



Experience on the Management of Patients with Asthma or Chronic Obstructive Pulmonary Disease During the COVID-19 Pandemic: the NEUMOBIAL Study

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ABSTRACT

Introduction: Chronic obstructive pulmonary disease (COPD) and asthma are treatable but greatly underdiagnosed disorders. Telemedicine made it possible to continue diagnosis, follow-up visits and treatment modifications during the COVID-19 pandemic. The present study describes the management of patients with COPD and asthma, and their treatments during the pandemic from the pulmonologist's perspective.

Methods: NEUMOBIAL was an ecological study with aggregated data. A total of 279 Spanish pulmonologists answered a 60-question survey about their last 10 patients, focused on the

characterisation and changes in visits and treatments during the pandemic.

Results: Most pulmonologists (72.0%) considered that the pandemic negatively altered the diagnosis and follow-up of patients with asthma or COPD. Diagnostic tests were reduced during the pandemic, mainly because they were not recommended by pulmonologists (68.1% and 72.7% in the case of COPD and asthma tests, respectively). Moreover, 17.3% of the COPD and 19.1% of the asthma visits were remote visits. According to pulmonologists, low adherence to treatment was mainly due to a lack of patient knowledge about their disease (75.3% and 81.7% in COPD and asthma, respectively). Other factors that also influenced adherence were inadequate use of the inhaler (59.5% for COPD and 57.7% for asthma) and a lack of knowledge about the device (57.3% for COPD and 57.7% for asthma). Pulmonologists chose Zonda[®] for COPD because of the ease of use of the device (73.1%) and the ability to check whether the entire dose was inhaled (69.5%). For asthma, Spiromax[®] was chosen because of the ease of use of the device (85.7%) and the possibility of using a single device for maintenance and reliever treatment (82.4%).

Conclusion: According to pulmonologists, during the pandemic, treatments for COPD and asthma were mainly chosen on the basis of their ease of use; treatment adherence was good; and the number of remote visits increased.

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Keywords: Asthma; Chronic obstructive pulmonary disease; COPD; Telemedicine; Treatment adherence; COVID-19

Key Summary Points

Asthma and chronic obstructive pulmonary disease (COPD) are often undiagnosed, while their treatment reduces exacerbations and improves patient quality of life.

The NEUMOBIAL study aimed to describe how the COVID-19 pandemic altered the diagnosis, treatments and follow-up visits.

The number of remote visits increased during the pandemic, and were shorter than face-to-face visits.

Adherence to treatments was good during the pandemic, though in some patients a lack of knowledge about the disease and the inadequate use of inhalers led to non-adherence.

Pulmonologists prescribed treatments on the basis of their ease of use, choosing devices such as Zonda[®] and Spiromax[®].

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) and asthma are serious but treatable disorders [1, 2]. Their burden is expected to increase in the following years because of exposure to risk factors [3, 4] and, given the estimated underdiagnosis of both conditions [5], proper screening and treatment will be fundamental to prevent exacerbations and reduce mortality [6, 7].

Long-acting muscarinic antagonists (LAMAs) are recommended as initial treatment for COPD [8], while an effective approach in the case of asthma is budesonide/formoterol maintenance and reliever therapy (MART) [9]—though several options are available, and the treatments

must be personalised. Accordingly, the Spanish COPD Guidelines (GesEPOC) recommend to individualise treatments on the basis of the clinical characteristics of each patient [10], and chronic disease management programmes have resulted in improved quality of life, as evidenced from the Global Initiative for Asthma (GINA) [11].

Since the visits to healthcare facilities were limited during the pandemic, telemedicine was used to continue diagnosis, follow-up visits, and rehabilitation programmes. This technology makes it possible to overcome geographical or physical barriers for patients and physicians—with hybrid models, including online pulmonary rehabilitation (PR) programmes, being the most effective strategy [12–14]. Previous studies on the impact of telemedicine were mainly focused on remote monitoring of parameters or PR programmes, with contradictory results. According to the PROMETE II and CHROMED studies [15, 16], telemedicine tools to monitor physiological parameters do not significantly reduce hospital admissions. In contrast, a meta-analysis found that these interventions seem to reduce the number of emergency room visits [17]. Moreover, remote education and self-management using mobile applications or wearables showed positive effects, but may be dependent upon the population characteristics [18]. Nevertheless, uses of telemedicine are still not generally accepted, as a result of the lack of consolidated evidence or because of their novelty.

