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ORIGINALS

Analysis of handover of complex hospitalised patients by nursing teams in Internal Medicine

Análisis de transferencia por los equipos de enfermería de pacientes complejos hospitalizados en Medicina Interna

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ABSTRACT:

Introduction: Currently, nursing teams lack standardised tools to ensure patient handovers during shift changeovers and to guarantee continuity of care, particularly for highly complex patients. This issue prompts reflection on shift changeovers with regard to patient safety.
Objectives: To analyse the perceptions of nursing team professionals regarding the handover of complex chronic patients (PCC) hospitalised in internal medicine units in the Region of Murcia.
Method: Multicentre, descriptive, observational, prospective and cross-sectional study with a quantitative approach. An adapted questionnaire was administered to nursing teams in internal medicine units across the Region of Murcia. Sociodemographic, work-related and perception variables were analysed using descriptive and inferential statistics ($p<0.05$) with SPSS 23.0.
Results: Of the 244 participants, 85% believed they performed patient handovers correctly; however, 84.83% felt that handovers could be improved for more complex patients. The majority of participants were women (88.11%), over 40 years of age (68.4%), and working 12-hour shifts (82.4%). Significant associations were found between years of experience and the appropriateness of the handover location; between being a nurse and forgetting information after a night shift; and between working 12-hour shifts or holding a supervisory position and the need to contact others due to missing information.
Conclusions: The findings reveal a positive yet insufficient perception of the handover process. Standardisation of information transfer for complex patients, together with the establishment of multidisciplinary teams, is required to strengthen patient safety and ensure continuity of care.

Key words: Continuity of Patient Care; Hospital Communication Systems; Patient Safety; Patient Transfer; Nursing Team; Handover.

RESUMEN:

Introducción: Actualmente los Equipos de Enfermería no disponen de herramientas estandarizadas que aseguren la transferencia de pacientes en los pases de guardia y que garanticen la continuidad de la atención al paciente, sobre todo cuando son de alta complejidad. Lo que nos lleva a reflexionar sobre los cambios de turno por la seguridad del paciente.

Objetivos: Analizar la percepción de los profesionales de los Equipos de Enfermería en la transferencia que realizan de pacientes crónicos complejos (PCC) Hospitalizados en Medicina Interna de la Región de Murcia.

Método: Estudio multicéntrico, descriptivo, observacional, prospectivo y transversal, con enforque cuantitativo. Se aplicó un cuestionario adaptado a los Equipos de Enfermería de las Unidades de Medicina Interna de la Región de Murcia. Se analizaron variables sociodemográficas, laborales y percepciones mediante estadística descriptiva e inferencial ($p<0,05$) con SPSS 23.0.

Resultados: De los 244 participantes, el 85% creen hacer correctamente la transferencia, pero un 84,83% opina que puede mejorarse en pacientes más complejos. Predominaron mujeres (88,11%), mayores de 40 años (68,4%), y profesionales con turno de 12 horas (82,4%). Se hallaron asociaciones significativas entre años de experiencia y adecuación del lugar de relevo; ser enfermera y olvidar datos tras turno nocturno; y entre turnos de 12 horas/supervisión con la necesidad de contactar por déficit informativo.

Conclusiones: Los resultados revelan una percepción positiva, pero insuficiente. Se requiere estandarizar la transferencia de información en pacientes complejos, y conformación de equipos multidisciplinares, para fortalecer la seguridad y continuidad asistencial.

Palabras Clave: Continuidad de la Atención al Paciente; Sistemas de Comunicación en Hospital; Seguridad del Paciente; Transferencia de Pacientes; Equipo de Enfermería; Pase de Guardia.

INTRODUCTION

Poor communication has been linked to the occurrence of adverse events in various studies[1,2]. For this reason, it is considered important to focus attention on the continuity of patient care in the hospital setting[3]. Shift changeovers among the different professionals that make up the nursing teams—during which patient information must be handed over—are considered critical moments. These handovers can be subject to disruptions given the complexity of the information being transferred. Such information is characterized by its multidimensional nature; its quality, and therefore its effectiveness, can be affected by various factors that influence the actions of healthcare professionals, with corresponding repercussions on patient care practice[4].

