ORIGINAL PAPERS

Relationship between gastroenterologists and hospital pharmacists: the results of a national survey. The CONDIFA study

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ABSTRACT

Introduction: project CONDIFA ("Consenso Digestivo-Farmacia Hospitalaria") aims to establish lines of agreement between both specialties in order to improve patient care and resource optimization. In this initial work our goal was to collect the views held by both fields on issues pertaining to their mutual cooperation in our country.

Material and methods: an online survey was administered to members of the *Sociedad Española de Patología Digestiva* (SEPD) and *Sociedad Española de Farmacia Hospitalaria* (SEFH). It comprised 31 questions, and was developed by a task force established by both Societies.

Results: the survey was filled out by 241 gastroenterologists and 126 pharmacists. Of these, 55 % were women. A total of 76.8 % of gastroenterologists and 88.1 % of pharmacists answered that relations between both specialties are good/very good, without reaching statistically significant differences. For both groups pharmaceutical expenditure is a priority/annual objective in their department, albeit they do not agree on prescription freedom and industry influence. Biologics committees are considered to be useful by most respondents, and both groups think it appropriate that meetings/sessions be scheduled between both specialties, and that a reference pharmacist be appointed for gastroenterology.

Conclusions: this institutional research, driven by SEPD and SEFH, demonstrates that, while cooperation between the gastroenterology and hospital pharmacy departments is close and adequate, some areas remain open to improvement, which will result in better, more effective patient care.

Keywords: Management. Hospital Pharmacy. Digestive.

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INTRODUCTION

Team work is nowadays imperative for reaching set targets. Even more so when treating patients, either individually or as a group (patients with the same disease), at sites such as hospitals in the National Health System.

Optimizing non-infinite resources, improving patient treatments, and achieving higher cure rates are goals that require cooperation —in our case between the hospital pharmacy and gastroenterology departments. This has been established by collaborative work performed in some countries (1) and also reported in our own (2-4). In this regard, the wide national consensus reached for the treatment of hepatitis C served as prime example of effective multidisciplinary cooperation, which should persist into the future in order to finally eradicate this infection (5).

However, because of the economic conjunction, of healthcare burden, or of the influence of the industry or health managers, at times we certainly find ourselves in challenging situations that may only lead to impairing the good relationship that ought to be shared by both specialties.

Because of the above, a project by the name of CONDIFA (*Consenso Digestivo-Farmacia*) was suggested to try and establish linkups and agreements between both fields in order to improve patient care and resource optimization.

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The project has two parts: a first part where a survey was conducted to collect specialist views; and a second part including joint (pharmacists and gastroenterologists in attendance) workshops across Spain to promote debate and discussion. In this article the results of the survey conducted by the aforementioned societies are reported. The primary endpoint of our research was to collect the views held by both specialties on several aspects related to their collaboration in Spain.

MATERIAL AND METHODS

A survey was conducted among members of the *Sociedad Española de Digestivo* (SEPD) and *Sociedad Española de Farmacia Hospitalaria* (SEFH). The survey comprised 31 questions (Annex 1). It was developed by the undersigned task force including both societies, considering several aspects that were deemed interesting and significant for analysis. An initial draft was developed, which was then revised by the task force, resulting in the annexed survey.

Questions were developed according to the following domains:

- Participant profile (quetsions 1 to 3).
- Gastroenterology- Pharmacy relationship (questions 4 to 7).
- Pharmaceutical expenditure (questions 8 to 15).
- Prescription (questions 16 to 21).
- Biologics (questions 22 to 26).
- Gastronterology/Pharmacy patient care (questions 27 to 34).

Most questions did not allow open responses but offered closed options to allow a better subsequent analysis.

Survey fillout occurred online from April to July 2019. Both societies were responsible for administration to members.

Statistical study

A descriptive analysis was performed on responses, with results expressed as percentages. Similarly, a comparative analysis of both specialties was made using the chi-squared test, with statistical significance at $p < 0.05$. The IBM SPSS Statistics 22.0® package was used for calculations.

RESULTS

The survey was submitted via email to members of SEPD and SEFH, and was filled out by 241 gastroenterologists and 126 pharmacists, which represents 8.2 % and 4.1 % of total affiliates, respectively.

