 363 development of practice guidelines.[26] This issue would be greater if members with COIs  
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28 364 serve on the board of more than one association.  
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33 365 Taking a selected picture of a specific country is a limit of our study that impedes  
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35 366 generalisation of the findings. However, we considered that this survey allowed us to define a  
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37 367 general scheme to be adopted for an investigation of this type, identifying reasonable  
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39 368 endpoints and specific information categories. We are not aware of similar surveys published  
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41 369 in the scientific literature, and believe that this scheme could also be used to investigate the  
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43 370 condition of PMAs in different specialties and different countries.  
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47 371 Rothman and co-workers described in detail the many potential threats to PMAs'  
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49 372 integrity, identified specific COIs that may affect the organisations' activity, and formulated  
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51 373 guidelines to prevent undue industry influence aimed at divestment from commercial support  
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53 374 rather than management of financial competing interests.[2] In fact, the authors maintain that  
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3 375 "PMAs should work toward a complete ban on pharmaceutical and medical device industry  
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5 376 funding (\$0), except for income from journal advertising and exhibit hall fees".[2]  
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8 377 The Council of Medical Specialty Societies was created in USA in 1965 with the  
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10 378 objective of providing an independent forum for cross-specialty collaboration in order to  
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12 379 influence policy on issues with a nationwide scope, such as medical education and  
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14 380 accreditation. The Council has issued a code for interactions with companies that includes  
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16 381 seven core principles covering COI, financial disclosure, independent program development,  
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18 382 and independent leadership.[27] With regard to transparency, the code states that "Societies  
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20 383 will make their conflict of interest policies and/or forms available to their members and the  
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22 384 public", and "Societies will disclose company support (at a minimum educational grants,  
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24 385 corporate sponsorships, charitable contributions, and support of research grants), making this  
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26 386 information available to their members and the public", and "Societies will disclose all  
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28 387 financial and uncompensated relationships that key society leaders and members of the board  
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30 388 of directors of the society' membership organization have with companies, making this  
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32 389 information available to their members and the public". [27] Up to now, the code has been  
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34 390 signed by 32 North-American member societies of the Council and by 17 North-American  
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36 391 non-member societies.[28]  
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42 392 Examples already exist of PMAs disclosing on their website the breakdown of  
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44 393 industry contribution toward the consolidated revenue of the society, as well as disclosure  
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46 394 statements reported by each member of the board of directors [29], and publishing in meeting  
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48 395 programs the company from which payment is received, the amount of payment by  
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50 396 categories, and the specific type of relationship held with the company.[30] A policy on  
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52 397 rigorous control over COIs has been implemented by several medical and surgical scientific  
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54 398 societies,[19, 29-35] in some cases without detrimental consequences in terms of finances,  
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56 399 membership, attendance at annual meetings, or leadership recruitment.[30, 32, 33]  
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3 400 According to Moynihan,[36] the pharmaceutical industry is currently attempting an  
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5 401 “audacious repositioning”, that is acting as a partner with health services in the provision of  
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7 402 patient care instead of the supplier of one element of it. Therefore, the sales and marketing  
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9 403 departments of pharmaceutical industries and device manufacturers appear to be increasingly  
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11 404 targeting medical societies in addition to individual physicians.[3-5, 9] Within this strategy,  
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13 405 establishing solid ties may prove easier with smaller rather than larger associations.  
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15 406 Moreover, the proliferation of professional organisations might also result in an overall  
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17 407 increase in medical overuse. Therefore, it is currently unclear if the observed progressive  
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19 408 growth in the number of gynaecological associations, together with the relative congresses  
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21 409 and courses, does more good than harm to patients.[37] Future research should aim at  
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23 410 verifying whether this phenomenon results exclusively in enhanced knowledge and translates  
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25 411 into better care of women's health, or if it facilitates the dissemination of partly biased  
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27 412 information within the scientific community.

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32 413 Italian scientists should lobby for transparency of public disclosure of COIs of  
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34 414 societies providing CME activity and on implementation of efficient societies' policies for  
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36 415 interactions with industry. Moreover, the Ministry of Health should only grant CME credits to  
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38 416 conferences and educational events provided that attendees are fully and publicly aware of  
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40 417 financial connections between the scientific society and any industry involved, including  
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42 418 quantitative information regarding funding for the meetings.[38-40] More in general, a sort of  
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44 419 Sunshine Act [41] focussed on scientific societies and educational activity, in addition to that  
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46 420 aimed at individual doctors, and with potential application to multiple settings and  
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48 421 jurisdictions, could prove of great benefit for patients, practising physicians, and clinical  
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50 422 investigators. A complete lack of transparency on the above issues nowadays appears hardly  
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52 423 justifiable and ethically questionable. In fact, COIs of PMAs are more serious than individual  
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54 424 ones, because, where distorted information is disseminated at educational events, the effect  
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3 425 would be multiplied with potential substantial consequences on prescribing practices of many  
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5 426 of the society's members.[3-5] Moreover, the definition of “conflict of interest” itself, in the  
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7 427 case of PMAs, may be somewhat misleading as it has been pointed out that a medical  
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9 428 organisation’s commitment to patients and public health is a moral duty and not a mere  
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11 429 interest.[5]

14 430 Collaboration between PMAs and research and development departments of  
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16 431 pharmacological companies and medical devices manufactures is very important for the  
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18 432 advancement of medicine. This form of interaction is welcome in the interest of patients and  
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20 433 society. On the other hand, collaboration between PMAs and company marketing departments  
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22 434 on CME events and society annual meetings, may blur the distinction between the interest of  
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24 435 the PMA, which is education, and that of industry, which is selling products.

28 436 Despite individual or organisational COIs, the officers of many medical associations  
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30 437 may well be disinterested and passionate, and provide valuable activities for the benefit of  
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32 438 society members. However, members of PMAs are not the end users of drugs and devices  
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34 439 marketed by industry; rather they are the gatekeepers entrusted to make evidence-based  
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36 440 recommendations to the real end user, that is, the patient.[9] When the citizens eventually  
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38 441 have to pay the bill, either directly or indirectly through national health systems, the conduct  
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40 442 of PMAs may not be only based on the presumed good faith of their officers, but should  
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42 443 contemplate the provision of publicly available and easily accessible data on financial  
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44 444 competing interests. Transparency and disclosures do not eliminate COIs,[42, 43] but may  
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46 445 enable doctors and lay people to contextualise the scientific information disseminated in  
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48 446 various ways by medical organisations, putting it in the right perspective.

## 447 CONTRIBUTION TO AUTHORSHIP

448 PVe, PVi and ES conceived and planned the article. All the authors searched the web to  
449 identify Italian obstetrical and gynaecological societies. PVe and MPF scrutinised the  
450 societies' websites, retrieved and tabulated data. All the authors interpreted the data. PVe  
451 drafted the manuscript and all the authors revised it. All the authors approved the final version  
452 of the manuscript.

453

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457

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459 All authors have completed the ICMJE uniform disclosure form at  
460 [www.icmje.org/coi\\_disclosure.pdf](http://www.icmje.org/coi_disclosure.pdf) and declare: no support from any organisation for the  
461 submitted work; no financial relationships with any organisations that might have an interest  
462 in the submitted work in the previous three years; no other relationships or activities that  
463 could appear to have influenced the submitted work; PVe is associate editor of Human  
464 Reproduction Update and past president of the World Endometriosis Society; PVi is associate  
465 editor of Human Reproduction; ES is deputy editor of Human Reproduction.

## 466 DATA SHARING STATEMENT

467 There are no additional unpublished data from the study.

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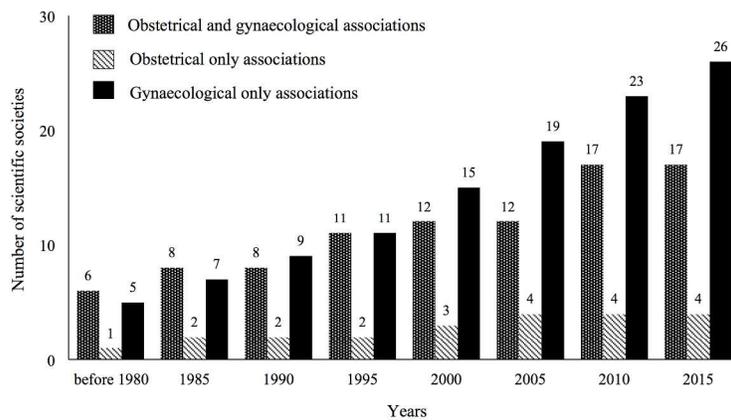
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575 FIGURE LEGEND

576 Variation in the number of Italian obstetrical and gynaecological societies over time. The  
577 number on top of each column is the number of societies.

