# Use of Telemedicine in Spain—Perceptions of Patients, Physicians, and Pharmacists

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## Abstract

The usefulness of telemedicine has been discussed in recent years. However, preconceptions about telemedicine have been less studied, despite the fact that they could change patient engagement. We aim to describe the standpoints of patients, physicians, and pharmacists concerning its use for managing diabetes mellitus type 2 (T2DM). In this study, 1,036 patients, 1,030 physicians, and 475 pharmacists completed a questionnaire. Although 9.8 percent and 28.3 percent of patients and physicians had used telemedical resources, none of the pharmacists reported experience in telemedicine. Most patients and physicians with experience in telemedicine considered that telemedicine had helped to reduce the use of health resources and optimized management of T2DM. Health professionals underestimated the patients' doubts about T2DM-related complications. Compared with patients, physicians and pharmacists gave greater importance to applications dealing with lifestyle habits ($p < 0.001$). The observed discrepancies between health professionals and patients highlight the importance of improving patients' knowledge about T2DM and instilling lifestyle habits.

**Keywords**: telemedicine; e-health; perception; type 2 diabetes mellitus; resources; management

## Introduction

Diabetes is a metabolic disorder affecting more than 420 million people worldwide, with type 2 diabetes mellitus (T2DM) being the most common type.[1] In Spain, the prevalence of T2DM is around 13.8 percent,[2] and a progressive increase is forecast for the coming decades, potentially reaching 14.4 percent by 2035.[3] This chronic disease requires continuous monitoring and control. Because of this need and an aging population, an increase in healthcare demand is expected, which will lead to increased healthcare costs and/or reduced quality of medical care.[4]

The World Health Organization (WHO) defines telemedicine broadly as "the delivery of health care services . . . by all health care professionals using information and communication technologies [ICTs] for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries."[5] The usefulness of telemedicine has been discussed in recent years. Although more data are needed, evidence has accumulated in favor of telemedicine for managing chronic diseases such as T2DM. From the clinical point of view, the use of telemedicine can contribute to optimizing glycemic control.[6, 7] Evidence also suggests that it could help improve weight control, body mass index, blood pressure, and LDL cholesterol levels.[8–11] Furthermore, from the standpoint of the use of health resources, different studies have shown that telemedicine could decrease face-to-face consultations, thus shortening waiting lists.[12–14] Finally, telemedicine could improve patients' health-related quality of life (HRQOL)[15–17] and save time and

money on travel.[18–20] Nevertheless, the use of telemedicine has encountered barriers related to privacy and data security, institutional support, support and training in its use, and other factors.[21, 22]

Currently, to evaluate the efficiency of strategies in which telemedicine is used, clinical trials focus on glycemic control and other clinical conditions. However, preconceptions about the usefulness of telemedicine, which can reduce its use or change the way the user interacts with the tool and hence its efficiency, are not usually evaluated.[23] Given the above, this study aims to identify similarities and differences between the standpoints of the three groups involved in the management of T2DM (patients, physicians, and pharmacists) concerning the use of telemedicine and its perceived usefulness.

# Methods

## *Study Design*

A descriptive observational study was conducted from April 18 to August 5, 2016. Three ad hoc questionnaires (one per group) were designed after literature review about the use of telemedicine and the perspectives of physicians, community pharmacists, and patients on the use of telemedicine for managing T2DM. A scientific committee composed of two expert physicians was involved in the questionnaire design and validated it. Each questionnaire included four sections:

1. Sociodemographic variables,
2. Clinical variables (in the patient questionnaire only),
3. Use of ICTs and telemedical resources for managing T2DM, and
4. Perceptions of the use of telemedicine for managing T2DM.

This last section differed between participants who had experience (questions according to their own experience) and those without experience with telemedicine for managing T2DM (questions according their expectations) by a disjunctive question.

Telemedicine was previously described according to the definition adopted by the WHO.[24] The telemedicine resources (ICTs used for healthcare purposes) considered in the survey meet this definition: telephone calls, SMS/WhatsApp, email, web platforms, apps, videoconferences, and blood glucose meters with data transmission. Searching for information on the Internet was not considered a telemedicine resource. The survey consisted of open-ended, closed-ended (dichotomous or multiple choice), and 7-point Likert-scale questions.