Despite being a topic of great impact[5], even today there remains a lack of standardisation of the handover process[6]. Communication systems in hospitals are suboptimal and shift changeovers between professionals are still performed in an ad hoc manner. This is perceived as a problem by professionals themselves and remains a subject of study across various healthcare teams[7].

The lack of regulation and validated tools—along with poor rigor in execution, not designating physical locations for handover, or simply not having structured steps or standardized content for shift-to-shift information transfers—can lead to omissions or forgetting of relevant information[8]. Consequently, this results in a loss of guarantee in continuity of care provided during hospitalisations[6].

This situation is evident in patients who, due to advanced stages of disease or multiple coexisting conditions with frequent exacerbations, become frequent readmissions and

are therefore complex. These patients require care involving various disciplines and professionals on a frequent basis, and are also known as pacientes crónicos complejos (PCC, complex chronic patients). This is because their level of risk and morbidity-mortality[9] necessitates greater control during handovers between professionals[10] . Given the high number of transitions across different levels of care—along with the number of admissions, often with longer lengths of stay—there is greater exposure to lapses during nurse shift changes, as observed in a similar study[2].

All these factors add to the complexity of managing information for effective communication related to the clinical status and care plan of patients during hospitalisation. The transmission of such information must be performed efficiently during shift changes to avoid omissions or transfer errors due to missing or inadequate communication of critical patient information. We are therefore dealing with patient quality and safety, which should be proportional to the complexity of the patient's condition[10]. Sufficient information must be provided to ensure continuity of care in the patient's care plan[6] so that other professionals can assume the necessary care tasks[11].

In reality, a deficit persists today in the patient handover process, with poor documentation records[12] and an inadequate communication system in hospitals. Undoubtedly, it is the responsibility of professionals themselves to recognise the impact of each of their actions—especially in clinical practice [1] —and to participate conscientiously in handovers. This conscious participation would minimise interruptions in the information flow[13], thereby safeguarding patient safety.

Justification

The issue prompting this research is that nursing team professionals in Internal Medicine units may have a potential deficit in the information they transfer during shift changeovers. This could compromise the continuity of patient care during hospital admissions. This concern for patient safety is even more pronounced for PCCs who, due to having multiple comorbidities, polypharmacy, and higher risk of morbidity and mortality, motivate the need for this study. We sought to analyse the professionals' perception of the information transfer they carry out during shift handovers, and the improvements they believe are needed in this handover process. Similar studies have been conducted[14,15] with objectives such as objectively measuring the implementation of safe practices[16] and assessing the need for training on this topic[17], while also raising awareness by involving staff in the study[18,19] given the potential impact on continuous improvement of patient quality and safety[20]. Another structured system demonstrated that standardising the process improved the efficacy of communication[21].

Objectives

General Objective

To analyse the perception of nursing team professionals regarding the handover of hospitalised patients in Internal Medicine units in the Region of Murcia.

Specific Objectives

- Describe the characteristics of the professionals that make up the nursing teams in Internal Medicine units in the Region of Murcia.

- Measure the need to improve continuity of care for complex chronic patients hospitalised in Internal Medicine units in the Region of Murcia.

- Highlight the need to increase the involvement of multidisciplinary teams in the handover of complex chronic patients (PCC) during hospitalisation in Internal Medicine units.

MATERIALS AND METHODS

Design

A multicentre, descriptive, observational, prospective, and cross-sectional study was conducted using a quantitative approach.

Participants

The study included professionals working in the nursing teams of Internal Medicine units at the time of the study. This comprised nursing care assistants (TCAEs), nurses, and nursing supervisors of those units. The inclusion and exclusion criteria were as follows:

Inclusion Criteria

- Willingness to participate voluntarily in the study and to complete the survey on their personal mobile device (access provided by their unit supervisor).

- Over 18 years of age.

- Employed as a nurse or TCAE.

- Currently working (regardless of contract type) in an Internal Medicine unit at one of the 9 selected public hospitals (one per Health Area of the Murcian Health Service, SMS).