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Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites.\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
AGEO Associazione Ginecologi Extra Ospedalieri (Association of off hospital gynaecologists) <a href="http://www.ageo-federazione.it">http://www.ageo-federazione.it</a>	1996	Yes	Yes	Yes	No	No	No	No	No	No	No	No
AGICO Associazione Ginecologi Consultoriali (Association of family clinic gynaecologists) <a href="http://www.agico.it/Agico-2007/home.asp">http://www.agico.it/Agico-2007/home.asp</a>	1985	Yes	Yes	Yes	No	Yes	No	No	No	No	No	Yes
AGIF Associazione Ginecologi Italiani in Formazione (Association of in-training Italian gynaecologists) <a href="http://www.giovaniginecologi.org/home/">http://www.giovaniginecologi.org/home/</a>	2009	Yes	Yes	Yes	No	No	No	No	No	No	No	Yes
AGITE Associazione Ginecologi Territoriali (Association of territorial gynaecologists) <a href="http://www.agite.eu/">http://www.agite.eu/</a>	2007	Yes	Yes	Yes	No	Yes	No	No	No	No	No	Yes
AGUI Associazione Ginecologi Universitari Italiani (Association of Italian academic gynaecologists) <a href="http://www.aguionline.it/">http://www.aguionline.it/</a>	1992	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
AIGE Associazione Italiana di Ginecologia Endocrinologica (Italian association of gynaecological endocrinology) <a href="http://www.ginendo.it/">http://www.ginendo.it/</a>	2003	No	No	Yes	No	No	N.A.	No	No	No	No	Yes
AIPE Associazione Italiana pre-eclampsia (Italian Branch of the International Society for the Study of Hypertension in Pregnancy) <a href="http://www.preeclampsia.it/">http://www.preeclampsia.it/</a>	2005	No	No	Yes	No	No	N.A.	No	No	No	No	No
AIUG Associazione Italiana di Urologia Ginecologica e del Pavimento Pelvico (Italian association of gynaecologic urology and of pelvic floor) <a href="http://www.aiug.eu/aiug.asp">http://www.aiug.eu/aiug.asp</a>	1989	No	No	Yes	Yes	Yes	N.A.	No	No	No	No	No
AOGOI Associazione Ostetrici Ginecologi Ospedalieri Italiani (Association of hospital Italian gynaecologists and obstetricians) <a href="http://www.aogoi.it/">http://www.aogoi.it/</a>	1948	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
ATGO Associazione Triveneta di Ginecologia e Ostetricia (North-eastern association of gynaecology and obstetrics) <a href="http://www.atgo.it/">http://www.atgo.it/</a>	1934	No	No	Yes	No	Yes	N.A.	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
CECOS Centro Studi e Conservazione Ovociti e Sperma Umani (Center for the study and preservation of human oocytes and sperm) <a href="http://www.cecos.it/">http://www.cecos.it/</a>	1984	No	Yes	Yes	No	Yes	No	No	No	No	No	No
FIOG Federazione Italiana di Ostetricia e Ginecologia (Italian federation of obstetrics and gynaecology) <a href="http://www.fiogonline.it/">http://www.fiogonline.it/</a>	2008	Yes	Yes	Yes	No	No	No	No	No	No	No	No
GILT Ginecologi Liguri del Territorio (Territorial gynaecologists of Liguria)	1994	No website found		Yes <sup>‡</sup>	No	No website found					No	
GISCi Gruppo Italiano Screening del Cervicocarcinoma (Cervical cancer screening Italian group) <a href="http://www.gisci.it/">http://www.gisci.it/</a>	1996	No	Yes	Yes	Yes	No	No	No	No	Yes	No	Yes
GLUP Gruppo di lavoro in uroginecologia pavimento pelvico (Working group in pelvic floor urogynaecology) <a href="http://dev-test.glup.it/">http://dev-test.glup.it/</a>	2010	Yes	Yes	Yes	No	No	No	No	No	No	No	No
GREG Gruppo Romano di Endoscopia Ginecologica (Roman group of gynaecological endoscopy)	1995	No website found		Yes <sup>‡</sup>	No	No website found					No	

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
LAMM Società Laziale Abruzzese Marchigiana Molisana di Ostetricia e Ginecologia (Lazio, Abruzzo, Marche, and Molise society of obstetrics and gynaecology)	1971	No website found		Yes <sup>‡</sup>	No	No website found						No
PRO-FERT Società Italiana di Conservazione della Fertilità (Italian society for the preservation of fertility) <a href="http://profert.org/">http://profert.org/</a>	2007	No	Yes	Yes	No	No	No	No	No	No	No	No
SCCL Società Campano Calabro Lucana di Ostetricia e Ginecologia (Campania, Calabria, and Lucania society of obstetrics and gynaecology)	1947	No website found		Yes <sup>‡</sup>	No	No website found						No
SEGi Società Italiana di Endoscopia Ginecologica (Italian society of gynaecological endoscopy) <a href="http://www.segionline.it/">http://www.segionline.it/</a>	2000	No	Yes	Yes	Yes	Yes	No	No	No	No	No	No
SIC Società Italiana Contraccezione (Italian society for contraception) <a href="http://www.sicontraccezione.it/">http://www.sicontraccezione.it/</a>	2004	Yes	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SICHIG Società Italiana di Chirurgia Ginecologica (Italian society of gynaecological surgery) <a href="http://www.sichig.it/">http://www.sichig.it/</a>	1989	No	Yes	Yes	No	No	No	No	No	No	No	No
SICMIG Scuola Italiana di Chirurgia Mini Invasiva Ginecologica (Italian school of minimally invasive gynaecological surgery) <a href="http://www.sicmig.org/">http://www.sicmig.org/</a>	2005	Yes	Yes	Yes	No	No	No	No	No	No	No	No
SICPCV Società Italiana di Coloscopia e Patologia Cervico Vaginale (Italian society of colposcopy and cervical and vaginal pathology) <a href="http://www.colposcopiaitaliana.it/">http://www.colposcopiaitaliana.it/</a>	1980	No	Yes	Yes	No	No	No	No	No	No	No	No
SIDIP Società Italiana di Diagnosi Prenatale e Medicina Materno Fetale (Italian society of prenatal diagnosis and feto-maternal medicine) <a href="http://www.ilfeto.it/site/">http://www.ilfeto.it/site/</a>	1998	No	Yes	Yes	No	No	No	No	No	No	No	No
SIDR Società Italiana della Riproduzione (Italian society of reproduction) <a href="http://www.sidr.it/cms/view.html">http://www.sidr.it/cms/view.html</a>	1999	Yes	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COIs of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIEOG Società Italiana di Ecografia Ostetrica e Ginecologica e Metodologie Biofisiche (Italian society of obstetrical and gynaecological ultrasonography and bio-physical methodologies) <a href="http://www.sieog.it/">http://www.sieog.it/</a>	1984	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
SIEPAM Società Italiana Endometriosi e Patologia Mestruale (Italian society of endometriosis and menstrual disorders) <a href="http://www.siepam.it/">http://www.siepam.it/</a>	2014	Yes	No	Yes	No	No	N.A.	No	No	No	No	Yes
SIERR Società Italiana di Embriologia, Riproduzione e Ricerca (Italian society of embryology, reproduction and research) <a href="http://www.sierr.it/">http://www.sierr.it/</a>	1998	No	Yes	Yes	No	No	No	No	No	No	No	Yes
SIFES E MR Società Italiana di Fertilità e Sterilità e Medicina della Riproduzione (Italian society of fertility, sterility and reproductive medicine) <a href="http://sifes.it/">http://sifes.it/</a>	1965	No	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COIs of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIFIOG Società Italiana di Fitoterapia e Integratori in Ostetricia e Ginecologia (Italian society of phytoterapeutics and supplements in obstetrics and gynaecology) <a href="http://www.sifio.org">http://www.sifio.org</a>	2008	Yes	No	Yes	No	No	N.A.	No	No	No	No	No
SIFR Società Italiana di Fisiopatologia della Riproduzione (Italian society for pathophysiology of reproduction)	1982	No website found		Yes <sup>‡</sup>	Yes	No website found						No
SIGIA Società Italiana di Ginecologia dell'Infanzia e dell'Adolescenza (Italian society of childhood and adolescent gynaecology) <a href="http://www.sigia.it/">http://www.sigia.it/</a>	1978	No	Yes	Yes	No	No	No	No	No	No	No	No
SIGITE Società Italiana di Ginecologia della Terza Età (Italian society for third age gynaecology) <a href="http://www.sigite.it/drupal/index.php">http://www.sigite.it/drupal/index.php</a>	1991	No	Yes	Yes	No	No	No	No	No	No	No	Yes