A. Respondent characteristics

Of the total sample, 55 % were women, and 35 % were older than 50 years. No statistically significant differences were found for this variable between both specialties. The survey was responded in all Spanish autonomous communities except for Ceuta. In order of frequency, 21.6 % were received from Madrid, 19.1 % from Andalusia, and 7.5 %from Castile-La Mancha. Of all respondents, 65 % worked at hospitals with over 250 beds (Table 1).

B. Gastroenterology-Hospital Pharmacy relationship

To the question on how was the relationship between both departments 76.8 % of gastroenterologists and 88.1 % of pharmacists responded with a "good" or "very good", without reaching statistically significant differences. Of note, only 3.3 % of gastroenterologists *versus* 0 % of phar-

Table 1. *Respondent characteristics*

	Gastroenterologists n (%)	Hospital pharmacists n (%)
Gender		
Female	110 (45.6 %)	91 (72.2 %)
Male	131 (54.4 %)	35 (27.8 %)
Age		
< 30 years	19 (7.9 %)	0 (0 %)
31-40 years	58 (24.1 %)	38 (30.2 %)
41-50 years	69 (28.6 %)	42 (33.3 %)
> 50 years	95 (39.4 %	31 (24.6 %)
No answer	0 (0 %)	15 (11.9 %)
Region		
Castile & Leon	16 (6.6 %)	6 (4.8 %)
Castile-La Mancha	18 (7.5 %)	5 (4.0 %)
Andalusia	46 (19.1 %)	18 (14.3 %)
Valencian Community	18 (7.5 %)	11 (8.7 %)
Madrid	52 (21.6 %)	22 (17.5 %)
Basque Country	17 (7.1 %)	4 (3.2 %)
Cantabria	8 (3.3 %)	2 (1.6 %)
Galicia	10 (4.1 %)	15 (11.9 %)
Catalonia	11 (4.6 %)	14 (11.1 %)
Canary Islands	9 (3.7 %)	4 (3.2 %)
Extremadura	2 (0.8 %)	2 (1.6 %)
Balearic Islands	2 (0.8 %)	3 (2.4 %)
La Rioja	2 (0.8 %)	1 (0.8 %)
Region of Murcia	12 (5.0 %)	7 (5.6 %)
Aragon	4 (1.7 %)	3 (2.4 %)
Principality of Asturias	7 (2.9 %)	5 (4.0 %)
Navarre	4 (1.7 %)	4 (3.2 %)
Melilla	3 (1.2 %)	0 (0.0 %)

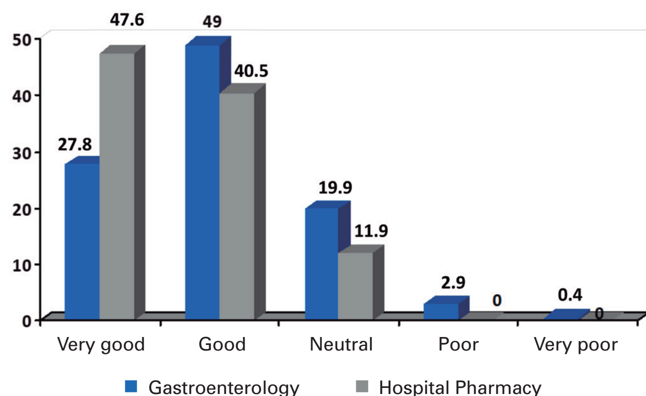

Fig. 1. *How do you consider the relationship between both departments?*

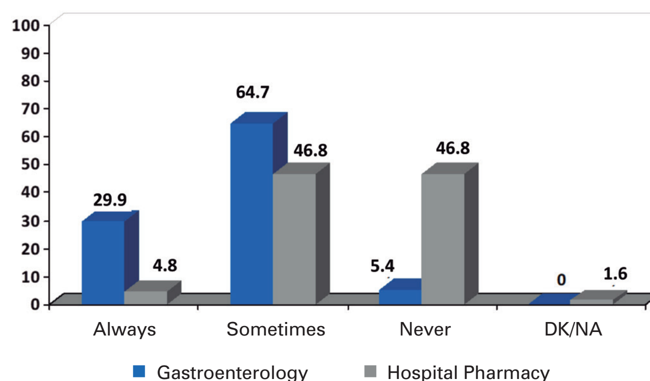

Fig. 2. *- To gastroenterologists: Do you think that the pharmacy department takes expenditure too much into account when it comes to accepting the use of certain drugs, while overlooking their effectiveness or need?*
- To pharmacists: Do you think that your department emphasizes expenditure too much when it comes to accepting the use of certain drugs, while overlooking their effectiveness or need for some patients?