While the survey for physicians was administered in electronic format, patients and pharmacists were also surveyed in person and by telephone.

## *Participants*

Participants representing every region in Spain were selected according to the following criteria for inclusion in the study: patients ≥18 years of age with a duration of T2DM of at least one year; physicians with at least two years' experience in their specialty, carried out in the Spanish public health sector, showing a special interest in T2DM and/or having at least 15 percent of patients diagnosed with T2DM; and community pharmacists with a minimum of two years of experience and working in the field of community pharmacy.

An estimation of the population size was performed to determine the minimum required sample size according to the assumption of maximum uncertainty with a 99 percent confidence interval and precision error values of 4 percent, 5 percent, and 5.5 percent for patients, physicians, and pharmacists, respectively. For this, the adult Spanish population for 2015 (37,007,319 people)[25] and the prevalence of T2DM in Spain (13.8 percent)[26] were taken into account, as well as the numbers of primary healthcare professionals (37,648), endocrinologists (879), and community pharmacies (21,854).[27, 28] As a result, the minimum required sample size was estimated at 1,036 patients, 1,030 physicians, and 535 community pharmacists.

### *Statistical Analysis*

Absolute and relative frequencies were calculated to describe qualitative variables. Means, standard deviations, and percentiles were calculated to describe quantitative variables. The comparison of qualitative variables between groups was carried out using the chi-square test, while the quantitative variables were compared using the Student t-test or ANOVA. The equivalent methods were employed for nonparametric variables. All statistical tests, performed using STATA v.14 software, were considered statistically significant for p-values $< 0.05$.

### *Ethical Considerations*

All participants received adequate information on the study and agreed to participate in it. To ensure the confidentiality of the data, all documents were duly encoded. The study protocol was approved by the Ethics Committee of Hospital Puerta de Hierro (Majadahonda, Madrid).

## Results

A total of 1,036 patients, 1,030 physicians, and 475 pharmacists took part in the study. The sociodemographic characteristics of the participants and the clinical characteristics of the patients are shown in Table 1.

### *Telemedicine Use in Spain*

Although 9.8 percent and 28.3 percent of patients and physicians had used telemedical resources for managing T2DM, none of the pharmacists reported having any previous experience. Significant differences regarding the use of telemedicine, related to sociodemographic characteristics, were observed.

Significant differences were observed in relation to the characteristics of the patients with and without experience with the use of telemedicine for managing T2DM. Thus, the profile of patients with telemedicine experience was a middle-aged patient (42.7 years), with high school or university studies, and actively working ($p \leq .001$); see Table 2. With respect to the characteristics of physicians, significant differences were observed only according to medical specialty. Endocrinologists had the greatest experience (64.5 percent), followed by internists (30.4 percent) and family doctors (25.8 percent).

Remarkably, only 4.7 percent of patients, 13.3 percent of physicians, and 4.2 percent of pharmacists had been offered opportunities to participate in telemedicine programs for managing T2DM. However, a greater proportion of them would be willing to do so (38.2 percent, 76.7 percent, and 52.9 percent, respectively). The typical profile of patients willing to use telemedical resources is a male patient of middle age (55.2 years), with secondary or higher education and actively working ($p < .001$); see Table 3. Conversely, no characteristic profile was observed among physicians or pharmacists, with the exception of younger pharmacists, who had greater interest in use telemedicine resources (41.7 vs. 44.3 years; $p = .013$).

### *ICT Coverage*

The majority of the patients with T2DM had good ICT coverage in their homes (97.5 percent phone and 71.6 percent Internet). Most physicians (83.9 percent) and pharmacists (95.5 percent) reported using ICTs frequently or very frequently in their professional activities.

### *Search for Information on the Internet*

Among the patients surveyed, 46.6 percent stated that they search for information about the disease on the Internet. From those, the main reasons for searching for information were T2DM-related complications (51.6 percent), adverse reactions to treatment (31.1 percent), characteristics of new treatments (27.5 percent), appearance of hypoglycemia (21.5 percent), and changes to the treatment regimen (20.1 percent).

