Digital transition and pre-filled templates improve medical prescription compliance: Feedback from a Comprehensive Care Center

Aurélien Lambert, Benoit Hombourger, Julie Salleron, Fadila Chergui, Catherine Vallance, Nadège Nicolas, Marie Moussouni, Lounisse Cherif, Emile Chenot, Céline Gavoille, Vincent Massard

Submitted to: Journal of Medical Internet Research
on: February 26, 2024

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Aurélien Lambert[1, 2] MD, PhD; Benoit Hombourger[1] PharmD; Julie Salleron[1] MS; Fadila Chergui[1] PharmD; Catherine Vallance[1] PharmD; Nadège Nicolas[1] PharmD; Marie Moussouni[1] PharmD; Lounisse Cherif[1] PharmD; Emile Chenot[1] PharmD; Céline Gavoille[1] MD; Vincent Massard[1] MD

[1]Institut de Cancérologie de Lorraine Vandoeuvre-lès-Nancy FR
[2]Université de Lorraine, INSERM UMR 1319 INSPIIRE Vandoeuvre-lès-Nancy FR

Corresponding Author:
Aurélien Lambert MD, PhD
Institut de Cancérologie de Lorraine
6 avenue de bourgogne
Vandoeuvre-lès-Nancy
FR

Abstract

Background: The transition from traditional handwritten prescriptions to digital prescribing systems represents a significant advancement, with the potential to enhance treatment efficacy, patient safety, and professional communication.

Objective: This study examines the impact of this transition within a medical oncology service, assessing the compliance of digital prescriptions with established good practice standards and exploring the associated risks.

Methods: In this retrospective analysis, we compared handwritten prescriptions from the pre-digital era (January-May 2018) with digital prescriptions (January-May 2021) following the implementation of the electronic prescribing system PandaLab Pro®. The inclusion criteria focused on outpatient oncology treatments, with a clear set of exclusion parameters to ensure a focused study scope. The prescription software was introduced to facilitate prescription uniformity through pre-filled templates, enhancing time efficiency and reproducibility

Results: Our findings, based on a sample size of 260 prescriptions (randomized among 30526 archived prescriptions), indicate a substantial improvement in digital prescriptions' compliance with prescribers and patient details, treatment accuracy, and overall adherence to regulatory standards. Notably, digital formats achieved a remarkable 80.8% accuracy rate in compliance with safety criteria compared with 8.5% for handwritten prescriptions ($p<.001$). The use of pre-filled prescriptions significantly increased compliance from a safety perspective (56% vs. 96.2%; $p<.001$) compared to digital prescriptions from scratch.

Conclusions: The analysis further underscores the advantages of pre-filled digital prescription templates, which significantly improved compliance rates compared with manually filled digital and handwritten prescriptions. Moreover, the study revealed a marked shift in prescribing behaviors, with digital prescriptions tending to be more concise yet more numerous, suggesting an impact on medication management and patient adherence, which warrants further investigation. The study supports the transition to digital prescribing systems in oncology, highlighting enhanced traceability, compliance with health authority standards, and patient safety. The implementation of pre-filled templates supported by pharmacists has emerged as a pivotal factor in this improved process. While acknowledging certain limitations, such as the non-quantitative assessment of time savings and acceptability, this research advocates for the widespread adoption of digital prescriptions and serves as a benchmark for future e-prescription initiatives in France. Clinical Trial: Retrospective study (trial registration waived)

(JMIR Preprints 26/02/2024:57782)
DOI: https://doi.org/10.2196/preprints.57782

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Digital transition and pre-filled templates improve medical prescription compliance: Feedback from a Comprehensive Care Center

Aurélien Lambert[1,2], Benoit Hombourger[3], Julia Salleron[4], Fadila Chergui[3], Catherine Vallance[3], Nadège Nicolas[3], Marie Moussouni[3], Lounisse Cherif[3], Emile Chenot[3], Céline Gavoille[1], Vincent Massard[1].

[1]Department of Medical Oncology, Institut de Cancérologie de Lorraine, Vandœuvre-lès-Nancy, France

[2]Université de Lorraine, INSERM UMR 1319 INSPIIRE, Vandœuvre-lès-Nancy, France

[3]Department of Pharmacy, Institut de Cancérologie de Lorraine, Vandœuvre-lès-Nancy, France

[4]Data Biostatistics Unit, Institut de Cancérologie de Lorraine, Vandœuvre-lès-Nancy, France

Corresponding author: Aurélien Lambert, MD, PhD, Department of Medical Oncology, Institut de Cancérologie de Lorraine, 6 Avenue de Bourgogne, 54500, Vandœuvre-lès-Nancy, France.