Exclusion Criteria

- Nursing students.

- Temporary staff who are not part of the regular workforce of the Internal Medicine unit.

Study Setting

The study was carried out in the Internal Medicine units of public hospitals in the Region of Murcia, Spain. The 9 Health Areas that make up the Murcian Health Service (SMS)

were selected for inclusion. After first contacting the Nursing Education and Research Units, and subsequently the supervisors of the Internal Medicine units in the different Health Areas, we gathered information on the staffing composition of each unit by health area.

Sample

Out of a population of 589 professionals, it was calculated that a total of 471 participants would be required for a representative sample (95% confidence level), using stratified sampling by Health Area (with a minimum of 80% of the population from each area to be considered representative of that area).

Variables

The variables considered in this study were grouped and categorized as dependent or independent:

- Dependent variables: socio-demographic variables (age, sex); and work-related variables (hospital/Health Area, years of experience specifically in an Internal Medicine unit, type of contract, work shift, and current role within the unit's nursing team).

- Independent variables: responses to questions related to the staff's activity during information exchange with colleagues, specifically their opinions on information handling for complex patients, as well as the likelihood of recommending their unit to a friend or colleague from another unit.

Data Collection and Processing

The study was structured in several phases to achieve the objectives and obtain results:

- Phase 1: Literature review in various databases for similar studies and a search for validated handover tools.

- Phase 2: Contact with the Nursing Education units of the different Health Areas and with the nursing supervisors of the Internal Medicine units to reach the professionals to be surveyed. Appropriate permissions were obtained in each Health Area prior to distributing the questionnaires. The study project (as part of a Master's Final Project, TFM) was evaluated according to the requirements of each Area's Education and Research Unit. Permissions were ultimately obtained from three Regional Ethics Committees, as required to cover all 9 Health Areas, before launching the study (obtained at different times for each area).

- Phase 3: Design of a questionnaire based on the one selected from the literature review (source 1), adapted to the context of hospital nursing teams in medical units. A pilot was conducted in a tertiary referral hospital over 5 days to involve all 5 shift rotations (12-hour day shifts) of an Internal Medicine unit. This allowed for anonymous, voluntary feedback from staff. The questionnaire maintained the same structure as the reference instrument (1) for questions 9 through 20, with modifications and additions to collect socio-demographic information, clinical

variables, the relevant Health Area, and additional questions to delve into specifics of managing PCCs. The questionnaire was then converted into an online form (via a QR code link: *https://forms.office.com/e/AZaSM4vmyE*), to be completed on personal mobile devices. Distribution and oversight were facilitated by the nursing supervisor of each unit in each Health Area of the SMS.

- Phase 4: Analysis of pilot data and refinement of the questionnaire. In this phase, question 22 was adjusted because three participants misinterpreted it—thinking they had to rank six criteria in order of importance, instead of rating each item from 1 to 5. The final wording was: *"22. What information do you consider important to take into account during handover of complex patients? Please rate the importance of each of the following items from 1 to 5."* This phase was also when we awaited all necessary permissions and the final population data in order to calculate the sample size before proceeding to Phase 5.

- Phase 5: Multicentre implementation. After consent was obtained, the questionnaire was distributed to the nursing teams (supervisors, nurses, and TCAEs) currently working in Internal Medicine units of the 9 public hospitals (the 9 Health Areas in the Region of Murcia, SMS). Information was collected on the number of Internal Medicine units, staffing numbers, and bed counts. The data obtained were analysed using SPSS statistical software version 23.0.

- Phase 6: After data analysis, results were presented to the pilot team to inform future lines of research involving multidisciplinary teams in the Internal Medicine service.

Data Analysis

For statistical processing, data were analysed with descriptive statistics and reliability analysis using SPSS version 23.0. To test the statistical significance of the tool that was developed and applied in Internal Medicine units (given that it had not previously been used in this setting and had to be adapted), we first performed a descriptive analysis of the responses, calculating frequencies, percentages, and means. Then, the dependent variables (Health Area, gender, age, years worked in an Internal Medicine unit, type of contract, work shift, role in the team, and likelihood of recommending one's unit) were cross-tabulated with the independent variables (perceptions of information during shift changes, corresponding to survey questions 9 through 20) using ANOVA. Statistical significance was set at $p<0.05$, and calculations were performed with SPSS 23.0.