To our knowledge, there are no extensive analyses on the impact upon patient management of phone calls or videoconferences as an alternative to face-to-face visits for individuals with asthma and COPD. The NEUMOBIAL study aimed to provide an updated perspective on the management of two of the most relevant chronic respiratory diseases, COPD and asthma, describing the profile of patients and treatment patterns. Moreover, the impact upon patient management of the coronavirus disease 2019 (COVID-19) pandemic and the use of telemedicine were also evaluated.

METHODS

Study Population and Design

NEUMOBIAL was an ecological observational study with aggregated data. The data source was the knowledge and experience of pulmonologists with experience treating patients with asthma or COPD in Spain, collected through a survey. Pulmonologists from different regions (Autonomous Communities) of the country were invited to participate in order to obtain a representative sample at regional and national level. No data were extracted from clinical charts, and all treatments were prescribed following routine clinical practice. Given the retrospective nature of the study, treatments were not altered by the participation of the doctors in the study.

This study was conducted in the pulmonology units of 156 Spanish hospitals and was approved by the Ethics Committee of Hospital Clínico San Carlos (Madrid, Spain). The study was performed in accordance with the 1964 Helsinki Declaration, its later amendments and local regulations. All participants provided written informed consent to participate in the study and to use their answers as part of a peer-reviewed publication.

Data Collection and Survey

A total of 279 pulmonologists participated in the study between June and December 2021. The participating hospitals are listed in Supplementary material, Table S1.

Data were collected through a 60-question online survey (Supplementary material S2) designed to collect information on the management of patients with asthma or COPD in pulmonology units. The survey included questions regarding treatment severity and disease classification according to the GEMA (Spanish Guide for Asthma Management) and the GINA and GOLD (Global Initiative for Chronic Obstructive Lung Disease) guides. Pulmonologists answered the survey on the basis of their last ten patients. The questions aimed to describe predominant prescription habits when

facing asthma or COPD, and to obtain information on the adequacy of clinical practice according to the available real-world evidence. Several questions addressed remote follow-up visits and the associated difficulties for treatment adjustments and disease control during the COVID-19 pandemic.

Statistical Analysis

A descriptive analysis of the responses to the survey was performed. Qualitative variables referring to the experience of the surveyed physicians were reported as frequencies; in the case of questions referring to the frequency of patients, the mean and standard deviation (SD) or median and interquartile range (IQR) were calculated. The statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS) version 28.01.0 (SPSS Inc., Chicago, IL, USA).

RESULTS

The pulmonologists participating in the study had a mean of 14.1 (9.4) years of experience treating patients with asthma or COPD, and they treated a mean of 85.5 (71.7) patients with COPD and 78.8 (69.6) patients with asthma each month.

Most of the surveyed physicians considered that the COVID-19 pandemic negatively altered the diagnosis and follow-up of their patients with COPD (22.2%), asthma (1.1%) or both (72.0%). Only a few (3.6%) reported that the pandemic had no negative impact.

When asked about patient classification based on different tests, the pulmonologists reported that most patients with COPD (53.0%) were barely symptomatic, being classified as GOLD 2 or 3 (31.9% and 34.4%, respectively) and mainly belonged to group B (31.0%). Similarly, most patients with asthma (51.5%) had their disease controlled, with an Asthma Control Test (ACT) score of greater than 20 (Table 1).