### *Items Desired in Telemedicine Applications*

Differences were observed between the groups in relation to the items demanded by patients and healthcare professionals for inclusion in telemedicine applications related to T2DM management. The

item in greatest demand by patients was information about medication (54.4 percent), while the majority of physicians (77.9 percent) and pharmacists (73.5 percent) requested items related to setting dietary menus. Compared to patients, physicians and pharmacists gave greater importance to applications dealing with lifestyle habits. Thus, while 41.0 percent of the patients considered applications that help to establish dietary menus necessary, this proportion was higher among physicians and pharmacists (77.9 percent and 73.5 percent, respectively; $p < .001$). Similarly, compared with the 35.4 percent and 34.7 percent of the patients requesting applications aimed respectively at optimizing caloric intake and measuring physical activity, higher proportions of physicians (65.2 percent and 66.2 percent, respectively) and pharmacists (59.7 percent and 55.3 percent) demanded these applications ($p < .001$). With respect to treatment, applications to remind patients of their doses were less in demand by patients than by physicians and pharmacists (47.4 percent vs. 60.0 percent and 68.9 percent; $p < .001$), whereas those related to general information about treatment were more frequently requested by physicians (61.0 percent) than by patients (54.4 percent) and pharmacists (54.4 percent) ($p = .002$).

### *Recording of Variables*

Regarding the habits of recording blood glucose levels, 85.9 percent of patients stated that they recorded them (on paper, personal computer, mobile phone/PDA, or glucometer). Physicians' and pharmacists' perceptions were close to this reality; 98.4 percent of physicians and 83.7 percent of pharmacists thought that most patients recorded their blood glucose levels. Conversely, discrepancies were found between the behavior of the patients and the perceptions of the health professionals related to the recording of other T2DM-related values, such as lifestyle habits (exercise, calorie intake or water intake) and the number of hypoglycemic episodes. Whereas nearly 68 percent of physicians and pharmacists believed that most patients recorded these T2DM-related values only 14.4 percent of patients stated that they indeed did so.

### *Telemedicine Perceptions*

Most patients and physicians with some experience with the use of telemedicine (70.5 percent in both cases) for managing T2DM were satisfied with its use. In fact, 72.5 percent of patients and 93.5 percent of physicians would be willing to use telemedicine resources again, demonstrating great loyalty, and 80.4 percent and 97.6 percent, respectively, would recommend telemedicine.

Regardless of their prior experience with telemedicine, 80.3 percent of physicians and 32.4 percent of pharmacists felt that its use could reduce the time spent on patient care in their respective fields. In addition, 92.4 percent of physicians and 50.8 percent of pharmacists believed that it could improve care for T2DM patients.

Most of the participants with telemedicine experience, especially physicians, considered that the use of telemedicine reduced the use of healthcare resources, with the exception of visits to the pharmacy, where only 45 percent of patients and 37 percent of physicians shared this opinion (see Figure 1). The perception of physicians who lacked experience with telemedicine for managing T2DM was even more positive. For example, 75 percent of them believed that telemedicine reduced medical visits, compared with 62 percent of physicians with telemedicine experience. However, among patients and pharmacists without telemedicine experience, this perception was less widespread (46 percent and 51 percent, respectively, for the example described); see Figure 1.

Similarly, the vast majority of patients and physicians with experience using telemedicine for managing T2DM considered that its use helped improve different aspects related to the disease, such as knowledge about it (78 percent and 91 percent, respectively); see Figure 2. However, the expectations of patients without experience were lower (though still positive) than those of patients with experience (61 percent vs. 78 percent), whereas those of physicians with and without experience were similar (91 percent vs. 89 percent). This trend was observed in the rest of the questions (see Figure 2). For the vast majority of the questions raised, the standpoint of the pharmacists was more similar to that of the patients than to that of the physicians.