Ethical and Confidentiality Considerations

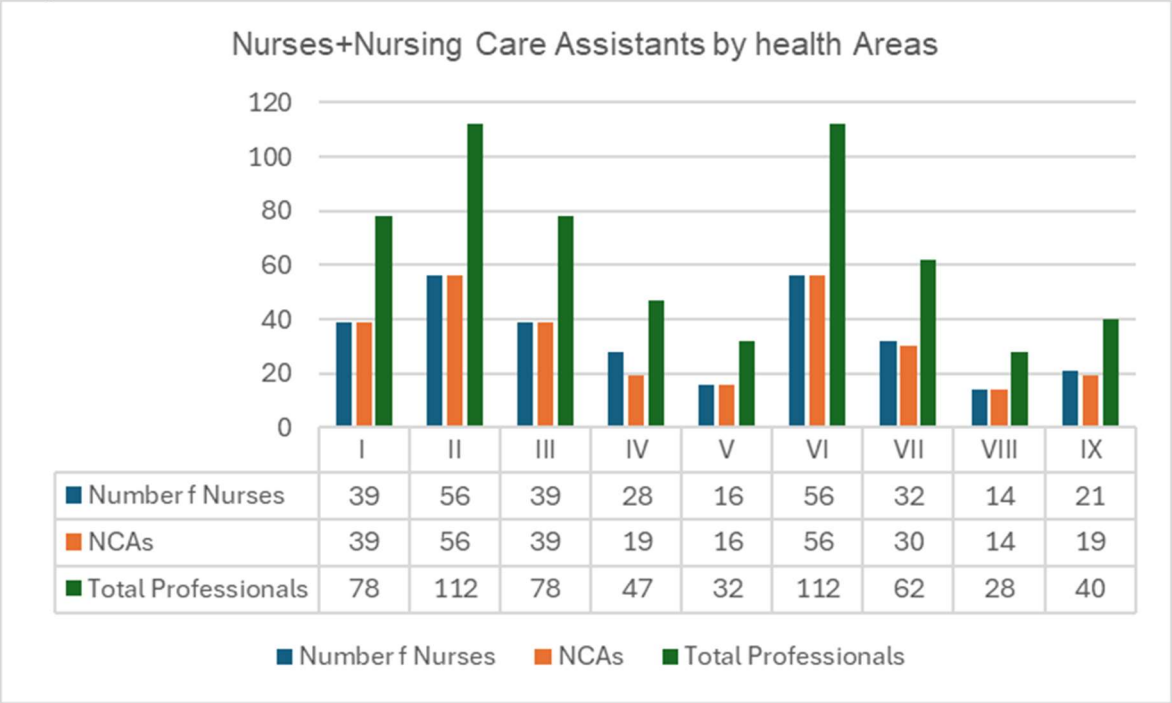
This study was part of a Master's Final Project and was approved by the Education Unit of the hospital where the study originated and where the questionnaire was piloted and created, adapted to the purposes of this study. Approval was granted by the Head of the Internal Medicine Department and the Nursing Hospitalisation Continuity of Care Supervisor at HCUVA, a tertiary-level regional referral hospital. The project also met the requirements for Master's theses in order to be implemented in the Internal Medicine Service of Health Area I.

As the study was expanded to a regional perspective beyond the initial hospital, it had to be re-evaluated and received approval from three required Ethics Committees to cover the 9 Health Areas of the Region of Murcia (SMS). All data remained completely confidential, ensuring the anonymity of participants in accordance with prevailing legislation (Ley Orgánica 3/2018, de 5 de diciembre, de Protección de Datos Personales y garantía de los derechos digitales).