macists answered with "poor" or "very poor" (Fig. 1). No joint meetings are held in over half of cases, an aspect claimed for by 87.1 % of gastroenterologists and 93.7 % of pharmacists. There is a protocol for the prescription of high-economic-impact medications, according to 71.8 % and 82.5 % of gastroenterologists and pharmacists, respectively.

C. Pharmaceutical expenditure

For both groups pharmaceutical expenditure chiefly represents an annual goal/priority in their departments, and 63 % of all respondents said the expenditure is adequate as currently established. Respectively, 80.5 % and 60.3 % of respondent gastroenterologists and pharmacists consider useful their potential taking part in medications purchase negotiations. It was directly asked whether pharmacists took spending, rather than effectiveness/need, too much into account when endorsing the use of selected drugs. In all, 94.6 % of gastroenterologists and 51.6 % of pharmacists considered that such was the case always or sometimes. On the other hand, when asking whether gastroenterologists consider price in their prescriptions, 6.6 % of them and 10.3 % of pharmacists answered with "never" (Figs. 2 and 3). However, 57 % of all respondents said drug price should be factored in when considering a prescription. When asked about ways to manage pharmaceutical expenditure 43.2 % of gastroenterologists and 90.5 % of pharmacists reported they agreed with payment by results.

D. Prescription

Prescription freedom was deemed essential by 92 % of gastroenterologists (the question was posed for them alone). When asked whether gastroenterologists' prescription freedom was at times not respected by the hospital pharmacy, 65.6 % of gastroenterologists and 26.2 % of pharmacists answered that was so.

The role of the industry was also assessed by the survey, and 23 % of gastroenterologists said pharmaceutical companies never influence too much their prescriptions, *versus* 3 % of pharmacists (p = 0.033). In case a "special" drug

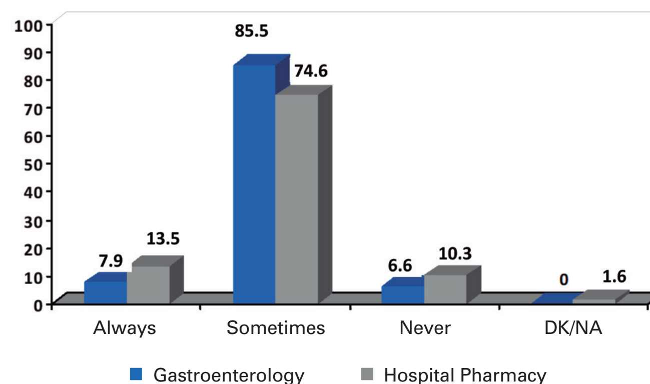

Fig. 3. *Do you consider that, generally speaking, gastroenterologists do not take drug prices into account when writing prescriptions?*

needs to be prescribed/used, 74 % of respondents reported this was agreed by both parties at a meeting/committee, while 18 % of gastroenterologists and 1 % of pharmacists claimed that the pharmacy prevails when discrepancy arises, which has statistical significance (p = 0.002).

E. Biologics

The survey also asked about biologics committees: 52 % of all respondents said that in their hospital such committee included a hospital pharmacist and specialists involved in prescribing biologics; 83 % of all respondents considered this committee useful.

As regards selected "innovator" medications, 78 % of all respondents said that access to such drugs could be improved by setting up consensus treatment protocols concerning their use.