## Discussion

The results show that the use of telemedicine in Spain is scarce. However, taking into consideration a previous survey of health professionals and patients, a slight increase can be seen in its implementation since 2013, when 11 percent of physicians and 7 percent of patients with diabetes were using telemedicine.[29] This low degree of implementation appears not to be related to ICT coverage, considering that the vast majority of physicians and pharmacists stated that they use ICTs in their professional activity, and that the coverage in T2DM patient households was in line with the data reported by the Spanish Institute of Statistics (Instituto Nacional de Estadística) in 2016.[30] Sociodemographic characteristics, such as age, could bias the use of telemedicine because technological skills often are less developed in the elderly. Similarly, knowledge of the disease, which is related to educational level, could affect telemedicine use. In fact, the patients reporting prior telemedicine experience were significantly younger and had a higher educational level than those who had no telemedicine experience.

Poor perceptions by users regarding a specific strategy aimed at optimizing their healthcare have been identified as one of the barriers directly affecting the effectiveness of the strategy.[31] In this regard, the results of our study show a good perception of telemedicine by both patients and healthcare professionals. Thus, participants with experience of telemedicine included in the study believed that telemedicine had helped reduce the use of health resources considerably (visits to the physician, nursing, and emergency care). Similarly, the vast majority of patients and physicians considered that the use of telemedicine optimized aspects such as knowledge about the disease, adherence to treatment, glycemic control, HRQOL, and compliance with lifestyle recommendations. These data are consistent with previous studies, such as one in which improvements in hygiene and dietary habits, self-care, knowledge about T2DM, adherence to treatment, and blood glucose control were observed among users of telemedicine.[32] Similar results were shown in another study, which assessed behavioral changes related to T2DM care through a tele-assistance program.[33] Moreover, in a telemedicine program offering advice and monitoring via text messages, the vast majority of users perceived an improvement in their knowledge about the risks of their illness (88.1 percent) and the importance of following their diet and observing hygienic dietary habits (88.8 percent), helping them to make changes in their eating habits.[34] In general, physicians showed a more positive perception than patients about the benefits of the use of telemedicine. This could be attributed to the fact that physicians have closer contact with telemedical resources than patients have (either directly for its use in the management of other diseases or indirectly through the experience of other colleagues).

Among telemedicine users, a high degree of satisfaction was noted, in line with the results observed in other studies. One study conducted on elderly patients showed that the combined strategy of visits and telemedicine improved HRQOL and their knowledge about the disease, achieving a high degree of satisfaction with the program.[35] Similarly, another study showed a high degree of patient satisfaction (96.2 percent) and significant improvement in perceived health, evaluated via the EQ-5D questionnaire, before and after participation in a telemedicine program (62.8 [SD, 15.0] vs. 70.5 [SD, 12.8]; $p = .002$).[36] Therefore, the objective benefits demonstrated by the use of telemedicine are perceived as such by patients and physicians. However, though most pharmacists consider that telemedicine improves the management of T2DM, the expectation reducing the use of health resources was lower. This could explain the lack of implementation of telemedicine resources for managing T2DM among pharmacists and their lower perception about its usefulness in comparison with physicians' perception.

The low implementation of telemedicine for managing T2DM, despite the advantages shown, the high coverage of ICTs, the satisfaction of its users, and the positive perception of its utility, suggest the need to promote it more. In this sense, the role of users with experience of telemedicine could be critical to encourage its use. In addition, because they are involved in the management of other chronic diseases, community pharmacists have a multifaceted role in healthcare.[37] Because they are in close contact with patients, they could play an important role in telemedicine promotion. Pharmacists' involvement could be especially relevant in rural areas, which have a scarcity of primary care physicians and a higher proportion of the elderly among the population. Another important point to promote the use of telemedicine is to identify and meet the needs of its users. In this respect, almost half of the patients reported often seeking information on the Internet about their illness, with the treatment and its

complications being the most frequent themes of consultation. This finding could reveal an unmet need leading patients to search for information about their T2DM online.