RESULTS

Based on the objectives set in this study, we will now present the results. From a population of 589 professionals (including supervisors, nurses, and TCAEs) who were part of nursing teams working exclusively in Internal Medicine units in the Region of Murcia at the time of the study (according to data provided by their unit supervisors), a representative sample of 471 was calculated. In the end, more than half of this number participated voluntarily, with a total of 244 respondents, representing 51.80% of all Internal Medicine nursing professionals in the SMS in 2025. This sample size allows us to gauge the perceptions of nursing team professionals working in Internal Medicine units in the Region of Murcia (SMS).

Figure 1. Distribution of nurses and nursing care assistants by Health Areas in the Region of Murcia



	I	II	III	IV	V	VI	VII	VIII	IX
Number f Nurses	39	56	39	28	16	56	32	14	21
NCAs	39	56	39	19	16	56	30	14	19
Total Professionals	78	112	78	47	32	112	62	28	40

Source: Authors' own elaboration (2024)

Regarding the characteristics of the nursing team professionals in the Internal Medicine units, 215 (88.11%) of participants were women and 29 (11.88%) were men. In terms of age, 167 (68.44%) were over 40 years old, 64 (26.22%) were between 31 and 40, and only 13 (5.32%) were under 30 years of age.

Looking at years worked in Internal Medicine units, 133 (54.50%) had 5 or fewer years of experience in these units. Meanwhile, 50 professionals (20.49%) had under 10 years,

23 (9.42%) had under 15 years, and 12 (4.91%) had over 20 years of experience. The longest tenure recorded in Internal Medicine was 35 years, by one professional.

Among the surveyed professionals, 127 (52.04%) were on interim (temporary) contracts and 78 (31.96%) held permanent positions, while 39 (15.98%) did not fall into either of those categories. The most common work schedule was the 12-hour shift, worked by 201 (82.37%) professionals, compared to 20 (8.19%) who worked fixed morning shifts, 16 (6.55%) who rotated morning and afternoon shifts, and 7 (2.86%) who had other shift arrangements.

Of all respondents, 10 (4.09%) were nursing supervisors of the units, 140 (57.37%) were nurses, and 94 (38.52%) were TCAEs (nursing assistants).

With respect to participation by Health Area, Area I had a response rate of 88.05% and Area IV had 80.85%, each constituting a significant representation of their respective Areas (exceeding 80% of the staff). Participation in the other Health Areas was lower.

Regarding the professionals' opinion on the likelihood of recommending their unit to other professionals or friends, the average response was 6.79 on a Likert scale from 1 (Not at all likely) to 10 (Highly likely). Cross-analysis of this question with other variables shows that neither age nor contract type influenced this positive or negative perception. However, the role performed in the team, the specific Health Area, and the years worked in the unit *did* influence their responses, with statistically significant results ($p < 0.05$).

To complete the analysis and assess the nursing teams' perception of handover in Internal Medicine units, the following results are presented with frequencies and percentages for questionnaire items 9 through 19 (from the survey by Corral et al.[1], as shown in Table 1 below.

Table 1. Results on the perception of patient handover based on the questionnaire by Corral et al.[1]

Questions	Yes n (%)	No n (%)
9. As a routine practice, do you perform shift handover in an appropriate location, ¿avoiding corridors and the presence of outsiders?	229 (93.85%)	11 (6.14%)
10. As a routine practice, do you perform shift handover in a quiet location?	145 (59.42%)	99 (40.57%)
11. Does the location where shift handover is performed have the necessary resources to ensure patient monitoring and urgent care when required?	174 (71.31%)	70 (28.68%)
12. Do you perform shift handover at the patient's bedside?	1 (0.40%)	243 (99.59%)
13. As a general rule, do you prepare the information in advance in written format?	237 (97.13%)	7 (2.86%)
14. As a general rule, do you receive the information in written format?	224 (91.80%)	20 (8.19%)
15. Do you perform shift handover in a methodical and structured manner?	213 (87.29%)	31 (12.70%)
16. At any time during shift handover, has the information you received been insufficient?	175 (71.72%)	69 (28.27%)