Table 1 Classification of patients with COPD or asthma

	Mean (SD), %	N ^a
COPD assessment test (CAT)		
CAT = 10 or mMRC = 2 (very symptomatic)	47.3 (20.7)	279
CAT < 10 or mMRC = 0–1 (barely symptomatic)	53.0 (21.0)	277
Spirometry GOLD degree		
GOLD 1	14.3 (11.8)	263
GOLD 2	31.9 (14.9)	275
GOLD 3	34.4 (13.6)	278
GOLD 4	20.9 (13.3)	276
ABCD group		
Group A	18.7 (13.9)	269
Group B	31.0 (13.0)	273
Group C	27.0 (14.2)	277
Group D	25.2 (14.5)	275
Asthma control test (ACT)		
More than 20	51.5 (22.5)	272
Between 16 and 19	31.6 (16.4)	274
Equal to or lower than 15	19.5 (16.1)	272

^aNumber of pulmonologists answering this question

Visit Characteristics

According to the pulmonologists, a mean (SD) of 17.3% (23.7%) of the COPD visits and 19.1% (24.4%) of the asthma visits were remote visits during the pandemic, whereas only 5.8% (19.0%) of the visits of patients with asthma were remote visits before the pandemic. The time dedicated to each patient changed between the face-to-face and remote visits (Fig. 1). In the case of patients with asthma, remote visits were mainly by phone, with a mean of 93.7% (17.9%), while 4.3% (12.8%) of the visits were video calls and 10.5% (23.4%) were based on other resources.

According to the pulmonologists, the number of diagnostic tests decreased during the pandemic, mostly because they did not recommend them (68.1% and 72.7% in the case of COPD and asthma, respectively). However, in

some cases the patients failed to go to scheduled diagnostic tests even if recommended (21.1% and 16.9% in the case of COPD and asthma, respectively). In most patients, the disease was evaluated every 6 months, though during the pandemic, the time between visits increased (Fig. 2). The pulmonologists considered that patients with COPD had poorer control due to fewer visits (44.8%) or because the patients failed to go to the scheduled evaluation visits (9.3%)—though 40.1% considered disease control to be similar during the pandemic period. Nevertheless, the physicians judged that 64.5% (16.9%) of the patients with COPD had their disease under control with the treatment prescribed during their last visit, and that 63.8% (15.4%) had a good general control of their disease. Similarly, 64.3% (17.9%) of the patients with asthma had good control of their disease, though 35.7% (20.0%) changed therapeutic

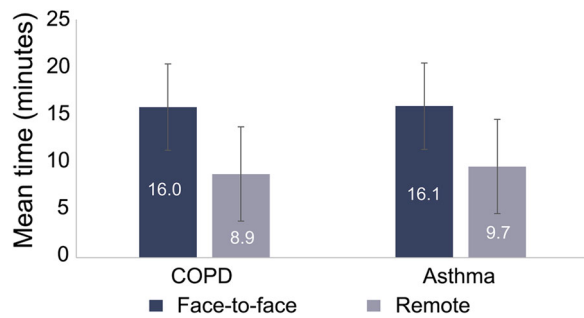


Fig. 1 Mean time (in minutes) dedicated to each patient during face-to-face (dark blue) and remote (light blue) visits, for COPD and asthma. The error bars represent the standard deviation (SD)

step. However, during the last year, the pulmonologists reported a mean of 22.7% (16.7%) exacerbations that were treated with oral corticosteroids.

Treatments

As initial treatment for COPD, 47.0% (16.4%) of the patients were receiving LAMA + long-acting β_2 agonists (LABA), according to the pulmonologists. Patients not responding correctly to the first treatment improved after switching

to a different drug or combination of drugs (Table 2). A mean of 34.0% (18.1%) of the patients were currently being treated with inhaled corticosteroids (ICS) + LABA + LAMA, and in 44.5% (24.7%) of the cases two different devices for open triple therapy were used, while 71.2% (31.5%) followed maintenance treatment with LAMA, either as monotherapy or in combination. The pulmonologists reported that these therapies were chosen primarily because of the active drug substance (30.3%) or easy handling of the device (24.7%) (Table 3). When asked about the reasons for switching to tiotropium (LAMA) with Zonda[®], the answers mainly included the ease of use of the device (73.1%) and the possibility of checking whether the dose was inhaled (69.5%). The lack of satisfaction with a different inhaler (34.8%) or the failure of another option (28.0%) were also given as reasons to switch—though the pulmonologists underscored that this is a usual starting treatment. Nevertheless, 98.2% of the surveyed physicians valued the transparent capsule of the Zonda[®] inhaler, which allows one to check whether the entire drug dose has been inhaled (73.1% considered this to be an important aspect and 25.1% considered it to be an aspect to take into consideration).