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIGO Società Italiana di Ginecologia e Ostetricia (Italian society of gynaecology and obstetrics) <a href="http://www.sigo.it/home/">http://www.sigo.it/home/</a>	1892	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
SIM Società Italiana della Menopausa (Italian society of menopause) <a href="http://www.simenopausa.it/">http://www.simenopausa.it/</a>	2011	Yes	No	Yes	No	No	N.A.	No	No	No	No	No
SIMP Società Italiana di Medicina Perinatale (Italian society of perinatal medicine) <a href="http://www.simponline.it/site/home.asp">http://www.simponline.it/site/home.asp</a>	1984	Yes	Yes	Yes	No	No	No	No	No	No	No	No
SIOG Società Italiana di Oncologia Ginecologica (Italian society of gynaecological oncology) <a href="http://www.siog.it">http://www.siog.it</a>	1977	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes
SIOS Società Italiana Ospedaliera Sterilità (Italian hospital society for sterility) <a href="http://www.siosteril.it/">http://www.siosteril.it/</a>	2003	No	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIPGO Società Italiana per la Psicomatica in Ginecologia e Ostetricia (Italian society for psychosomatics in gynaecology and obstetrics) <a href="http://www.sipgo.org/">http://www.sipgo.org/</a>	1993	No	Yes	Yes	No	No	No	No	No	No	No	No
SIPO Società Italiana Policistosi Ovarica (Italian society of polycystic ovary syndrome)	2012	No website found		Yes <sup>‡</sup>	No	No website found						No
SIPPO Società Italiana di Psicoprofilassi Ostetrica (Italian society for obstetrical psycho-prophylaxis) <a href="http://www.sippo.eu/">http://www.sippo.eu/</a>	1966	No	No	Yes <sup>‡</sup>	No	No	N.A.	No	No	No	No	No
SIPUF Società Italiana di Pelvi Perineologia e Urologia Femminile e Funzionale (Italian society of pelvi-perineology and female and functional urology) <a href="http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do">http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do</a>	2007	Yes	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
SIRONG Società Italiana per la Ricerca Ostetrico-Neonatale-Ginecologica (Italian society for the obstetrical, neonatal, and gynaecological research) <a href="http://www.sirong.it/">http://www.sirong.it/</a>	2008	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes
SIUD Società italiana di urodinamica (Italian society of urodynamics) <a href="http://www.siud.it/">http://www.siud.it/</a>	1977	No	Yes	Yes	Yes	No	No	No	No	No	No	Yes
SLOG Società Lombarda di Ostetricia e Ginecologia (Lumbardy society of obstetrics and gynaecology) <a href="http://www.slog.org/">http://www.slog.org/</a>	1950	No	Yes	Yes	No	No	No	No	No	No	No	No
SMIC Società Medica Italiana per la Contraccezione (Italian medical society for contraception) <a href="http://www.smicontraccezione.it/">http://www.smicontraccezione.it/</a>	2006	No	No	No	N.A.	No	N.A.	No	No	No	No	N.A.

\*In 12 cases, including those in which a website was not found, the year of establishment of the association/society was obtained from the two major national professional associations (i.e., Società Italiana di Ginecologia and Ostetricia and Associazione Ostetrici e Ginecologi Ospedalieri Italiani), and presidents or past presidents of the societies.

<sup>†</sup> Specific directives regulating professional obstetrical and gynaecological associations' conduct in case of private financial support.

<sup>‡</sup> When an association's website was not found or when the information was not indicated on website, CME activity was identified by scrutinising the online programmes of the society's conferences and courses.

COI = conflict of interest. CME = continuing medical education. PMA = professional medical association. N.A. = not applicable.

Supplementary table 2. Evaluation of the Società Italiana di Ginecologia e Ostetricia (SIGO) and the Associazione Ostetrici e Ginecologi Ospedalieri Italiani (AOGOI) websites according to the Health on the Net Foundation Code of Conduct (HONcode) principles.

Principles of HONcode Site Evaluation Form	SIGO	AOGOI
<b>Principle 1. Information must be authoritative</b>		
1. The site provides general information about the organization or individual responsible for its operation and content, and details about the editor or principal author are given with his/her credentials	Yes, an author's or editor's details with credentials are given	Yes, an author's or editor's details with credentials are given
2. The site provides medical/health information or advice	Some health/medical information is not attributed to an author	Some health/medical information is not attributed to an author
<b>Principle 2. Complementarity/Mission/Assistance</b>		
3. A statement declaring that information provided on the site is meant to complement and not replace any advice or information from a health professional is clearly provided	Yes	Yes
4. A statement describing the intended mission of the site is provided on the site	Yes	Yes
5. The site clearly mentions the intended audience of the site (general public, health professionals, students...)	Yes	Yes
<b>Principle 3. Privacy - Confidentiality</b>		
6. A Privacy/Confidentiality Policy regarding e-mail addresses, personal, non-personal and medical information is displayed on my website	Yes	Yes
7. Do my site and its mirrors respect the legal requirements, including those concerning medical and personal information privacy, that apply in the country and state of their location?	Yes	Yes
<b>Principle 4. Information must be documented: Referenced and dated</b>		
8. Is the last modification date provided for the site?	No	Yes, for all the pages of the site

Supplementary table 2. Evaluation of the Società Italiana di Ginecologia e Ostetricia (SIGO) and the Associazione Ostetrici e Ginecologi Ospedalieri Italiani (AOGOI) websites according to the Health on the Net Foundation Code of Conduct (HONcode) principles. Continued.

9. Does the site contain information from external sources?	Yes, a bibliographic reference to the source data is given	Yes, a bibliographic reference to the source data is given
<b>Principle 5. Justification of claims</b>		
10. Does the site make claims relating to the benefit or performance of a specific medical treatment, commercial product or service?	Yes, the claims are based on the author's personal research or opinions	Yes, all claims are supported by clear references to scientific research results and/or published articles
<b>Principle 6. Website contact details</b>		
11. A valid email address for the webmaster or a link to a valid contact form is easily accessible throughout the site?	Yes	Yes
<b>Principle 7. Disclosure of funding sources</b>		
12. Is the source of the funding of my site clearly described?	No	No
<b>Principle 8. Advertising policy</b>		
13. The site displays advertising that, is a source of income	Advertising is not identified as such	Advertising is not identified as such
14. The site is part of a link/banner exchange	Yes, but there is no specific description about the site advertising policy	Yes, but there is no specific description about the site advertising policy
15. The site does not display advertising	There is no statement displayed	There is no statement displayed

# BMJ Open

## The proliferation of gynaecological scientific societies and their financial transparency: an Italian survey

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3 1 THE PROLIFERATION OF GYNAECOLOGICAL SCIENTIFIC SOCIETIES AND THEIR  
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5 2 FINANCIAL TRANSPARENCY: AN ITALIAN SURVEY  
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20 Key words: scientific societies, obstetrics, gynaecology, competing interests.

21 Word count: 4052

## 23 ABSTRACT

24 **Objectives:** To determine the number of Italian obstetrical and gynaecological societies, and  
25 to ascertain their financial transparency.

26 **Design:** Internet-based national survey and website content analysis.

27 **Participants:** Currently active, not privately owned, non-religious, apolitical, obstetrical and  
28 gynaecological associations.

29 **Methods:** From October 2014 to June 2015, scientific societies were identified using  
30 combinations of search terms, and examining the website of the two main Italian obstetrical  
31 and gynaecological organisations. Individual societies' websites were scrutinised by two  
32 independent investigators.

33 **Primary and secondary outcome measures:** Number of Italian obstetrical and  
34 gynaecological associations and its variation over time; 12 information categories defining the  
35 general characteristics of the societies and their websites, and the financial transparency of the  
36 associations.

37 **Results:** The initial web search yielded 56 professional obstetrical and gynaecological  
38 associations but nine were excluded for various reasons. Of the remaining 47 professional  
39 associations, 17 covered both obstetrics and gynaecology, four were specialised in obstetrics,  
40 26 in gynaecology and 46 provided CME activities. The number of societies has quadrupled  
41 in the last 35 years, increasing at a mean rate of one additional society per year. The  
42 headquarters of the associations were located in the offices of a professional congress  
43 organiser in 15 instances, and advertisements or links to industry products were present in 12  
44 societies' websites. Bylaws were accessible in 32 websites. No information was publicly

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3 45 available regarding competing interests, financial statements, and quantitative external  
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5 46 funding.  
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8 47 **Conclusions:** The number of obstetrical and gynaecological societies is remarkably high in  
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10 48 Italy, particularly in the gynaecological area. Despite CME activity provision, transparency of  
11  
12 49 societies regarding financial issues and competing interests was almost non-existent. Policies  
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14 50 addressing the interactions between medical associations and industry are available and  
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17 51 should be implemented.  
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## 52 STRENGTHS AND LIMITATIONS OF THE STUDY

- 53 • Different search strategies were adopted to identify all currently active Italian  
54 obstetrical and gynaecological scientific societies, i.e., Internet, executive personnel of  
55 the two main national organisations, and direct contacts with some presidents and  
56 past-presidents.
- 57 • Two independent investigators retrieved information, abstracted data on standardised  
58 forms and conducted a website content analysis on 12 items regarding the general  
59 characteristics of the medical associations and their websites, as well as societies'  
60 financial transparency.
- 61 • The data presented describe a selected picture of a specific medical specialty in Italy.  
62 The findings cannot be generalised to other medical specialties and other countries.