On the contrary, patients included in this study considered the inclusion of hygiene- and dietary-related issues in applications related to T2DM management less important. Indeed, despite the major importance of lifestyle habits in the management of T2DM,[38] less than 14.4 percent of patients recorded them. This fact could suggest the existence of a real unmet need not yet addressed that is critical for T2DM care. In this sense, Graffigna et al. stressed the importance of the skills of health professionals to promote T2DM patient self-care and the multidimensional process on which patient engagement depends.[39] According to their model, patients' perception of the importance of self-care received from the health professional improves their adherence, their engagement, and the perceived importance of the knowledge about and care of their disease, which is reflected in the frequency of use of telemedicine. However, this relationship could be bidirectional, taking into account the results of a recent qualitative study that suggests that monitoring patients via mobile phone can improve the relationship between patients and health professionals, optimizing the care of the disease.[40]

Because of its observational nature, this study has a number of limitations, including susceptibility to bias and confounding factors that hinder the establishment of cause-effect relationships.[41] The estimated minimum sample size for pharmacists (n = 535) was not reached. However, with a 95 percent confidence interval, the minimum sample size would be 313 pharmacists. Therefore, the statistical analysis would be reliable with the 475 surveyed pharmacists.

Notwithstanding these limitations, the study results show that, despite the benefits shown and the observed good perception by patients and health professionals, the use of telemedicine for the management of T2DM in Spain is still scarce. The data obtained highlight the need for greater promotion of telemedicine, especially among patients and pharmacists, as well as the establishment of telemedicine resources that improve patients' knowledge regarding the disease and its treatment. Similarly, the data showed that hygienic and dietary habits are not sufficiently instilled in the patients, and telemedicine could play an important role in this area. Finally, the fact that those participants with a better perception of telemedicine are involved in telemedicine programs suggests a link between the use of these programs and their perceived usefulness.

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## Notes


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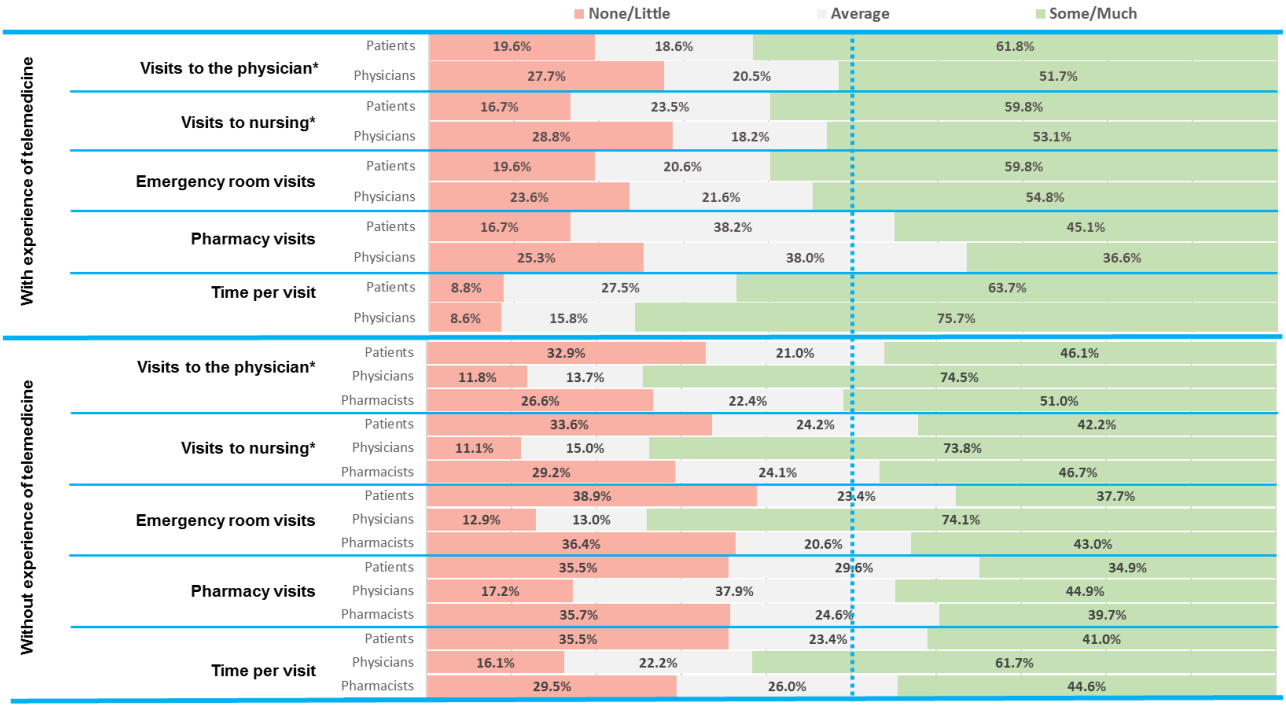
## Figure 1