Questions	Yes n (%)	No n (%)
17. Have you ever been given the handover in written form without it being communicated verbally?	97 (39.75%)	147 (60.24%)
18. Have you ever finished a night shift feeling so tired that you forgot to communicate some patient information to your colleague?	192 (78.68%)	52 (21.31%)
19. Have you ever needed to contact the colleague who handed over the shift due to lack of information?	170 (69.67%)	74 (30.32%)

Notably, as seen in Table 1, the items with the highest positive responses (in order, from highest to lowest) were questions 13, 9, 14, and 15 – with around 85% of respondents indicating they perform the handover process correctly for their patients during shift changes. In contrast, for questions 16, 17, 18, and 19, a high proportion of respondents highlighted that the information received was insufficient.

When cross-tabulating the responses to these questions with the dependent variables, Table 2 (next page) highlights the variables that showed a statistically significant relationship. For example, in question 9 (regarding whether handovers take place in an appropriate location), years worked in Internal Medicine had a $p < 0.001$: those with less than 5 years in the unit more often agreed that handovers occur in suitable locations, as did those on interim contracts compared to other respondents. Another example is question 18, where being a nurse was significantly associated ($p < 0.001$) with reporting having forgotten to pass on some patient information to a colleague at the end of a night shift. Finally, for question 19 (asking whether they ever had to contact a colleague after a shift change due to missing information), there was a relationship with job role on the team: unit supervisors were the professionals who most often reported needing to follow up with colleagues after a handover with information deficits ($p < 0.001$). These findings are detailed in Table 2 below.

Table 2. Relationship between variables with statistically significant associations based on the questionnaire by Corral et al [1]

Questions	Variables	Total Yes n (%)	Total No n (%)	Key Findings	p value
9. As a routine practice, do you perform shift handover in an appropriate location, avoiding corridors and the presence of outsiders?	Years working in Internal Medicine	229 (93.9%)	15 (6.1%)	≤ 5 years of experience: 133 (54.50%) / 244; 128 (52.45%) Yes	p < 0.001
10. As a routine practice, do you perform shift handover in a quiet location?	Type of contract	174 (71.3%)	70 (28.7%)	Temporary contracts: 127 (52.04%) / 244; 87 (68.5%) Yes	p = 0.008
11. Does the location where shift handover is performed have the necessary resources to ensure patient monitoring and urgent care when required?	Gender	174 (71.3%)	70 (28.68%)	Women: 157 (64.3%) Yes	p = 0.10

Questions	Variables	Total Yes n (%)	Total No n (%)	Key Findings	p value
12. Do you perform shift handover at the patient's bedside?	Gender	1 (0.4%)	243 (99.6%)	Women: 215 (88.1%) No; 0% Yes	p = 0.006
	Work shift	243 (99.6%)	1 (0.4%)	12-hour shift: 201 (82.4%) No; 0% Yes	p = 0.01
13. As a general rule, do you prepare the information in advance in written format?	Gender	237 (97.1%)	7 (2.9%)	Women: 211 (98.1%) Yes	p = 0.01
18. Have you ever finished a night shift feeling so tired that you forgot to communicate some patient information to your colleague?	Role within the team	192 (78.7%)	52 (21.3%)	Nurses: 127 (52.0%) / 244 Yes; 127 (90.7%) / 140 Yes	p < 0.001
19. Have you ever needed to contact the colleague who handed over the shift due to lack of information?	Work shift	170 (69.7%)	74 (30.3%)	12-hour shift: 136 (55.7%) / 244; 136 (67.66%) / 201 Yes	p = 0.029
	Role within the team	170 (69.7%)	74 (30.3%)	Nurse supervisors: 100% Yes; Nurses: 114 (81.4%) / 140 Yes	p < 0.001

Regarding the need to improve continuity of care for the most complex patients, in question 21 (which asked *"Do you think the information handed over about more complex patients could be improved?"* — defining complex patients as those with multiple pathologies, multiple medications, and frequent readmissions), 207 respondents (84.8%) answered "yes". This showed a statistically significant association (p = 0.047) with the variable of gender: 186 women (76.2% of all respondents) believed the information could be improved. Question 22 asked which information they consider most important to include during handovers for more complex patients. The responses to this question revealed significant relationships, as shown in Table 3 below. Specifically, there was a significant relationship between certain variables and the priorities in information transfer: notably, the perception that having more information from other professionals involved in the complex patient's care is important, and the type of work shift (with 12-hour shift workers). Both of these had a p-value of 0.003.