Tel. +33 (0)3 83 59 85 64. E-mail address: a.lambert@nancy.unicancer.fr

Keywords: digital prescription, electronic prescription, handwritten prescription, computerized physician order entry, electronic health record

Abstract (337 words)

Introduction: The transition from traditional handwritten prescriptions to digital prescribing systems represents a significant advancement, with the potential to enhance treatment efficacy, patient safety, and professional communication. This study examines the impact of this transition within a medical oncology service, assessing the compliance of digital prescriptions with established good practice standards and exploring the associated risks.

Methods: In this retrospective analysis, we compared handwritten prescriptions from the pre-digital era (January-May 2018) with digital prescriptions (January-May 2021) following the implementation of the electronic prescribing system PandaLab Pro®. The inclusion criteria focused on outpatient oncology treatments, with a clear set of exclusion parameters to ensure a focused study scope. The prescription software was introduced to facilitate prescription uniformity through pre-filled templates, enhancing time efficiency and reproducibility

Results: Our findings, based on a sample size of 260 prescriptions (randomized among 30526 archived prescriptions), indicate a substantial improvement in digital prescriptions' compliance with prescribers and patient details, treatment accuracy, and overall adherence to regulatory standards. Notably, digital formats achieved a remarkable 80.8% accuracy rate in compliance with safety criteria compared with 8.5% for handwritten prescriptions ($p<.001$). The use of pre-filled prescriptions significantly increased compliance from a safety perspective (56% vs. 96.2%; $p<.001$) compared to digital prescriptions from scratch.

Discussion: The analysis further underscores the advantages of pre-filled digital prescription templates, which significantly improved compliance rates compared with manually filled digital and handwritten prescriptions. Moreover, the study revealed a marked shift in prescribing behaviors, with digital prescriptions tending to be more concise yet more numerous, suggesting an impact on medication management and patient adherence, which warrants further investigation. The study supports the transition to digital prescribing systems in oncology, highlighting enhanced traceability,

compliance with health authority standards, and patient safety. The implementation of pre-filled templates supported by pharmacists has emerged as a pivotal factor in this improved process. While acknowledging certain limitations, such as the non-quantitative assessment of time savings and acceptability, this research advocates for the widespread adoption of digital prescriptions and serves as a benchmark for future e-prescription initiatives in France.

Introduction

Medical prescriptions are a pivotal element in the care process and play a crucial role in treatment efficacy, patient safety, and communication among healthcare professionals. Traditionally, prescriptions were handwritten, a method prone to various errors and limitations; however, digital prescriptions are not exempt from errors that can vary from 2 to 514 per 1000 prescriptions and from 4.2 to 82% of patients or charts reviewed [1]. With the advent of health information technologies, electronic prescriptions have emerged as a promising solution for enhancing care quality and medication treatment management. In oncology, in which therapeutic regimens are often complex and high-risk, the accuracy and clarity of prescriptions are particularly significant. The primary goal of electronic prescriptions is to minimize the risk of medical errors as much as possible while improving legibility [2,3].

Obvious though the impact of introducing a digital prescribing system on compliance with prescriptions with good practice in medical oncology services has not been fully evaluated in oncology outpatients. However, digital prescription introduces a new source of risk [4], one of which is called automation bias, which occurs when a physician blindly trusts prescription-helping software, thereby reducing vigilance in information seeking and validation [5].

The transition from handwritten to digital prescriptions in our center offers a unique opportunity to examine changes in prescription quality and their adherence to standards established by the authorities (Haute autorité de santé (HAS) and Direction générale de l’offre de soins (DGOS) in France) [6].

Although historically ubiquitous, handwritten prescriptions are prone to errors owing to illegibility, omission of crucial information, and variability in interpreting instructions. These shortcomings can lead to prescription errors, which can affect patient safety and treatment efficacy. The time-consuming and redundant nature of handwritten prescriptions could also lead to shortcuts in writing or other "homegrown" systems of drafts, carbon papers, and Word files in more or less secure

folders. Not to mention the major identity-vigilance risks.

Oncology, which requires great precision in prescribing complex treatments, represents an ideal context for assessing the impact of prescription digitalization. Errors in prescribing antitumor agents or growth factors can have serious consequences, making the accuracy and clarity of information imperative. Moreover, the digitization of prescriptions can also play a role in improving care coordination, a critical aspect of cancer treatment where multiple specialists are often involved in patient care. This study is part of a broader context of evolving health practices towards greater digitization, a change accelerated by the COVID-19 pandemic. The transition to more digital health systems is seen not only as a means to improve operational efficiency but also as a crucial step to increase patient safety and care quality.

To conduct this study, we analyzed handwritten prescriptions from 2018, before the digital era, and digital prescriptions from 2021, after the deployment of our outpatient digital prescribing solution. This comparative analysis allowed us to evaluate the evolution of several parameters, including the presence of essential information on prescribers and patients, adherence to prescription standards, and variety of prescribed treatments.