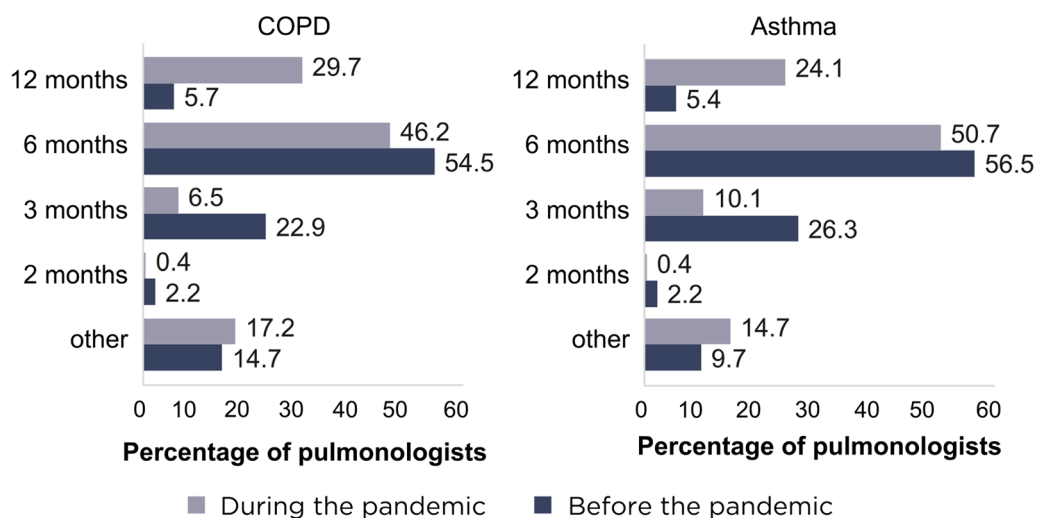


Fig. 2 Frequency of evaluation of patients for COPD and asthma. Percentage of pulmonologists evaluating their patients every 2, 3, 6, 12 months. Other includes answers

ranging between different intervals. Before the pandemic is represented in dark blue and during the pandemic in light blue

Table 2 Initial treatments and first switch in COPD

	Mean (SD), %	N ^a
COPD initial treatment		
LAMA + LABA	47.0 (16.4)	277
ICS + LABA	22.1 (13.8)	255
LAMA	19.0 (14.0)	267
LABA	3.4 (5.5)	220
Other	25.1 (17.3)	137
COPD treatment for those not responding to initial treatment		
LAMA + LABA	33.2 (19.8)	257
ICS + LABA + LAMA	32.8 (21.2)	259
ICS + LABA	17.9 (13.3)	221
LAMA	11.8 (14.3)	210
ICS + LABA + LAMA + azithromycin	9.7 (10.7)	200
ICS + LABA + LAMA + roflumilast	6.5 (7.1)	196
LABA	5.3 (11.5)	178
Other	13.5 (24.3)	22

^aNumber of pulmonologists answering this question

Table 3 Characteristics for choosing a COPD treatment

	Mean (SD), %	N ^a
Active drug substance	30.3 (21.1)	246
Easy handling	24.7 (15.6)	264
Required inspiratory flux	19.3 (13.1)	232
Inhaler type	14.7 (10.8)	206
Patient preferences	13.0 (11.3)	196
Possibility of checking correct inhalation	11.0 (8.3)	178
Easy explanation	9.9 (10.5)	171
Other	14.7 (31.1)	15

^aNumber of pulmonologists answering this question

A mean of 84.9% (15.5%) of the patients with asthma were being treated with ICS + LABA. For those with moderate asthma (GEMA 5.0 steps 3 or 4), the preferred treatment for the pulmonologists was a medium dose of ICS + LABA (Fig. 3), whereas for severe asthma (steps 5 or 6), high doses of ICS + LABA + tiotropium were chosen (Fig. 4). Before their current treatment, 39.6% (27.5%) of the patients were treated with ICS + LABA, 29.8% (20.6%) came from a short-acting beta-agonist (SABA), and 23.7% (21.1%) from ICS—while 33.7% (20.5%) were recently diagnosed and therefore had no previous treatment.