F. Patient care and Gastroenterology-Pharmacy relationship

Finally, there was a set of quetsions on how could the relationship between both departments be improved. Of all respondents, 59 % believe that patient care may be improved by creating consensus treatment protocols for selected conditions, this notion being more common among pharmacists (43 % of gastroenterologists *versus* 92 % of pharmacists). In all, 54 % of all respondents said there was no reference pharmacist for gastroenterology in their institution, albeit over 90 % of them deemed it necessary (Figs. 4 and 5).

A total of 85 % of respondents deemed it necessary/useful that pharmacists should guide gastroenterologists towards a more cost-effective use of medications. Furthermore, also a majority (91 % of respondents) considered it necessary/useful that gastroenterologists should guide pharmacists towards a more "clinical" use of medications, with joint sessions being the best approach to achieving both goals.

DISCUSSION

This is the first paper that directly assesses, using a structured survey, the extent of communication, collaboration, and understanding between hospital pharmacists and gastroenterologists. It also hints at some potential tools to enhance such relathionship.

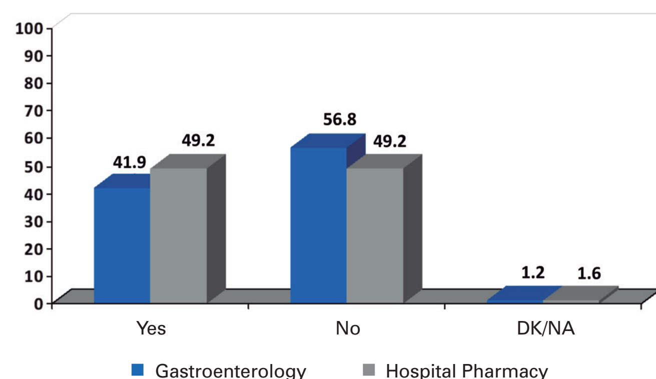

Fig. 4. *Is there a reference pharmacist for the gastroenterology department?*

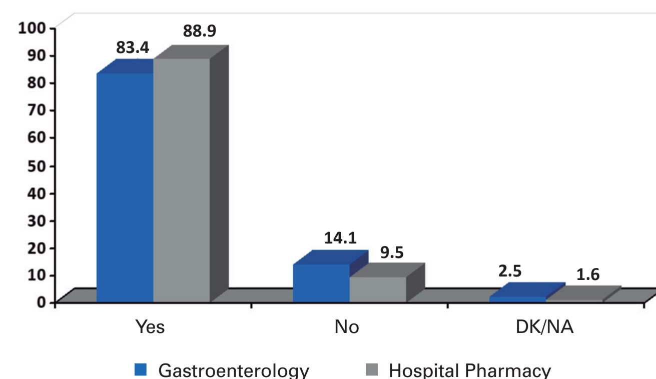

Fig. 5. *Do you think there should be one?*

Addressing complex health problems usually requires a multidisciplinary team including different specialists with different views and sensitivities. Frequently, gastroenterology and hospital pharmacy departments must manage—simultaneously but not always jointly—complex health care issues at the same or distinct levels (6). In this respect, over the last few years, the evolving treatment of hepatitis C, as well as the increasingly common use of biologics and the advent of biosimilars for the treatment of patients with inflammatory bowel disease (IBD) have made of close cooperation between both fields a need, which on some occasions may have led to conflicts that should not be present within a public structure whose function is caring for patients as best as possible. However, based on the responses received, we may say that their relationship is good, although some aspects remain open to improvement.