Table 3. Question 22 and professionals' perceptions of the transfer of important information in complex chronic patients (CCPs)

Questions	Variables	1	2	3	4	5	p value
22.1. Special medications	Total	28 (11.5%)	15 (6.1%)	42 (17.2%)	25 (10.2%)	134 (54.9%)	p = 0.01
						88 (36.06%) >41 years	
22.2. Difficulty with self-care	Age	16 (6.6%)	16 (6.6%)	55 (22.5%)	45 (18.4%)	112 (45.9%)	
	Work shift	16 (6.6%)	24 (9.8%)	54 (22.1%)	55 (22.5%)	95 (38.9%)	p = 0.035
						90 (36.9%) 12-hour shift	
22.3. Overload/ deficit or dysfunction of the primary caregiver	Total	16 (6.6%)	24 (9.8%)	54 (22.1%)	55 (22.5%)	36 (14.8%)	
						/244 (45.6%) /79	
	Age					81 (33.2%) >41 years	p = 0.016
	Work shift					12-hour shift	p = 0.004
22.4. Special care/wound care	Total	22 (9.0%)	10 (4.1%)	25 (10.2%)	35 (14.3%)	152 (62.3%)	p = 0.005
						104 (42.62%)	
22.5. Pending tests	Total	21 (8.6%)	16 (6.5%)	24 (9.8%)	46 (18.2%)	137 (56.14%)	Not significant
22.6. Information from other professionals involved	Total	14 (5.7%)	19 (7.8%)	33 (13.5%)	65 (26.1%)	112 (46.3%)	
	Work shift					95 (38.9%) 12-hour shift	p = 0.003

DISCUSSION

The key results presented above, obtained via the custom questionnaire, provide insight into the current perceptions of nursing team professionals in Internal Medicine units of the SMS in the Region of Murcia. According to the respondents, they have a strong belief that they carry out patient handovers correctly during shift changes. Compared to the study by Corral et al.[1] on which our questionnaire was based (which surveyed 55 professionals in an Emergency Department), the present study achieved a much larger sample of 244 respondents, more than doubling the previous sample. In fact, we obtained a representative sample in 2 of the 9 Health Areas based on the calculated proportions.

Comparing our results with those of Corral et al.[1] in terms of participant characteristics, we also found a majority of female professionals, and the most common age range was likewise 31–40 years. In both studies, interim positions were prevalent (41.8% in their study).

Turning specifically to the perception items (questions 9–19, which mirror those in Corral et al.[1], and given our larger sample size, we compare percentage agreements in the

absence of other similar studies or uses of this scale. Regarding whether they consider shift changeovers to occur in an appropriate location, 93.85% of our Internal Medicine respondents believed they do, compared to 80% in the similar Emergency Department study. For whether handovers take place in a quiet location, 59.42% of our respondents agreed, whereas in the reference Emergency Department study, 100% responded “no” to that item[1]. When asked if they prepare the information in advance and receive it in written form, 91.80% of our respondents said yes, and 87.29% consider the handover to be methodical and structured. In the Emergency Department study, 80% prepared information in advance, 98.2% received it in writing, and 70.9% considered it structured[1]. These figures are very similar in many respects.

In the analysis of variables, our study results did not align with those of the reference study for certain items. For instance, Corral et al.[1] found that gender ($p = 0.489$), shift timing, and work experience were not significantly associated with perceptions of handover in the Emergency Department setting, whereas our analysis in Internal Medicine identified some different associations that cannot be directly extrapolated to the Emergency context.

Our findings indicate that in Internal Medicine units, it is necessary to improve the continuity of patient care in care plans for hospitalised PCCs in the Region of Murcia (SMS), given the complexity of this issue and the lack of comparable data or studies.