Treatment Adherence During the Pandemic

During the pandemic, 45.7% (27.8%) of the patients with COPD had a treatment adherence rate of greater than 80%; 47.4% (26.2%) had a rate of 50–80%; and 16.3% (12.4%) had a rate of

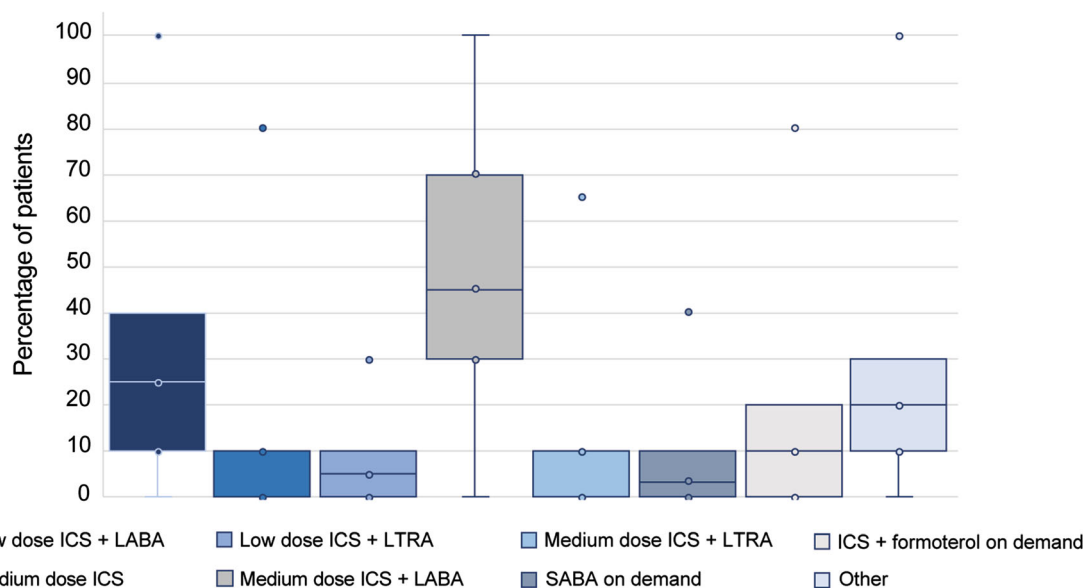


Fig. 3 Treatments for GEMA 5.0 steps 3 and 4. Treatments received by patients classified as corresponding to steps 3 and 4 according to the GEMA 5.0 guidelines. The boxplot represents the median, *IQR* minimum and maximum, *LABA* long-acting beta-agonists, *LAMA* long-

acting muscarinic antagonists, *LTRA* leukotriene receptor antagonist, *ICS* inhaled corticosteroid, *SABA* short-acting beta-agonist

less than 50%. On testing adherence to the inhaler (TAI) in asthmatic patients, 51.1% (21.2%) of the patients showed good adherence (50 points), 32.8% (16.4%) showed intermediate adherence (49–46 points) and 18.8% (11.5%) showed poor adherence (45 points). According to the pulmonologists, the main factor for low adherence was a lack of patient knowledge about the disease (75.3% for COPD and 81.7% for asthma) (Table 4). In this line, 65.5% (28.6%) of the patients needed extra information during a second visit on how to use the inhaler, and 46.3% (32.6%) required a third visit or more. According to the physicians, it proved difficult to explain the inhalation technique to 22.7% (17.8%) of the patients.