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64 ETHICAL APPROVAL STATEMENT

65 The Ethic Committee's approval was not required for this survey.

For peer review only

## 66 INTRODUCTION

67 A core mission of medical societies is dissemination of scientific information.[1, 2] They  
68 foster research in distinct fields of medicine, promote medical education, and develop clinical  
69 guidelines. Authoritative medical associations are also influential in modulating practice,  
70 counselling administrators, advising politicians regarding public healthcare programmes, and  
71 regulating professional conduct. Thus, the social role of these organisations entails  
72 exceedingly important clinical and ethical implications.[1-4]

73 However, some authors are concerned that economic aspects are interfering with the  
74 moral foundations of medical associations.[1] In particular, a progressive imbalance has been  
75 observed in funding derived from membership dues and grants and contracts awarded by  
76 government or charitable foundations, in favour of support from for-profit organisations [1, 5-  
77 7]. This situation may generate a conflict of interest (COI), which has been defined as “a set  
78 of circumstances that creates a risk that professional judgment or actions regarding a primary  
79 interest will be unduly influenced by a secondary interest”. [8] The primary interest of a  
80 scientific society is to promote the highest quality of care also through the education of its  
81 members. [9] The secondary interest is, in this case, the financial well-being of the society  
82 together with the financial profit of some commercial entities. A COI may occur not only if a  
83 professional medical organisation (PMA) receives money from manufacturers of drugs or  
84 devices used in the same medical area of interest as the society, but also when individual  
85 officers of the organisation have personal financial ties to industries that could influence their  
86 actions and decisions within the PMA. Of note, COI is a condition, not a behaviour. In other  
87 words, when a COI exists, no actual unethical conduct has necessarily arisen. [5] However,  
88 although COI and bias are not synonymous, the former is a demonstrated risk factor for the  
89 latter.[10]

Two different approaches have been suggested to deal with COIs of PMAs, i.e., a divestment strategy (progressively discontinuing commercial support), and a management strategy (disclosing COIs and adopting rules to limit their potentially pernicious effects).[5, 9] As the operating budget of many PMAs is substantially based on industry funding, the latter policy has generally been preferred, purportedly to ensure stability in organisation functioning and avoid curtailments in services to members. [1, 5-7, 11] To be efficient, any strategy to “manage” COIs about interactions with industry, should be based on thorough financial transparency, particularly, but not exclusively, regarding commercial support of annual meetings. In fact, most PMAs base their financial sustainability on revenues from periodic congresses, as in these occasions industry generally purchases exhibit hall space, sponsors conference sessions or satellite symposia, pays the registration fee for a variable number of attendees, and buys advertising opportunities.[2, 9, 12, 13].

Complicating further the above scenario, the past decades have witnessed a tendency toward proliferation of medical societies focussed on subspecialty areas or even single diseases, paralleling the general trend of modern medicine in the direction of over-specialisation. [14] The intrinsic benefit of creating small and subspecialty associations is the possibility of increasing knowledge on specific disorders. However, compared with major national and international organisations, small societies may have less impact regarding public advocacy, information of healthcare decision makers, and definition of public health system strategies. Moreover, small societies generally have restricted financial resources, thus their possibility to fund research seems limited. In this regard, the proliferation of subspecialty medical associations could also be viewed as a potential waste of precious resources that could be invested more efficiently in the interest of patients.

In addition, the quality of the information disseminated by scientific organisations should be scrutinised with care. Intellectual independence is essential, especially when

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3 115 providing continuing medical education (CME) activity,[10, 15-17] but fragmentation and  
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5 116 subspecialisation may expose medical societies to increased financial vulnerability and,  
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7 117 hypothetically, this could result in an increase in the risk of undue influence of  
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9 118 pharmaceutical, biotechnology, and device industries. Noteworthy, the percentage of the  
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11 119 overall national funding for CME activities provided by industry is particularly high in Italy,  
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13 120 with reported figures varying from 60%[18] to almost 100%[19] of the total expenditure.

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17 121 The phenomenon of proliferation of professional organisations appears to be  
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19 122 particularly intense in the gynaecological field, probably owing to the multitude of issues  
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21 123 regarding women's health. Therefore, we decided to conduct a survey in order to examine the  
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23 124 condition of obstetrical and gynaecological societies in Italy. The primary objectives were to  
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25 125 determine the overall number of associations and to verify whether a trend exists towards an  
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27 126 increase in the number of subspecialty organisations over time. Secondary aims were to  
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29 127 ascertain the societies' level of transparency regarding general competing interests and  
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31 128 funding from industry, and to evaluate if a relation exists between the provision of CME  
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33 129 activity and the degree of financial transparency.

### 34 35 36 37 38 130 METHODS

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41 131 This survey was conducted by retrieving and analysing information from the Internet. As  
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43 132 publicly available data were used, the present study was exempt from the Ethics Committee's  
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45 133 approval. The study was restricted to professional organisations active during 2014 in Italy.  
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47 134 Websites were identified using 'Google', consistently ranked as the most popular search  
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49 135 engine (<http://www.google.com>). [20] The following Italian search terms and phrases were  
50  
51 136 used: "Italian obstetrical and gynaecological societies", "obstetrical and gynaecological  
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53 137 societies AND Italy", " Italian obstetrical and gynaecological associations", "obstetrical and  
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55 138 gynaecological associations AND Italy", "Italian obstetrical and gynaecological federations",  
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3 139 “obstetrical and gynaecological federations AND Italy”, “Italian obstetrical and  
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5 140 gynaecological organisations”, “obstetrical and gynaecological organisations AND Italy”. In  
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7 141 addition, the websites of the two major national obstetrical and gynaecological societies  
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9 142 (Società Italiana di Ginecologia e Ostetricia, SIGO; Associazione Ostetrici Ginecologi  
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11 143 Ospedalieri Italiani, AOGOI) were examined with the objective of identifying all the  
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13 144 subspecialty organisations in the field affiliated to SIGO and AOGOI. All authors  
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15 145 independently conducted the initial search from October 31 to November 7, 2014. After  
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17 146 completion of the list of associations, these were categorised, based on their name, into  
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19 147 combined obstetrical and gynaecological, obstetrical only, and gynaecological only  
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21 148 organisations.

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26 149 Individual societies’ websites were then independently scrutinised from November 8  
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28 150 to December 12, 2014, and from June 15 to 19, 2015, by two authors (PVe and MPF), in  
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30 151 order to verify the correctness of the initial categorisation, and to ascertain whether the  
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32 152 association was public (i.e., not privately owned by single individuals), and with a defined  
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34 153 mission and a regular board, including a president, a treasurer, a secretary, and an executive  
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36 154 committee. Individual or privately owned organisations, those not specifically aimed at  
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38 155 physicians, and those with a religious or political profile were excluded. Moreover,  
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40 156 information was collected on standardised abstraction forms on 12 items defining two  
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42 157 domains, i.e., i) the general characteristics of the society and its website (year of  
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44 158 establishment; whether the headquarters were independent or located in the offices of a  
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46 159 professional congress organiser and accredited CME provider; online availability of society's  
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48 160 bylaws; provision of CME activity; inclusion of sponsored sessions or symposia in the  
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50 161 society's last annual meeting program; presence on society's website of industry advertisement  
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52 162 or links to industries' websites), and ii) the financial transparency of the association  
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54 163 (discussion of financial COIs in society's bylaws; adoption of a policy for interactions with  
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3 164 industry; availability of financial COI disclosures of presidential trio (president, past  
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5 165 president, and president-elect), board members and executive staff; online availability of  
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7 166 annual financial statement; disclosure of restricted and unrestricted industry grants and  
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10 167 individual donations; indication of industry sponsorship in the last annual meeting program  
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12 168 based on informative printed text in addition to mere logo inclusion).

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15 169 In cases where the information on a PMA's year of establishment was missing, the  
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17 170 executive staff of the above two major national obstetrical and gynaecological societies were  
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19 171 consulted by email and telephone. Moreover, PVe directly contacted the presidents and  
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21 172 selected board members of some associations in order to obtain missing data from original  
22  
23 173 documents. A final extraction form was compiled from the two separate evaluation forms,  
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25 174 with correction or resolution of any discrepancies between abstractors by consensus reached  
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27 175 after discussion or further joint re-examination of selected societies' websites.

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31 176 In addition, two authors independently used the Health on the Net Foundation Code of  
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33 177 Conduct [21] for medical websites, with the objective of examining the degree of  
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35 178 transparency of the healthcare information provided on the websites of the two major national  
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37 179 obstetrical and gynaecological associations, SIGO and AOGOI. The HONcode is an  
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39 180 instrument developed to assess the intent of a website to publish accurate information, and it  
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41 181 includes items on transparency, financial disclosure, and advertising policy [21].