Lastly, considering the current situation of heavy workload in Internal Medicine units and the growing number of high-complexity patients, there is an evident need to create a validated tool[14,15] to ensure continuity of care for inpatients in these units, especially when they are complex patients. The shift changeovers among nursing team staff are points of vulnerability in communicating important patient information. This communication affects the reliability of nursing interventions[19], which must be received completely and safely for the patient’s benefit[22]. A guided briefing led by a case-manager nurse could be a good option as a future line of action to address this continuity challenge[9]. It should also be noted as an area for improvement that the primary caregiver of complex chronic patients should be taken into account. Despite the importance of caregivers, our surveyed sample did not rate their involvement as highly as other topics like medication and wound care. However, other studies emphasize including both the patient and family members during handovers as a way to ensure correct transmission of information during staff shift changes[23]. Likewise, studies highlight the priority of person-centered care for patient safety[24]. All of this justifies the need to implement standardised interventions during patient information transfer[22], especially for complex patients. Other studies underline the importance of structured handovers in critical patients, where interventions are crucial to patient survival[25]; a proper tool should allow a comprehensive and safe handover during staff changeovers and shift reports.

The aforementioned studies echo the information gaps in patient handovers[17]. In paediatric patients, for example, studies have explored quality and patient safety aspects of how handovers are conducted, as well as recommendations for improvement [26]. Such recommendations could be considered for future adaptation to complex adult patients and hospitalised settings. Most of the notable prior studies on handovers have been in Emergency Departments[1,27,28], where multidisciplinary teamwork is more standardised and tools are used to ensure time efficiency and task allocation in specific processes. However, none of those contexts are fully comparable to the present study.

Regarding the limitations of this study, the primary issues were the absence of validated tools and a scarcity of bibliographic references on this topic, as well as the difficulty in reaching the target population. Nurses and TCAEs working in medical wards are not accustomed to participating in research studies, and many had limited availability to complete the entire questionnaire during breaks in their work shifts, citing heavy workloads.

A larger sample would have allowed the possibility of validating the scale created to measure these perceptions in Internal Medicine units. The calculated Cronbach's alpha for internal consistency of our questionnaire was 0.687. This score is just below the commonly accepted threshold of 0.70 for good reliability. While validation was not an objective of this study, it suggests the need to expand the sample in future work, potentially outside the Region of Murcia, to improve reliability.

Based on our results, it is deemed necessary to continue working with the nursing teams of Internal Medicine units on the handover of information for their patients—especially complex chronic patients. Given the complexity of managing these patients, the volume of information involved in their care plans, and the fact that they require the involvement of many professionals during their stay, it is even more evident that better coordination of information transfer is needed during their hospitalisations. This coordination must account for the work of each and every professional involved in each patient's case.

To that end, it is suggested that the case-manager nurse for complex chronic patients should take on the role identified by these needs, maintaining a focus on ensuring continuity of care in the care plans of PCCs at discharge. Work should also continue within nursing teams to develop a briefing-type evaluation instrument that addresses complexity based on evidence and covers all the patient's needs. Such a tool must involve all professionals as required at each step. It should be emphasised that nursing teams carry the responsibility for the patient's comprehensive management during hospital admission, 24 hours a day, every day of the hospital stay. Their management of care continuity should not be disrupted regardless of the hour or day (even when certain professionals are not present due to their work shifts, e.g. afternoons, nights, or weekends, whom nurses might need to consult for specific complex care questions).

CONCLUSIONS

In conclusion, the questionnaire developed allowed us to analyse the nursing teams' perception of handovers for their hospitalised patients in Internal Medicine units of the Region of Murcia. With participation from over half of the professionals, the results show that although staff believe they perform handovers correctly, they also recognize the need to improve continuity of patient care in care plans, especially for complex chronic patients. This finding highlights the need to improve continuity of care in patient handovers and to increase the formation of multidisciplinary teams. Such measures would ensure care with greater involvement of all professionals managing complex patients from their respective disciplines, achieving a more comprehensive approach. This would improve the quality and safety of information transfer, particularly for PCCs during their hospitalisation in Internal Medicine units.

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