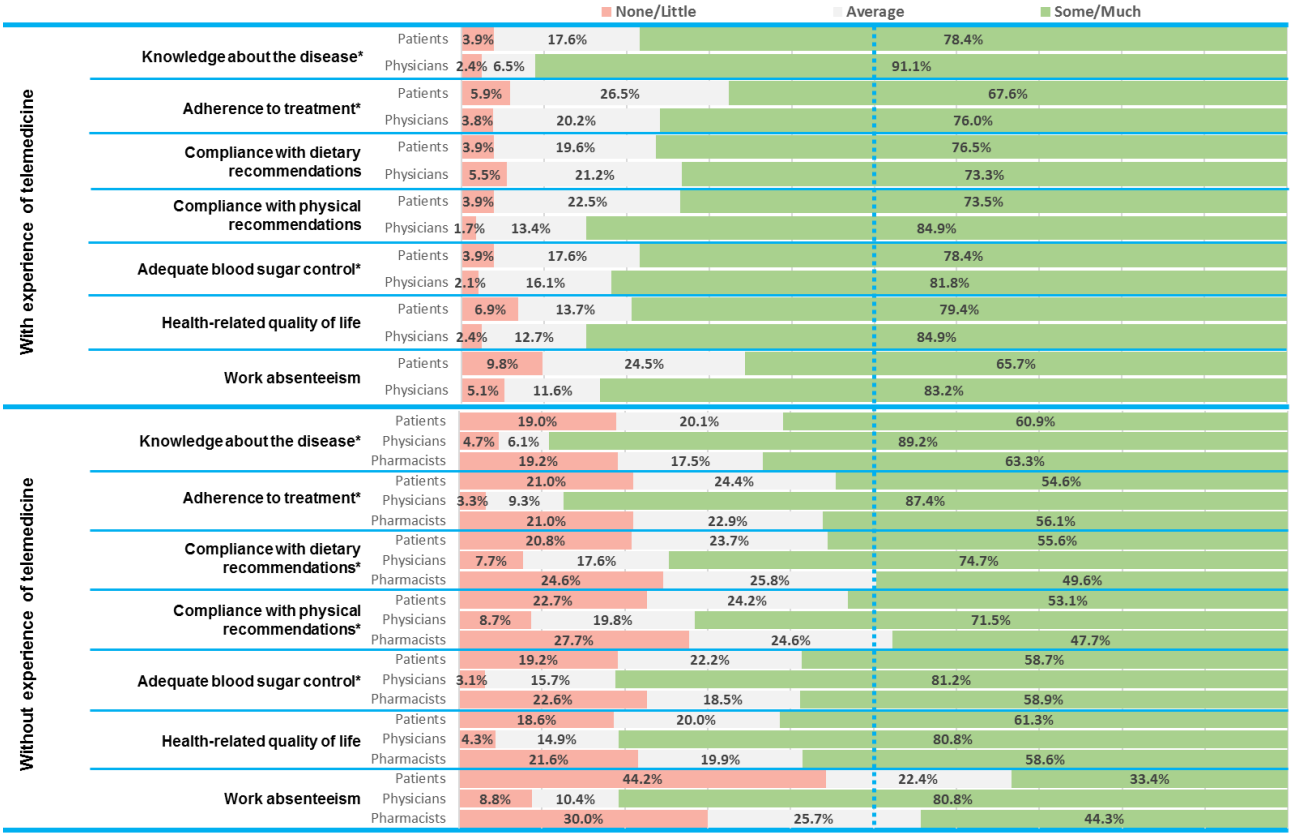
Perception of the Optimization of the Use of Health Resources with Telemedicine among Participants with and without Experience of Telemedicine




* Statistically significant differences between groups.

## Figure 2

Perception of the Improvement of Different Aspects with the Help of Telemedicine, among Participants with and without Experience of Telemedicine




* Statistically significant differences between groups.