## 42 182 RESULTS

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48 183 The initial web search yielded 56 professional obstetrical and gynaecological associations, but  
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50 184 two were immediately excluded because they were known to be privately owned (Società  
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52 185 Italiana Studi di Medicina della Riproduzione, SISMeR) or individually managed  
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54 186 (Fondazione Graziottin per la Cura del Dolore nella Donna). Examination of societies'  
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56 187 websites resulted in the exclusion of three organisations with defined socio-political or  
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3 188 religious characteristics (Associazione Italiana Ginecologi Ostetrici Cattolici, AICOG;  
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5 189 Società Italiana Procreazione Responsabile, SIPRe; Libera Associazione Italiana Ginecologi  
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7 190 per l'Applicazione della Legge 194/78, LAIGA). One association (Confederazione Italiana  
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9 191 Ginecologi Ospedalieri, CIGO) was excluded because its activities were unclear and not  
10  
11 192 typical of a regular scientific society (e.g., organisation of conferences and development of  
12  
13 193 clinical recommendations). Another association was apparently no longer currently active  
14  
15 194 (Società Italiana di Endoscopia e Laserterapia in Ginecologia, SIELG). Only one reviewer  
16  
17 195 excluded two other organisations. Joint re-examination of the two websites demonstrated that  
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19 196 the activity of one association (Fondazione Confalonieri Ragonese) was limited to drafting  
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21 197 clinical practice recommendations on behalf of AOGOI, whereas the activity of the other one  
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23 198 (Associazione Italiana di Ostetricia, AIO) was aimed mainly at midwives rather than  
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25 199 physicians. A shared decision was taken to exclude the latter two organisations.

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30 200 Summary characteristics of the remaining 47 professional associations are shown in  
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32 201 Table 1. Individual societies' details regarding the general characteristics of the associations  
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34 202 and their websites as well as PMAs' financial transparency are included in online  
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36 203 Supplementary table 1.  
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204 TABLE 1. General characteristics and financial transparency of Italian professional obstetrical and gynaecological associations extracted from their websites.

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206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225
Clinical and research area	No. with website	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity*	Sponsored session/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COIs of presidents, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program							
Obstetrics and gynaecology (n=17)	14	7	12	17	4	8	0	0	0	0	0	8							
Obstetrics only (n=4)	4	1	2	4	0	0	0	0	0	0	0	0							
Gynaecology only (n=26)	23	7	18	25	5	4	0	0	0	1	0	7							

227 Data are numbers. COI = conflict of interest. CME = continuing medical education. PMA = professional medical association.

228 \*When an association's website was not found or when the information was not indicated on website, CME activity was identified scrutinising the online programmes of the society's conferences and courses.

230 † Specific directives regulating professional obstetrical and gynaecological associations' conduct in case of private/commercial financial support.

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3 231 A total of 24 organisations were affiliated with SIGO (<http://www.sigo.it/societa-affiliate/>),  
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5 232 and six with AOGOI (<http://www.aogoi.it/opencms/sezioniOriz/societaAffiliate/index.html>).  
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7 233 Seventeen "generalist" associations covered both obstetrics and gynaecology (the two main  
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9 234 ones plus 15 minor societies), four were specialised in obstetrical areas only, and 26 were  
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11 235 specialised in gynaecological areas only. In this latter group, seven organisations dealt with  
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13 236 infertility, four with pelvic and endoscopic surgery, four with urogynaecology, and two with,  
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15 237 respectively, cervical pathology, contraception, and climacteric. After exclusion of the 17  
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17 238 "generalist" organisations, the distribution of societies' main area of interest was substantially  
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19 239 skewed towards gynaecology (26/30; 87%).  
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24 240 Six societies did not appear to have a website. In 12 cases, including those in which a  
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26 241 website could not be found, the year of establishment of the association was obtained from  
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28 242 SIGO or AOGOI executive personnel, and from direct contact between PVE and presidents or  
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30 243 past-presidents. In the period 1980-2014 the number of Italian obstetrical and gynaecological  
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32 244 societies has quadrupled, starting from 12 and increasing at a mean rate of one society per  
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34 245 year in the last 35 years (Figure 1).  
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37 246 The headquarters of the associations were independent in 26/41 instances, and located  
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39 247 in the offices of a professional congress organiser and accredited CME provider in the  
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41 248 remaining 15. Society's bylaws were published online on 32/41 (78%) of the identified  
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43 249 websites. Forty-six associations organised conferences and provided CME activities. When an  
44  
45 250 official society's website was not identified or when the information was not indicated on  
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47 251 website, CME activity was verified by scrutinising the online programmes of the societies'  
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49 252 conferences and courses. A total of 9/46 associations included sponsored sessions or  
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51 253 symposia in their last annual meeting program. Advertisements or links to industry products  
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53 254 were present on 12/41 societies' websites (8 in the obstetrical and gynaecological subgroup  
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55 255 and 4 in the gynaecological only subgroup).  
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3 256 With regard to financial transparency, in none of the 32 developed bylaws was the  
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5 257 issue of COIs mentioned. No association had apparently developed a policy for interactions  
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7 258 with industry. A total of 423 board members were identified, including the presidential trios,  
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9 259 treasurers and secretaries. Forty-eight members were included at the same time on the board  
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11 260 of two distinct organisations, 14 members on the board of three organisations, and five on the  
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13 261 board of four organisations. The competing interest disclosures of board members and  
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15 262 executive staff were never posted on societies' websites.  
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19 263 The annual financial statement was published online in only one case and, with this  
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21 264 exception, no information was publicly available on any other website regarding the society's  
22  
23 265 source of financial support, as no data was accessible on restricted and unrestricted industry  
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25 266 grants or individual donations, nor on industry sponsorship for the last annual meetings,  
26  
27 267 courses, or other educational events.  
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31 268 Evaluation of transparency of SIGO and AGOI websites according to the HONcode  
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33 269 principles [21] identified lack of information (Supplementary table 2). In particular, neither  
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35 270 website attributed certain health/medical information to an author; the sources of the funding  
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37 271 of both sites were not clearly described; advertising was not always identified as such; and the  
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39 272 sites were part of a link/banner exchange but there was no specific description about the site  
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41 273 advertising policy. Moreover, the SIGO website did not provide the last modification date and  
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43 274 made claims relating to the benefit or performance of a specific medical treatment,  
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45 275 commercial product or service based on the author's personal research or opinion.  
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49 276 Both websites provided free CME e-learning courses supported by pharmaceutical  
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51 277 industries manufacturing drugs or commercial products used specifically in those medical  
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53 278 areas on which courses were focused. Finally, the SIGO website included descriptions of  
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3 279 some campaigns supported by industries with direct or indirect interests in related medical  
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5 280 fields.  
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8 281 DISCUSSION  
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10 282 The results of the present survey on Italian obstetrical and gynaecological societies and  
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12 283 content analysis of their websites depict an academic scenario that warrants consideration. A  
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14 284 remarkably high number of organisations was identified, characterised by a progressive and  
15  
16 285 impressive increase over time, especially during the last decades. We do not have a clear  
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18 286 explanation for this phenomenon. According to the list of member societies of the  
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20 287 Federazione delle Società Medico-Scientifiche Italiane (Italian Federation of Medical-  
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22 288 Scientific Societies; FISM), which includes Italian medical and scientific societies involved in  
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24 289 medical education or research activities of national interest, this situation does not seem to be  
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26 290 generalizable to other medical specialties. [22] Of note, the gynaecological subgroup was  
27  
28 291 characterised by several replications, particularly in the fertility and sterility, pelvic and  
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30 292 endoscopic surgery, and urogynaecology areas. The reason for these duplications is not  
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32 293 readily understandable.  
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38 294 The observed disproportion in the distribution of subspecialty associations decidedly  
39  
40 295 cannot be explained by unequal distribution of the clinical content of the two main areas of  
41  
42 296 the addressed specialty, obstetrics and gynaecology. Thus, it could be hypothesised that  
43  
44 297 Italian gynaecologists were more scientifically proactive compared with their obstetrical  
45  
46 298 colleagues, but we could not find evidence to support this interpretation. An alternative  
47  
48 299 theoretical explanation of this observation is that commercial sponsorship skewed the topics  
49  
50 300 in favour of disorders from which a larger profit could be made. In this regard, gynaecology  
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52 301 might prove a more lucrative medical area compared with obstetrics, at least in terms of  
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3 302 markets for several costly new drugs, surgical devices, and diagnostic tools. However, we  
4  
5 303 have no data to support this hypothesis.  
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8 304 Financial transparency of the organisations included was almost non-existent, as we  
9  
10 305 were unable to retrieve relevant, publicly available information, with the exception of the  
11  
12 306 annual financial statement of a single, small gynaecological association. Six associations did  
13  
14 307 not appear to have a website, thus providing no publicly available information. Unfortunately,  
15  
16 308 online publishing of annual budgets and data regarding financial support is not a legal  
17  
18 309 requirement for Italian scientific societies, and we could not identify alternative sources of  
19  
20 310 information. We could not verify if and to what extent financial relations were in place  
21  
22 311 between Italian obstetrical and gynaecological associations and industry, and we are unable to  
23  
24 312 reject the hypothesis that they did not exist. This also applies to commercial support of annual  
25  
26 313 meetings and educational events, although in this case the obstetrical and gynaecological area  
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28 314 would constitute an exception with respect to data on overall industry funding of Italian CME  
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30 315 activities.[18, 19]  
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35 316 We used websites as the main source of information regarding a society's financial  
36  
37 317 transparency. It could be argued that websites can be useful to identify national PMAs, but  
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39 318 they provide no accurate specific information on COIs and commercial funding. This  
40  
41 319 constitutes a limitation of our study, as we could have sent a questionnaire directly to  
42  
43 320 individual medical organisations or interviewed the president and executive officers.  
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45 321 However, the aim of our survey was to verify whether information regarding COIs of board  
46  
47 322 members and industry support of Italian gynaecological societies was easily and publicly  
48  
49 323 accessible, which nowadays means posted on a society's website [17]. The concept of  
50  
51 324 transparency should not imply the need for individual investigation into a society's board  
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53 325 members or executive staff by doctors and citizens to acquire this type of information.  
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3 326 Almost all the identified societies provided CME activity through conferences and  
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5 327 courses. Lack of disclosure, in societies' websites, regarding industry support for scientific  
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7 328 events involving CME activity (or lack of a website) is neither surprising nor unlawful, but  
8  
9 329 raises ethical concerns. Some relevant information can be retrieved from the website of the  
10  
11 330 Agenzia Nazionale per i Servizi Sanitari Regionali (Age.na.s), which manages the national  
12  
13 331 CME program on behalf of the Italian Ministry of Health. However, although the industries  
14  
15 332 sponsoring the events are listed, the financial support is expressed as a relative percentage of  
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17 333 an overall budget that is not quantified  
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20 334 ([http://ecm.agenas.it/BancaDati/SB\\_Lista\\_Cerca\\_Accr.asp](http://ecm.agenas.it/BancaDati/SB_Lista_Cerca_Accr.asp); accessed on March 23, 2015).