The sustainability of our health system is a priority for specialists in both areas, hence adequately managing pharmaceutical spending is key for both. Most respondents deem it necessary to establish limits, but this is an aspect that should be played down since few or no data exist regarding health results or the key factors of sound management decision making. The paper published a few years back by the SEPD, entitled "Gestiona EII" (6), already showed that pharmaceutical expenditure was a priority for department heads, and that spending was highest for biologic drugs,which were thus most susceptible of improvement concerning productivity. Another paper recently published in *Farmacia Hospitalaria* (7) touches on the notion of advancing from current cost-effectiveness-based models to productivity-based models. Other forms of expense management such as payment by results or implementation of an expenditure ceiling should also be assessed as management models, although this view is not shared by many gastroenterologists based on the responses obtained. Also the idea of playing a more active role in medication purchases is considered a sound collaborative initiative for expenditure control. However, the reciprocal views that gastroenterologists and pharmacists hold of each other are striking—gastroenterologists consider pharmacists poor clinicians, and pharmacists consider gastroenterologists poor economizers. A joint assessment of health results as induced by different drugs, the implementation of incentives for departments (not for individuals) secondary to more efficient policies for drug selection, and/or a full participation of both specialties in the introduction and positioning of drugs for hospital use would no doubt help limit potential disagreements. At the end of the survey the idea of joint sessions is supported by most respondents aiming at improving interaction between both specialties, and at providing pharmacists with a more clinical view, and gastroenterologists with a more cost-effective perspective. Thus, in recently reported papers interaction with patients is enhanced to improve subcutaneous therapy management (8), and actions such as improved adherence, implemented by SEFH, represent the joint efforts of pharmacists and clinicians to improve patient care. According to both specialties, it also seems highly important that a reference pharmacist be appointed to liaise with Gastroenterology, since over half of respondents reported no such reference pharmacist existed in their institution.

Prescription freedom is something inalienable for gastroenterologists, which the survey clearly shows and cannot be otherwise. Limitation or attempts at limitation of such freedom by some —very few, we believe— hospital pharmacy departments is intolerablefor gastroenterologists, and represents one of the most conflicting issues between both specialties. Since prescription freedom is unnegotiable, agreement between both specialties requires treatment algorithms developed, designed, discussed, and approved by both departments, with health results, and in their absence cost-effectiveness, being the key factor for medication positioning, rather than direct cost. Having a specific, super specialized pharmacist liaising with gastroenterology departments is very useful if consensus and mutual understanding are to be achieved.

The role of the industry in drug prescription was also addressed in this paper. In fact, one of the issues most criticized by pharmacists is gastroenterologists' potential dependence on the pharmaceutical industry regarding prescriptions. This perception will likely improve in the near future because of increasingly stringent codes of ethical conduct in the industry, and also in some governmental agencies, which will block the likely scarce number of physicians whose prescriptions are adulterated by this type of relationship.

Biologics, biosimilars and their prescription have prompted many meetings, and raised many issues, between both specialties in many sites. The consecutive reviews of position statements by scientific societies, in particular by SEPD (9,10) and SEFH (11), must have reconciled positions, again within a proper frame of respect to both the clinical and financial viewpoints. Consequently, biologics committees seem to be useful for a vast majority of respondents. Furthermore, developing consensus treatment protocols for innovator drugs is deemed necessary. However, in order to reach consensus in this area, access to innovation must be guaranteed, commitment with system sustainability must be exacted, and participation of clinicians and pharmacists in the positioning of biologics and biosimilars must be implemented.

This research has a number of limitations. First and foremost is that items were responded by the SEPD and SEFH members who so wished, with no selection criteria, which may represent some selection bias since, likely, only those interested in this topic filled the survey out. In fact, the percentage of responding members in both societies was rather low. Second, the survey only included multiple-choice, that is, closed questions, hence respondents could only answer using the answers provided by the researchers, which limits the range of responses; however, this system is key when conclusions are pursued that have statistical power.

Finally, to conclude, we believe that this institutional work, supported and fostered by SEPD and SEFH, demonstrates that, albeit cooperation between Gastroenterolgy and Hospital Pharmacy is close and adequate generally speaking, some areas or topics remain open to improvement, which will no doubt bring about a better, more effective health care for our patients.

ANNEX I

CONDIFA PROJECT SURVEY

A. General questions (participant profile)

1. **How old are you?**
   a) < 30 years
   b) 31-40 years
   c) 41-50 years
   d) > 51 years

2. **Gender:**
   a) Male
   b) Female

3. **Autonomous community**

B. Questions on Gastroenterology-Hospital Pharmacy relationships

4. **Number of beds in your hospital:**
   a) < 100
   b) 100-250
   c) 251-500
   d) 501-750
   e) > 750

5. **How would you rate your relationship with your hospital's pharmacy at present?**
   a) Very good
   b) Good
   c) Neutral
   d) Poor
   e) Very poor