According to the participating physicians, the reasons why patients with asthma changed their treatment were insufficient control of the disease in 53.2% (20.9%) of the cases; a switch to maintenance and reliever therapy (MART) in 22.9% (17.4%); misuse of the device in 21% (12.7%); and low adherence in 16.8% (11.4%). New inhalers were chosen mainly because of their ease of use (92.1%); the possibility of

maintenance and reliever treatment with the same inhaler (83.2%); and the fact that no coordination was required in the inhalation technique (79.6%). Accordingly, when asked about the reasons to choose the fixed combination of formoterol fumarate/budesonide in the Spiromax[®] device, the pulmonologists claimed to choose it because it is easy to use (85.7%), and because maintenance and reliever treatment are provided in the same inhaler (82.4%). Along these lines, 58.1% of the surveyed physicians chose to switch to this device when changing to MART, while 43.7% switched because of failure of the previous therapy, and 40.5% switched because the patient was not satisfied with the previous device.

Telemedicine

When asked about treatment switches, 95.4% of the participating physicians reported that the pandemic delayed the change of treatment or inhaler in their patients with COPD, and of these physicians, 36.6% considered that a large

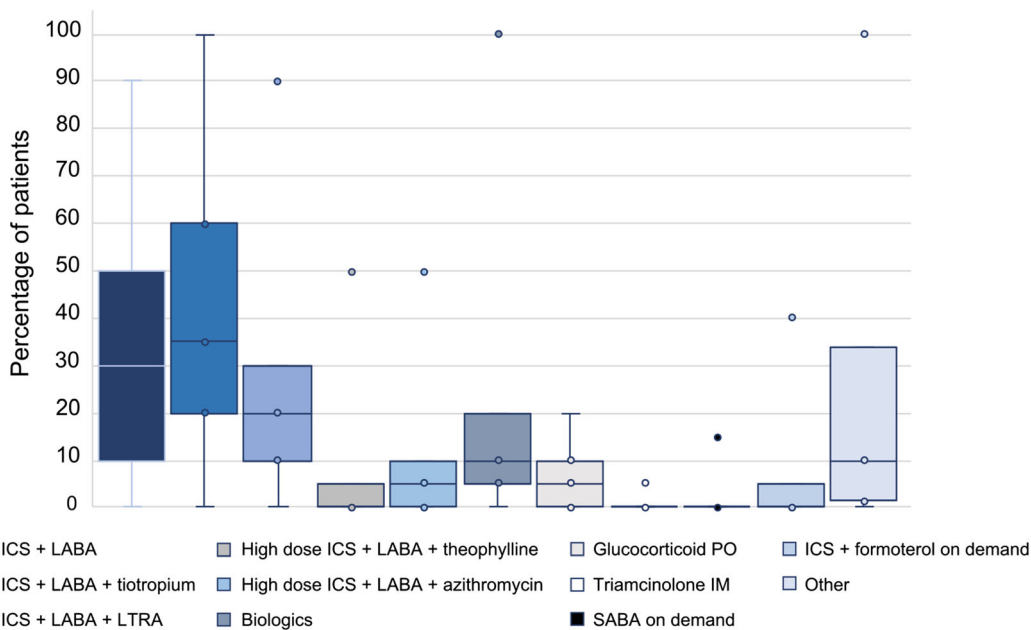


Fig. 4 Treatments for GEMA 5.0 steps 5 and 6. Treatments received by patients classified as corresponding to steps 5 and 6 according to the GEMA 5.0 guidelines. The boxplot represents the median, *IQR* minimum and maximum, *LABA* long-acting beta-agonists, *LTRA*

leukotriene receptor antagonist, *ICS* inhaled corticosteroid, *IM* intramuscular injection, *PO* oral administration, *SABA* short-acting beta-agonist

percentage of patients had their treatment or inhaler switches delayed. Only 3.9% of the pulmonologists thought that treatment switches were not affected during the pandemic. Similarly, for patients with asthma, most physicians reported that the pandemic delayed switching to a different inhaler in some cases (55.8%), while 41.0% delayed this switch in most cases. Nevertheless, according to the pulmonologists, most treatment switches were face-to-face decisions, as 83.8% (23.7%) of the patients with COPD and 84.8% (22.7%) of the patients with asthma switched their inhaler during a face-to-face visit, compared to 14.5% (24.9%) and 13.5% (23.7%), respectively, who switched remotely.