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24 335 Independently of legal requirements, we believe that scientific societies should  
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26 336 provide data on industry support of CME activity spontaneously, and should post it on their  
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28 337 websites. This seems particularly important when the organisations delivering CME activity,  
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30 338 which is a source of income for the provider, do not have independent headquarters, but are  
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32 339 hosted by professional congress organisers that may receive money also from pharmaceutical  
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34 340 companies and manufacturers of medical devices,[23, 24] or when advertisements or links to  
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36 341 industry products are included in their websites. However, without a formal evaluation of  
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38 342 CME “products” (i.e., scientific quality and compliance with society mandate), no  
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40 343 conclusions can be drawn.

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44 344 Competing interests of members of the boards and executive committees of a society  
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46 345 were also not disclosed, and this appears somewhat concerning.[1, 5, 9] In general, finding  
47  
48 346 experts without competing interests is difficult, and ideally they would all be concentrated in  
49  
50 347 the boards of a few major obstetrical and gynaecological societies. The multiplication of  
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52 348 boards and committees needed as a consequence of the proliferation of smaller organisations,  
53  
54 349 particularly in the gynaecological area, implies that most of their directors and executives will  
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56 350 have COIs, simply because there are not sufficient experts without COIs to cover all the  
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3 351 available positions. This may have implications regarding a society's activities, including the  
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5 352 development of practice guidelines.[25] This issue would be greater if members with COIs  
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7 353 serve on the board of more than one association.  
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10 354 Taking a selected picture of a specific country is a limit of our study that impedes  
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12 355 generalisation of the findings. However, we considered that this survey allowed us to define a  
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14 356 general scheme to be adopted for an investigation of this type, identifying reasonable  
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16 357 endpoints and specific information categories. We are not aware of similar surveys published  
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18 358 in the scientific literature, and believe that this scheme could also be used to investigate the  
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20 359 condition of PMAs in different specialties and different countries.  
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24 360 Rothman and co-workers described in detail the many potential threats to PMAs'  
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26 361 integrity, identified specific COIs that may affect the organisations' activity, and formulated  
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28 362 guidelines to prevent undue industry influence aimed at divestment from commercial support  
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30 363 rather than management of financial competing interests.[2] In fact, the authors maintain that  
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32 364 "PMAs should work toward a complete ban on pharmaceutical and medical device industry  
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34 365 funding (\$0), except for income from journal advertising and exhibit hall fees".[2]  
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38 366 The Council of Medical Specialty Societies was created in USA in 1965 with the  
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40 367 objective of providing an independent forum for cross-specialty collaboration in order to  
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42 368 influence policy on issues with a nationwide scope, such as medical education and  
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44 369 accreditation. The Council has issued a code for interactions with companies that includes  
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46 370 seven core principles covering COI, financial disclosure, independent program development,  
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48 371 and independent leadership.[26] With regard to transparency, the code states that "Societies  
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50 372 will make their conflict of interest policies and/or forms available to their members and the  
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52 373 public", and "Societies will disclose company support (at a minimum educational grants,  
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54 374 corporate sponsorships, charitable contributions, and support of research grants), making this  
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3 375 information available to their members and the public”, and “Societies will disclose all  
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5 376 financial and uncompensated relationships that key society leaders and members of the board  
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7 377 of directors of the society’ membership organization have with companies, making this  
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9 378 information available to their members and the public”. [26] Up to now, the code has been  
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11 379 signed by 32 North-American member societies of the Council and by 17 North-American  
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13 380 non-member societies. [27]

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17 381 Examples already exist of PMAs disclosing on their website the breakdown of  
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19 382 industry contribution toward the consolidated revenue of the society, as well as disclosure  
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21 383 statements reported by each member of the board of directors [28], and publishing in meeting  
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23 384 programs the company from which payment is received, the amount of payment by  
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25 385 categories, and the specific type of relationship held with the company. [29] A policy on  
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27 386 rigorous control over COIs has been implemented by several medical and surgical scientific  
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29 387 societies, [19, 28-34] in some cases without detrimental consequences in terms of finances,  
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31 388 membership, attendance at annual meetings, or leadership recruitment. [29, 31, 32]

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35 389 It is currently unclear if the observed progressive growth in the number of  
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37 390 gynaecological associations, together with the relative congresses and courses, does more  
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39 391 good than harm to patients. [35] Future research should aim at verifying whether this  
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41 392 phenomenon results exclusively in enhanced knowledge and translates into better care of  
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43 393 women's health, or if it facilitates the dissemination of partly biased information within the  
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45 394 scientific community.

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49 395 Italian scientists should lobby for transparency of public disclosure of COIs of  
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51 396 societies providing CME activity and on implementation of efficient societies' policies for  
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53 397 interactions with industry. Moreover, the Ministry of Health should only grant CME credits to  
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55 398 conferences and educational events provided that attendees are fully and publicly aware of

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3 399 financial connections between the scientific society and any industry involved, including  
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5 400 quantitative information regarding funding for the meetings.[36-38] More in general, a sort of  
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7 401 Sunshine Act [39] focussed on scientific societies and educational activity, in addition to that  
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9 402 aimed at individual doctors, and with potential application to multiple settings and  
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11 403 jurisdictions, could prove of great benefit for patients, practising physicians, and clinical  
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13 404 investigators. A complete lack of transparency on the above issues nowadays appears hardly  
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15 405 justifiable and ethically questionable. Indeed, COIs of PMAs might be considered more  
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17 406 serious than individual ones, because, where distorted information is disseminated at  
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19 407 educational events, the effect would be multiplied with potential substantial consequences on  
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21 408 prescribing practices of many of the society's members.[3-5] Moreover, the definition of  
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23 409 “conflict of interest” itself, in the case of PMAs, may be somewhat misleading as it has been  
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25 410 pointed out that a medical organisation’s commitment to patients and public health is a moral  
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27 411 duty and not a mere interest.[5]

32 412 Collaboration between PMAs and research and development departments of  
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34 413 pharmacological companies and medical devices manufactures is very important for the  
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36 414 advancement of medicine. This form of interaction is welcome in the interest of patients and  
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38 415 society. On the other hand, collaboration between PMAs and company marketing departments  
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40 416 on CME events and society annual meetings, may blur the distinction between the interest of  
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42 417 the PMA, which is education, and that of industry, which is selling products.

46 418 Despite individual or organisational COIs, the officers of many medical associations  
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48 419 may well be disinterested and passionate, and provide valuable activities for the benefit of  
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50 420 society members. However, members of PMAs are not the end users of drugs and devices  
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52 421 marketed by industry; rather they are the gatekeepers entrusted to make evidence-based  
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54 422 recommendations to the real end user, that is, the patient.[9] When the citizens eventually  
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56 423 have to pay the bill, either directly or indirectly through national health systems, the conduct  
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3 424 of PMAs may not be only based on the presumed good faith of their officers, but should  
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5 425 contemplate the provision of publicly available and easily accessible data on financial  
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7 426 competing interests. Transparency and disclosures do not eliminate COIs,[40, 41] but may  
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9 427 enable doctors and lay people to contextualise the scientific information disseminated in  
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11 428 various ways by medical organisations, putting it in the right perspective.  
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## 429 CONTRIBUTION TO AUTHORSHIP

430 PVe, PVi and ES conceived and planned the article. All the authors searched the web to  
431 identify Italian obstetrical and gynaecological societies. PVe and MPF scrutinised the  
432 societies' websites, retrieved and tabulated data. All the authors interpreted the data. PVe  
433 drafted the manuscript and all the authors revised it. All the authors approved the final version  
434 of the manuscript.