6. **Are meetings between both departments regularly held?**
   a) Yes
   b) No

7. **Do you deem them necessary?**
   a) Yes
   b) No

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C. QUESTIONS ON PHARMACEUTICAL EXPENDITURE

8. **Is there any prescription protocol, consensus or norm agreed to by both departments regarding high financial impact drugs?**
   a) Yes
   b) No

9. **Does pharmaceutical expenditure represent a priority/annual objective for your department?**
   a) Yes
   b) No

10. **Was the expenditure goal for 2018 met?**
   a) Yes
   b) No

11. **Did you deem it adequate?**
   a) No, too high
   b) Yes, adequate
   c) No, too low

12. **Do you deem it necessary to set an annual goal for pharmaceutical expenditure in your department?**
   a) Yes
   b) No

13. **Do you participate in the purchase price negotiations between the pharmacy department and the industry concerning digestive system drugs?**
   a) Yes
   b) No

14. **Would you deem it useful?**
   a) Yes
   b) No

15. **Do you think that the pharmacy department takes expenditure too much into account when it comes to accepting the use of certain drugs, and instead overlooks their effectiveness/need?**
   a) Always
   b) Sometimes
   c) Never

D. QUESTIONS ON PRESCRIPTION

16. **Do you think that overall, gastroenterologists do not take prices into account when prescribing medications?**
   a) Always
   b) Sometimes
   c) Never

17. **Do you think they should?**
   a) Always
   b) Sometimes
   c) Never

18. **Do you consider prescription freedom essential for gastroenterologists?**
   a) Yes
   b) No

19. **Do you think that, at times, the hospital pharmacy fails to respect freedom of prescription?**
   a) Always
   b) Sometimes
   c) Never

20. **How do you consider the role of the pharmaceutical industry? Do you think they have a much too great influence on prescription?**
   a) Always
   b) Sometimes
   c) Never

21. **When discrepancy arises regarding a medication, are there any meetings summoned to reach agreement? Or is the medication imposed by the pharmacy or gastroenterology department?**
   a) Discrepancy never arises
   b) The drug is agreed upon by both parties in a meeting/committee
   c) Gastroenterologists prevail
   d) Pharmacists prevail

E. QUESTIONS ON BIOLOGICS

22. **Is there a biologics committee in your hospital?**
   a) Yes
   b) No

23. **If affirmative, who sits on it?**
   a) A hospital pharmacist and specislists involved in prescribing biologics
   b) Hospital pharmacists alone
   c) Gastroenterologists alone
   d) Rheumatologists alone
   e) Medical directors, hospital pharmacists, and specialists
   f) Don't know
   g) Other…

24. **Do you consider this committee useful?**
   a) Yes
   b) No

25. **Do you agree with payment by results (paying the manufacturer for a drug only if the patient improved or was cured)?**
   a) Yes
   b) No

26. Do you agree with payment by budget ceiling (paying the manufacturer up to an annual maximum)?
a) Yes
b) No

F. QUESTIONS ON GASTROENTEROLOGY/PHARMACY PATIENT CARE

27. How do you think gastroenterology patient care may be improved with regard to the pharmacy department?
a) By developing consensus treatment protocols for selected disorders
b) By always endorsing my prescription freedom
c) By only accepting what the pharmacy suggests
d) By increasing pharmaceutical expenditure
e) Other…

28. Is there a reference pharmacist for gastroenterology in your hospital?
a) Yes
b) No

29. Do you think there should be one?
a) Yes
b) No

30. How can access be improved to selected "innovator" drugs?
a. By developing consensus treatment protocols for these drugs
b. By negotiating payment by results/budget ceiling
c. Not buying until price drops
d. Other…

31. Do you deem it necessary/useful that pharmacists should orient gastroenterologists towards a more cost-effective use of medications?
a) Yes
b) No

32. If you answered yes, how?
a) Training courses
b) Joint hospital sessions
c) Educational handouts, books…
d) Other…

33. Do you deem it necessary/useful that gastroenterologists should orient pharmacists towards a more "clinical" use of medications?
a) Yes
b) No

34. If you answered yes, how?
e) Training courses
f) Joint hospital sessions
g) Educational handouts, books…
h) Other…

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