According to the pulmonologists, the telemedicine tools most frequently used by patients were mobile applications (COPD 75.3%; asthma 71.7%) and web-based platforms (COPD 67.4%; asthma 57%). The patients with COPD also used PR programmes (66.3%), and patients with asthma used allergen measuring devices (51.3%) or other telemedicine options (64.9%).

During the pandemic, most of the physicians (90.0%) recommended being especially rigorous in using maintenance medication to maintain control of asthma or to continue the usual maintenance treatment (77.4%). Since a respiratory disease is a risk factor for COVID-19, they also recommended being extremely careful (63.1%) and to trust the specialists in the event of COVID-19 infection (53.0%). Only 3.9% recommended avoiding lung function tests, if possible.

DISCUSSION

The NEUMOBIAL study presents the perspective of Spanish pulmonologists on how patients with COPD or asthma were being treated following the start of the COVID-19 pandemic. The classification of patients based on the severity of their disease showed most patients with COPD to be barely symptomatic, and the prevalence of at least well-controlled asthma in

Table 4 Reasons for low adherence to treatment according to the pulmonologists

	COPD, N ^a (%)	Asthma, N ^a (%)
Lack of patient knowledge about their disease	210 (75.3)	228 (81.7)
Need to use different devices	172 (61.6)	152 (54.5)
Inadequate use of the device	166 (59.5)	161 (57.7)
Lack of knowledge about the device	160 (57.3)	161 (57.7)
Low frequency of follow-up visits	75 (26.9)	81 (29.0)
Other	18 (6.5)	18 (6.5)

^aNumber of pulmonologists answering this question

our study (51.5%) was within the estimated range in Europe (49.6%) and Spain (59.8%) [19].

According to the GOLD guidelines, patients without exacerbations or with exacerbation not leading to hospital admission are classified as belonging to group A if the mMRC (Modified British Research Council Questionnaire) score is 0–1 and CAT (COPD Assessment Test) < 10, and as belonging to group B if mMRC ≥ 2 and CAT ≥ 10. In turn, those individuals with two or more exacerbations or with exacerbation leading to hospital admission are classified as belonging to group C if the mMRC score is 0–1 and CAT < 10, and as belonging to group D if mMRC ≥ 2 and CAT ≥ 10 [6]. The CHAIN study analysed the distribution and transitions between groups in Spain [20], and documented a slightly different distribution—with most patients being classified as belonging to group A (37.7%) and group B (38.3%). Similarly, according to Halpin et al. [21], most patients with COPD in the UK were classified into group A (45.2%) and group B (28.5%). In contrast, in our study, most patients were classified as belonging to group B (31.0%) and only 18.7% to group A. Since our study focused on recent visits, these differences suggest a different visiting pattern based on disease severity.

The observed differences in the characteristics of the patients are also reflected in their treatments. The COPD cohort reported by Halpin et al. was treated mainly with LAMA only (47.8%) [21], while in our study these cases represented approximately 14% of the patients.

In NEUMOBIAL, the pulmonologists preferred LAMA + LABA, though in contrast this strategy was the choice for only 1% of patients in the UK cohort [21]. According to the Spanish COPD guidelines (GesEPOC), the recommended initial treatment would be LAMA [10], but real-world evidence has shown the combinations of LAMA + LABA to be effective and with a good safety profile [22]. Moreover, asthma treatments in our study were chosen according to the GINA and GEMA guidelines [2, 23].