435

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439

## 440 COMPETING INTEREST STATEMENT

441 PVe is associate editor of Human Reproduction Update and past president of the World  
442 Endometriosis Society; PVi is associate editor of Human Reproduction; ES is deputy editor of  
443 Human Reproduction.

## 444 DATA SHARING STATEMENT

445 There are no additional unpublished data from this study.

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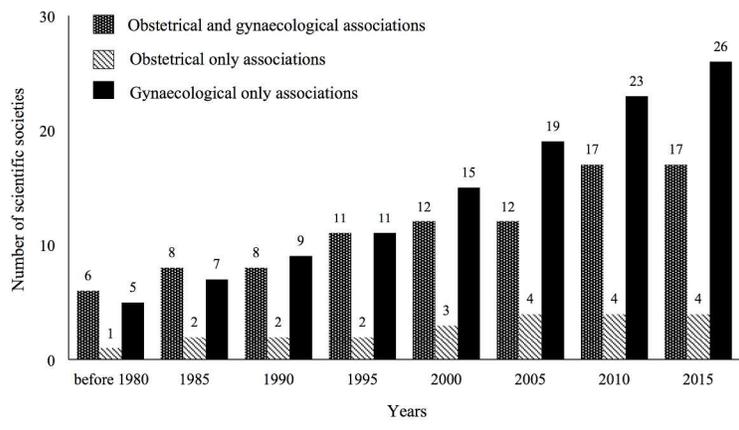
## 550 FIGURE LEGEND

551 Variation in the number of Italian obstetrical and gynaecological societies over time. The

552 number on top of each column is the number of societies.

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Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites.\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COI of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
AGEO Associazione Ginecologi Extra Ospedalieri (Association of off hospital gynaecologists) <a href="http://www.ageo-federazione.it">http://www.ageo-federazione.it</a>	1996	Yes	Yes	Yes	No	No	No	No	No	No	No	No
AGICO Associazione Ginecologi Consultoriali (Association of family clinic gynaecologists) <a href="http://www.agico.it/Agico-2007/home.asp">http://www.agico.it/Agico-2007/home.asp</a>	1985	Yes	Yes	Yes	No	Yes	No	No	No	No	No	Yes
AGIF Associazione Ginecologi Italiani in Formazione (Association of in-training Italian gynaecologists) <a href="http://www.giovaniginecologi.org/home/">http://www.giovaniginecologi.org/home/</a>	2009	Yes	Yes	Yes	No	No	No	No	No	No	No	Yes
AGITE Associazione Ginecologi Territoriali (Association of territorial gynaecologists) <a href="http://www.agite.eu/">http://www.agite.eu/</a>	2007	Yes	Yes	Yes	No	Yes	No	No	No	No	No	Yes
AGUI Associazione Ginecologi Universitari Italiani (Association of Italian academic gynaecologists) <a href="http://www.aguionline.it/">http://www.aguionline.it/</a>	1992	Yes	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

Name of the association/society	Established year	Headquarters located in the offices of a professional congress organiser	Society bylaws posted on website	CME activity	Sponsored sessions/symposia included in the PMA's last annual meeting program	Industry advertisement on society's website or links to industries' websites	Financial COI issue discussed in bylaws	Policy for interaction with industry available online <sup>†</sup>	Financial COIs of president, board members, and executive staff disclosed on website	Annual financial statement available online	Disclosure of financial support (industry grants and individual donations) available online	Industry sponsorship indicated in the PMA's last annual meeting program
AIGE Associazione Italiana di Ginecologia Endocrinologica (Italian association of gynaecological endocrinology) <a href="http://www.ginendo.it/">http://www.ginendo.it/</a>	2003	No	No	Yes	No	No	N.A.	No	No	No	No	Yes
AIPE Associazione Italiana pre-eclampsia (Italian Branch of the International Society for the Study of Hypertension in Pregnancy) <a href="http://www.preeclampsia.it/">http://www.preeclampsia.it/</a>	2005	No	No	Yes	No	No	N.A.	No	No	No	No	No
AIUG Associazione Italiana di Urologia Ginecologica e del Pavimento Pelvico (Italian association of gynaecologic urology and of pelvic floor) <a href="http://www.aiug.eu/aiug.asp">http://www.aiug.eu/aiug.asp</a>	1989	No	No	Yes	Yes	Yes	N.A.	No	No	No	No	No
AOGOI Associazione Ostetrici Ginecologi Ospedalieri Italiani (Association of hospital Italian gynaecologists and obstetricians) <a href="http://www.aogoi.it/">http://www.aogoi.it/</a>	1948	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
ATGO Associazione Triveneta di Ginecologia e Ostetricia (North-eastern association of gynaecology and obstetrics) <a href="http://www.atgo.it/">http://www.atgo.it/</a>	1934	No	No	Yes	No	Yes	N.A.	No	No	No	No	No

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CECOS Centro Studi e Conservazione Ovociti e Sperma Umani (Center for the study and preservation of human oocytes and sperm) <a href="http://www.cecos.it/">http://www.cecos.it/</a>	1984	No	Yes	Yes	No	Yes	No	No	No	No	No	No
FIOG Federazione Italiana di Ostetricia e Ginecologia (Italian federation of obstetrics and gynaecology) <a href="http://www.fiogonline.it/">http://www.fiogonline.it/</a>	2008	Yes	Yes	Yes	No	No	No	No	No	No	No	No
GILT Ginecologi Liguri del Territorio (Territorial gynaecologists of Liguria)	1994	No website found		Yes <sup>‡</sup>	No	No website found						No
GISCi Gruppo Italiano Screening del Cervicocarcinoma (Cervical cancer screening Italian group) <a href="http://www.gisci.it/">http://www.gisci.it/</a>	1996	No	Yes	Yes	Yes	No	No	No	No	Yes	No	Yes
GLUP Gruppo di lavoro in uroginecologia pavimento pelvico (Working group in pelvic floor urogynaecology) <a href="http://dev-test.glup.it/">http://dev-test.glup.it/</a>	2010	Yes	Yes	Yes	No	No	No	No	No	No	No	No
GREG Gruppo Romano di Endoscopia Ginecologica (Roman group of gynaecological endoscopy)	1995	No website found		Yes <sup>‡</sup>	No	No website found						No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

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LAMM Società Laziale Abruzzese Marchigiana Molisana di Ostetricia e Ginecologia (Lazio, Abruzzo, Marche, and Molise society of obstetrics and gynaecology)	1971	No website found		Yes <sup>‡</sup>	No	No website found						No
PRO-FERT Società Italiana di Conservazione della Fertilità (Italian society for the preservation of fertility) <a href="http://profert.org/">http://profert.org/</a>	2007	No	Yes	Yes	No	No	No	No	No	No	No	No
SCCL Società Campano Calabro Lucana di Ostetricia e Ginecologia (Campania, Calabria, and Lucania society of obstetrics and gynaecology)	1947	No website found		Yes <sup>‡</sup>	No	No website found						No
SEGi Società Italiana di Endoscopia Ginecologica (Italian society of gynaecological endoscopy) <a href="http://www.segionline.it/">http://www.segionline.it/</a>	2000	No	Yes	Yes	Yes	Yes	No	No	No	No	No	No
SIC Società Italiana Contraccezione (Italian society for contraception) <a href="http://www.sicontraccezione.it/">http://www.sicontraccezione.it/</a>	2004	Yes	Yes	Yes	No	No	No	No	No	No	No	No

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SICHIG Società Italiana di Chirurgia Ginecologica (Italian society of gynaecological surgery) <a href="http://www.sichig.it/">http://www.sichig.it/</a>	1989	No	Yes	Yes	No	No	No	No	No	No	No	No
SICMIG Scuola Italiana di Chirurgia Mini Invasiva Ginecologica (Italian school of minimally invasive gynaecological surgery) <a href="http://www.sicmig.org/">http://www.sicmig.org/</a>	2005	Yes	Yes	Yes	No	No	No	No	No	No	No	No
SICPCV Società Italiana di Coloscopia e Patologia Cervico Vaginale (Italian society of colposcopy and cervical and vaginal pathology) <a href="http://www.coloscopiaitaliana.it/">http://www.coloscopiaitaliana.it/</a>	1980	No	Yes	Yes	No	No	No	No	No	No	No	No
SIDIP Società Italiana di Diagnosi Prenatale e Medicina Materno Fetale (Italian society of prenatal diagnosis and feto-maternal medicine) <a href="http://www.ilfeto.it/site/">http://www.ilfeto.it/site/</a>	1998	No	Yes	Yes	No	No	No	No	No	No	No	No
SIDR Società Italiana della Riproduzione (Italian society of reproduction) <a href="http://www.sidr.it/cms/view.html">http://www.sidr.it/cms/view.html</a>	1999	Yes	Yes	Yes	No	No	No	No	No	No	No	No