**Table 1**

Sociodemographic and Clinical Characteristics by Group

| **Characteristics** | **Patients (*n* = 1,036)** | **Physicians (*n* = 1,030)** | **Pharmacists (*n* = 475)** |
|---|---|---|---|
| Age, mean (SD), years | 60.3 (15.0) | 51.8 (8,8) | 43.2 (10.8) |
| Men, % (*n*) | 50.5 (523) | 65.2 (671) | 28.9 (138) |
| Level of education, % (*n*) | | | |
| No education | 10.2 (106) | – | – |
| Primary school | 20.2 (209) | – | – |
| High school | 39.8 (412) | – | – |
| University | 29.8 (309) | – | – |
| Specialty, % (n) | | | |
| Family medicine | – | 82.4 (841) | – |
| Endocrinology | – | 7.4 (76) | – |
| Cardiology | – | 4.8 (49) | – |
| Internal medicine | – | 4.5 (46) | – |
| Nephrology | – | 0.8 (8) | – |
| Geriatrics | – | 0.1 (1) | – |
| Years working in specialty/pharmacy, mean (SD) | – | 23.9 (9.6) | 17.5 (10.8) |
| Patients attended per month, mean (SD) | – | 108.1 (116.0) | 452 (64.3) |
| Percentage of patients with DM2, mean (SD) | – | 51.7 (35.8) | – |
| Time per visit, mean (SD), minutes | – | 12.2 (5.3) | 6.6 (2.7) |
| Time for diagnosis, % (*n*) | | | |
| <5 years | 28.4 (294) | – | – |
| 5–10 years | 37.6 (390) | – | – |
| >10 years | 33.9 (352) | – | – |
| Time from start of treatment, % (*n*) | | | |
| <5 years | 33.1 (328) | – | – |
| 5–10 years | 31.2 (368) | – | – |
| >10 years | 29.7 (294) | – | – |
| Missing data | 46 | – | – |
| Type of T2DM treatment, % (*n*) | | | |
| Oral | 87.4 (906) | – | – |
| *Oral (monotherapy)* | 4.5 (4) | – | – |
| *Oral (combined treatment)* | 64.2 (582) | – | – |
| *Oral (fixed combination)* | 31.2 (283) | – | – |
| Injectable | 38.2 (396) | – | – |
| *Injectable (monotherapy)* | 36.87 (146) | – | – |
| *Injectable (combined treatment)* | 63.13 (250) | – | – |
| Treatment adherence, % (*n*) | 64.00 (663) | – | – |
| T2DM-related health problems, % (*n*) | | | |

| | | | |
|---|---|---|---|
| Diabetic foot | 8.49 (88) | – | – |
| Diabetic retinopathy | 14.67 (152) | – | – |
| Diabetic nephropathy | 11.39 (118) | – | – |
| Diabetic neuropathy | 19.88 (206) | – | – |
| Diabetic heart disease | 12.55 (130) | – | – |
| Comorbidities, % (*n*) | | | |
| Arterial hypertension | 46.81 (485) | – | – |
| Hypercholesterolemia | 41.60 (431) | – | – |
| Hypertriglyceridemia | 25.48 (264) | – | – |
| Obesity | 45.46 (471) | – | – |
| Repeated cystitis | 12.07 (125) | – | – |

*Abbreviation:* T2DM, type 2 diabetes mellitus.

**Table 2**

Sociodemographic Characteristics of Patients and Physicians According to Their Experience with Telemedicine