The factors associated with treatment adherence have been previously analysed in other studies. Adherence rates were estimated to range from 22% to 78% [24], and the adherence pattern varied between asthma and COPD—being more irregular among patients with asthma [25]. A recent meta-analysis has pointed to knowledge about the disease as a determining factor [26], while a Polish survey found patient discouragement, insufficient knowledge about the disease, and a lack of noticeable effects to be the main causes for stopping therapy (41.6%, 19.3% and 6.2% of all patients, respectively) [27]. According to our study, approximately one-half of the patients showed good treatment adherence, and the main reasons for poor adherence were a lack of knowledge about the disease or the device, in addition to the reasons identified in previous studies. The chosen device played an important role according to the surveyed physicians, since poor adherence is often related to problems inhaling the full dose or to difficulties using the

device. For these reasons, Zonda[®] and Spiromax[®] were frequently chosen by the pulmonologists participating in the NEUMOBIAL study.

Telemedicine interventions should improve self-management, helping patients to receive information and remote support, and reserving face-to-face interactions for monitoring parameters and quality visits [28]. Such interventions could include different tools, ranging from phone calls to videoconferences, internet-based communications, telemonitoring and PR programmes. Among all the branches included in telemedicine, our study focused mainly on remote management and visits. These two aspects combined were previously described as being helpful in asthma control and in improving patient quality of life [29]. Shortly after the pandemic started, phone visits were expected to become a common practice in Spain [30]. In line with this, according to the physicians surveyed in NEUMOBIAL, phone calls were the main tool used for remote visits. They reported that some patients were also complementing their follow-up with other telemedicine tools—mainly mobile applications.

We focused on the impressions of the pulmonologists without differentiating between patient subgroups. Previous studies analysing the effectiveness of telemedicine pointed to socioeconomic differences and age as determining factors. Telemedicine can sound exciting for children and adolescents, having a considerable potential for education and management of the disease and increasing adherence to treatment [31, 32]. Similarly, PR programmes have been a telemedicine strategy for years, though innovative technologies are being implemented as they emerge as alternatives. At the beginning of the COVID-19 pandemic, the situation forced the rapid implementation of telemedicine without time to plan a strategy in those situations where it was not used before. With the knowledge obtained in this study, future interventions could be planned, considering the lessons learned in other parts of the world in order to establish a set of rules for a telemedicine programme [33].

Our study presents several limitations. The strategy of aggregated data collection based on the experience of the surveyed physicians omitted patient opinions and individual data, and was exposed to recall bias. The results were focused on the recent experience of the pulmonologists, and therefore could be biased by the characteristics of those patients requiring their attention, not necessarily representing all patients with COPD and asthma. Moreover, interpretation was based on the survey questions and was limited by their answers, omitting other opinions. Nevertheless, our study provides an overview of the COPD and asthma treatments and of the impact of the pandemic upon visits and adherence to treatment. Future research could probe deeper into the effectiveness of remote visits and new trends to adjust personalised treatments, focusing on long-term adherence to remotely prescribed treatment, and evaluating knowledge of the patients about their disease and treatment, and their satisfaction with novel methods implemented during the pandemic.

CONCLUSIONS

During the COVID-19 pandemic, the number of remote visits involving patients with COPD and asthma increased, and were shorter than face-to-face visits. Although the follow-up visits were less frequent, adherence to treatments was good. Pulmonologists identified patient lack of knowledge of the disease or inhaler misuse as critical factors adversely affecting treatment adherence, and thus tended to choose easy-to-use inhalers that facilitate adherence to treatment.

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Author Contributions. P.L., J.I.P.R. and F.G. designed the project and contributed to data interpretation, manuscript preparation and revision.

Prior Presentation. This study was previously presented at the XI Jornadas Nacionales de Respiratorio SEMERGEN (20–21 May 2022, Badajoz, Spain) as a poster (620/2).

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Compliance with Ethics Guidelines. This study was conducted in the pulmonology units of 156 Spanish hospitals and was approved by the Ethics Committee of Hospital Clínico San Carlos (Madrid, Spain). The study was performed in accordance with the 1964 Helsinki Declaration, its later amendments and local regulations. All participants provided written informed consent to participate in the study and to use their answers as part of a peer-reviewed publication. No patients' data were collected from medical charts for this study, which was based on the aggregated information provided by the participants.

Data Availability. All data generated during this study are available from the corresponding author upon reasonable request.

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