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SIEOG Società Italiana di Ecografia Ostetrica e Ginecologica e Metodologie Biofisiche (Italian society of obstetrical and gynaecological ultrasonography and biophysical methodologies) <a href="http://www.sieog.it/">http://www.sieog.it/</a>	1984	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
SIEPAM Società Italiana Endometriosi e Patologia Mestruale (Italian society of endometriosis and menstrual disorders) <a href="http://www.siepam.it/">http://www.siepam.it/</a>	2014	Yes	No	Yes	No	No	N.A.	No	No	No	No	Yes
SIERR Società Italiana di Embriologia, Riproduzione e Ricerca (Italian society of embryology, reproduction and research) <a href="http://www.sierr.it/">http://www.sierr.it/</a>	1998	No	Yes	Yes	No	No	No	No	No	No	No	Yes
SIFES E MR Società Italiana di Fertilità e Sterilità e Medicina della Riproduzione (Italian society of fertility, sterility and reproductive medicine) <a href="http://sifes.it/">http://sifes.it/</a>	1965	No	Yes	Yes	No	No	No	No	No	No	No	No

Supplementary table 1. Details of the characteristics of Italian professional obstetrical and gynaecological associations extracted from their websites (continued).\*

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SIFIOG Società Italiana di Fitoterapia e Integratori in Ostetricia e Ginecologia (Italian society of phytoterapeutics and supplements in obstetrics and gynaecology) <a href="http://www.sifiog.it/">http://www.sifiog.it/</a>	2008	Yes	No	Yes	No	No	N.A.	No	No	No	No	No
SIFR Società Italiana di Fisiopatologia della Riproduzione (Italian society for pathophysiology of reproduction)	1982	No website found		Yes <sup>‡</sup>	Yes	No website found						No
SIGIA Società Italiana di Ginecologia dell'Infanzia e dell'Adolescenza (Italian society of childhood and adolescent gynaecology) <a href="http://www.sigia.it/">http://www.sigia.it/</a>	1978	No	Yes	Yes	No	No	No	No	No	No	No	No
SIGITE Società Italiana di Ginecologia della Terza Età (Italian society for third age gynaecology) <a href="http://www.sigite.it/drupal/index.php">http://www.sigite.it/drupal/index.php</a>	1991	No	Yes	Yes	No	No	No	No	No	No	No	Yes

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SIGO Società Italiana di Ginecologia e Ostetricia (Italian society of gynaecology and obstetrics) <a href="http://www.sigo.it/home/">http://www.sigo.it/home/</a>	1892	No	Yes	Yes	Yes	Yes	No	No	No	No	No	Yes
SIM Società Italiana della Menopausa (Italian society of menopause) <a href="http://www.simenopausa.it/">http://www.simenopausa.it/</a>	2011	Yes	No	Yes	No	No	N.A.	No	No	No	No	No
SIMP Società Italiana di Medicina Perinatale (Italian society of perinatal medicine) <a href="http://www.simponline.it/site/home.asp">http://www.simponline.it/site/home.asp</a>	1984	Yes	Yes	Yes	No	No	No	No	No	No	No	No
SIOG Società Italiana di Oncologia Ginecologica (Italian society of gynaecological oncology) <a href="http://www.siog.it">http://www.siog.it</a>	1977	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes
SIOS Società Italiana Ospedaliera Sterilità (Italian hospital society for sterility) <a href="http://www.siosteril.it/">http://www.siosteril.it/</a>	2003	No	Yes	Yes	No	No	No	No	No	No	No	No

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SIPGO Società Italiana per la Psicopatologia in Ginecologia e Ostetricia (Italian society for psychosomatics in gynaecology and obstetrics) <a href="http://www.sipgo.org/">http://www.sipgo.org/</a>	1993	No	Yes	Yes	No	No	No	No	No	No	No	No
SIPO Società Italiana Policistici Ovarica (Italian society of polycystic ovary syndrome)	2012	No website found		Yes <sup>‡</sup>	No	No website found						No
SIPPO Società Italiana di Psicoprofilassi Ostetrica (Italian society for obstetrical psycho-prophylaxis) <a href="http://www.sippo.eu/">http://www.sippo.eu/</a>	1966	No	No	Yes <sup>‡</sup>	No	No	N.A.	No	No	No	No	No
SIPUF Società Italiana di Pelvi Perineologia e Urologia Femminile e Funzionale (Italian society of pelvi-perineology and female and functional urology) <a href="http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do">http://www.sipuf.net/sipuf/societa-italiana-di-pelvi-perineologia-e-urologia-femminile-e-funzionale.do</a>	2007	Yes	Yes	Yes	No	No	No	No	No	No	No	No

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SIRONG Società Italiana per la Ricerca Ostetrico-Neonatale-Ginecologica (Italian society for the obstetrical, neonatal, and gynaecological research) <a href="http://www.sirong.it/">http://www.sirong.it/</a>	2008	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes
SIUD Società italiana di urodinamica (Italian society of urodynamics) <a href="http://www.siud.it/">http://www.siud.it/</a>	1977	No	Yes	Yes	Yes	No	No	No	No	No	No	Yes
SLOG Società Lombarda di Ostetricia e Ginecologia (Lumbardy society of obstetrics and gynaecology) <a href="http://www.slog.org/">http://www.slog.org/</a>	1950	No	Yes	Yes	No	No	No	No	No	No	No	No
SMIC Società Medica Italiana per la Contracezione (Italian medical society for contraception) <a href="http://www.smicontraccezione.it/">http://www.smicontraccezione.it/</a>	2006	No	No	No	N.A.	No	N.A.	No	No	No	No	N.A.

\*In 12 cases, including those in which a website was not found, the year of establishment of the association/society was obtained from the two major national professional associations (i.e., Società Italiana di Ginecologia and Ostetricia and Associazione Ostetrici e Ginecologi Ospedalieri Italiani), and presidents or past presidents of the societies.

<sup>†</sup> Specific directives regulating professional obstetrical and gynaecological associations' conduct in case of private financial support.

<sup>‡</sup> When an association's website was not found or when the information was not indicated on website, CME activity was identified by scrutinising the online programmes of the society's conferences and courses.

COI = conflict of interest. CME = continuing medical education. PMA = professional medical association. N.A. = not applicable.

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Supplementary table 2. Evaluation of the Società Italiana di Ginecologia e Ostetricia (SIGO) and the Associazione Ostetrici e Ginecologi Ospedalieri Italiani (AOGOI) websites according to the Health on the Net Foundation Code of Conduct (HONcode) principles.

Principles of HONcode Site Evaluation Form	SIGO	AOGOI
<b>Principle 1. Information must be authoritative</b>		
1. The site provides general information about the organization or individual responsible for its operation and content, and details about the editor or principal author are given with his/her credentials	Yes, an author's or editor's details with credentials are given	Yes, an author's or editor's details with credentials are given
2. The site provides medical/health information or advice	Some health/medical information is not attributed to an author	Some health/medical information is not attributed to an author
<b>Principle 2. Complementarity/Mission/Assistance</b>		
3. A statement declaring that information provided on the site is meant to complement and not replace any advice or information from a health professional is clearly provided	Yes	Yes
4. A statement describing the intended mission of the site is provided on the site	Yes	Yes
5. The site clearly mentions the intended audience of the site (general public, health professionals, students...)	Yes	Yes
<b>Principle 3. Privacy - Confidentiality</b>		
6. A Privacy/Confidentiality Policy regarding e-mail addresses, personal, non-personal and medical information is displayed on my website	Yes	Yes
7. Do my site and its mirrors respect the legal requirements, including those concerning medical and personal information privacy, that apply in the country and state of their location?	Yes	Yes
<b>Principle 4. Information must be documented: Referenced and dated</b>		
8. Is the last modification date provided for the site?	No	Yes, for all the pages of the site

Supplementary table 2. Evaluation of the Società Italiana di Ginecologia e Ostetricia (SIGO) and the Associazione Ostetrici e Ginecologi Ospedalieri Italiani (AOGOI) websites according to the Health on the Net Foundation Code of Conduct (HONcode) principles. Continued.

9. Does the site contain information from external sources?	Yes, a bibliographic reference to the source data is given	Yes, a bibliographic reference to the source data is given
<b>Principle 5. Justification of claims</b>		
10. Does the site make claims relating to the benefit or performance of a specific medical treatment, commercial product or service?	Yes, the claims are based on the author’s personal research or opinions	Yes, all claims are supported by clear references to scientific research results and/or published articles
<b>Principle 6. Website contact details</b>		
11. A valid email address for the webmaster or a link to a valid contact form is easily accessible throughout the site?	Yes	Yes
<b>Principle 7. Disclosure of funding sources</b>		
12. Is the source of the funding of my site clearly described?	No	No
<b>Principle 8. Advertising policy</b>		
13. The site displays advertising that, is a source of income	Advertising is not identified as such	Advertising is not identified as such
14. The site is part of a link/banner exchange	Yes, but there is no specific description about the site advertising policy	Yes, but there is no specific description about the site advertising policy
15. The site does not display advertising	There is no statement displayed	There is no statement displayed