| Characteristics | Patients | | | Physicians | | |
|---|---|---|---|---|---|---|
| | **With Experience (*n* = 102)** | **Without Experience (*n* = 934)** | ***p*** | **With Experience (*n* = 292)** | **Without Experience (*n* = 738)** | ***p*** |
| Age, median (SD), years | 42.7 (13.5) | 62.3 (13.9) | **<.001** | 51.1 (9.2) | 52.1 (8.6) | .115 |
| Men, % (n) | 58.8 (60) | 49.6 (463) | .076 | 66.4 (194) | 64.6 (477) | .584 |
| Level of education, % (n) | | | | | | |
| No education | 0.9 (1) | 11.2 (105) | **.001** | – | – | – |
| Primary school | 3.9 (4) | 21.9 (205) | | – | – | |
| High school | 39.2 (40) | 39.2 (372) | | – | – | |
| University | 55.9 (57) | 26.9 (252) | | – | – | |
| Specialty, % (n) | | | | | | |
| Family medicine | – | – | – | 74.3 (217) | 84.6 (624) | **<.001** |
| Endocrinology | – | – | | 16.8 (49) | 3.7 (27) | |
| Cardiology | – | – | | 3.4(10) | 5.28 (39) | |
| Internal medicine | – | – | | 4.8 (14) | 4.3 (32) | |
| Nephrology | – | – | | 0.3 (1) | 1.0 (7) | |
| Geriatrics | – | – | | 0.0 (0) | 0.1 (1) | |
| Years working in specialty, mean (SD) | – | – | | 23.2 (9.8) | 24.2 (9.5) | .117 |
| Patients attended per month, mean (SD) | – | – | | 115.5 (113.1) | 105.1 (117.1) | .193 |
| Percentage of patients with type 2 diabetes mellitus, mean (SD) | – | – | | 49.7 (34.7) | 52.5 (36.2) | .274 |
| Time per visit, mean (SD), minutes | – | – | | 14.3 (18.8) | 12.6 (18.7) | .180 |

*Note:* Bold indicates *p* values that were statistically significant at $p < 0.05$.

**Table 3**

Sociodemographic Characteristics of Participants According to Their Willingness to Use Telemedicine Resources

| | **Patients** | | | **Physicians** | | | **Pharmacists[a]** | | |
|---|---|---|---|---|---|---|---|---|---|
| **Characteristics** | **NI (*n* = 577)** | **I (*n* = 357)** | ***p*** | **NI (*n* = 172)** | **I (*n* = 566)** | ***p*** | **NI (*n* = 200)** | **I (*n* = 225)** | ***p*** |
| Age, median (SD), years | 66.6 (11.9) | 55.2 (13.9) | **<.001** | 52.7 (8.6) | 51.9 (8.6) | .293 | 44.3 (10.8) | 41.7 (11.1) | **.013** |
| Men, % (n) | 44.5 (257) | 57.7 (206) | **<.001** | 62.2 (107) | 65.4 (370) | .448 | 27.0 (54) | 31.6 (71) | .304 |
| Level of education, % (n) | | | | | | | | | |
| No education | 16.8 (97) | 2.2 (8) | **<.001** | – | – | – | – | – | – |
| Primary school | 26.5 (153) | 14.6 (52) | | – | – | | – | – | |
| High school | 39.7 (229) | 40.1 (143) | | – | – | | – | – | |
| University | 17.0 (98) | 43.1 (154) | | – | – | | – | – | |
| Specialty, % (n) | | | | | | | | | |
| Family medicine | – | – | – | 90.0 (153) | 84.1 (471) | .352 | – | – | – |
| Endocrinology | – | – | | 2.9 (5) | 3.9 (22) | | – | – | |
| Cardiology | – | – | | 4.7 (8) | 5.5 (31) | | – | – | |
| Internal medicine | – | – | | 2.4 (4) | 5.0 (28) | | – | – | |
| Nephrology | – | – | | 0.0 (0) | 1.3 (7) | | – | – | |
| Geriatrics | – | – | | 0.0 (0) | 0.2 (1) | | – | – | |
| Years working in specialty/ pharmacy, mean (SD) | – | – | | 25.1 (9.7) | 24.0 (9.5) | .176 | 18.3 (10.5) | 16.0 (10.0) | **.032** |
| Patients attended per month, mean (SD) | – | – | | 98.7 (112.6) | 107.0 (118.5) | .411 | – | – | – |
| Percentage of patients with type 2 diabetes mellitus, mean | – | – | | 47.6 (36.5) | 53.9 (36.1) | **.046** | – | – | – |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| (SD) | | | | | | | | | |
| Time per visit, mean (SD), minutes | – | – | | 11.6 (3.9) | 12.9 (21.2) | .410 | 6.7 (2.7) | 6.6 (2.6) | .934 |

*Abbreviations:* NI, not interested in using telemedicine resources; I, interested in participating in telemedicine programs.

*Note:* Bold indicates statistical significance at $p < .05$.

[a] In the pharmacist group, data about willingness to use telemedicine resources were missing for 50 participants.