Here, we report our center's experience with the digital transition of prescriptions, moving from entirely handwritten prescriptions to 100% digital prescriptions three years later. The main objective of the study was to assess the improvement in prescription compliance via a digital solution compared to historical manual drafting.

Methods

We retrospectively collected prescriptions from our electronic patient records from January 1 to May 31, 2018 (2018 period) for handwritten prescriptions and from January 1 to May 31, 2021 (2021 period) for digitized prescriptions.

We selected prescriptions for outpatients in the oncology department to obtain the greatest possible

completeness for different prescriptions. The prescription software we introduced, PandaLab Pro® (PandaLab SAS, Nancy, France), of course allows prescriptions from scratch, but above all, the use of pre-filled prescription templates to save time and ensure a reproducible attitude, given that treatment protocols ultimately lead to many similarities in prescriptions (systematization of leukocyte growth factors associated with some chemotherapy regimens, biological tests planned in advance according to the protocol, etc.).

All prescription templates were created in advance by a team of medical oncologists and then underwent a thorough review by pharmacists to ensure compliance with the standards.

The inclusion criteria for prescription selection were as follows:

- All the patients underwent outpatient medical oncology treatment.
- Treatment prescription.
- Handwritten or Digital (no intermediate format).

The exclusion criteria were as follows:

- Prescription for nursing care (bandages, physiotherapy, etc.)
- Equipment (walking sticks, compression stockings, etc.)
- Simultaneous pre-printed carbon and handwritten prescriptions
- Chemotherapy prescriptions (IV molecules are prescribed in a specific chemotherapy software, but a paper copy is added to the patient's file).
- Medical test prescriptions (laboratory work, imaging, etc.)

The compliance criteria for the authorities are listed in Table 1.

It should be noted that a prescription was considered illegible if only one line was considered non-readable, regardless of whether the rest was readable.

We retrieved prescription types, such as antitumor agents or growth factors, and the rest were

compiled in an associated treatment group.

The drug delivery methods were also assessed.

Concerning the international name of a molecule when several treatments were prescribed, it had to match every single molecule to be correct ; if one or more names were incorrect (or with brand name only), the item was considered invalid.

For reproducibility and safety questions, we excluded specific prescriptions such as medical transport and exceptional molecules to maintain only routine prescriptions with molecules.

In 2018, all prescriptions were considered for inclusion and were randomly allocated using a randomization table to ensure unbiased assignment and to mitigate selection bias. We selected the first 130 patients who met the inclusion criteria. For the 2021 period, we were able to disqualify some prescriptions in advance because the type of prescription is now part of our file system (we excluded transport prescriptions, nursing and home care prescriptions, exams, etc.) The remaining prescriptions were then analyzed using the same logic as that for the 2018 period.

Statistical analysis

Statistical analysis was performed using the SAS software (SAS Institute Inc., Cary, NC, USA). Assuming a pessimistic hypothesis of 40% compliance in the case of handwritten prescriptions, we evaluated the potential of the digital solution to improve this compliance rate to at least 60%, with a power of 90% and alpha risk of 5%. To test this hypothesis, it was necessary to conduct a t-test to collect 130 prescriptions in each arm, making a total of 260 prescriptions. The significance level was set at 5%. Qualitative parameters were described by headcount and percentage, quantitative parameters by means and standard deviations, median, and 1st and 3rd quartiles. We compared the quantitative parameters normally distributed using Student’s t-test. Otherwise, the Wilcoxon Mann-Whitney test was used. Qualitative parameters were compared using the chi-squared test.

Table 1. Compliance criteria expected by the authorities

Category	Item
Prescriber	
	First name (or first letter)
	Last name
	Specialty or unit
	Registration number (RPPS)
	Signature
Center	
	Name
	Address
	Registration number (FINESS)
General	
	Contact information (prescriber or center)
	Prescription date
	Readability
Patient	
	First name
	Last name
	Birthdate (or age)
	Social number
Prescription type	
	Cancer treatment type (cancer treatment, associated treatment)
Molecule	
	International drug name
	Commercial drug name
	Drug type (IV, oral, SC, IM)
	Dosage unit
	Drug Dosage
	Posology
	Duration

IV: intravenous; SC: subcutaneous; IM: intramuscular

Results

In the handwritten arm, during the January-May 2018 period, a total of 251 prescriptions were analyzed from an initial pool of 6129 to keep the first 130 meeting the inclusion criteria.

In the digital prescription arm, during the January-May 2021 period, out of 24,397 prescriptions, 8,206 were filtered using digital criteria, with only 150 prescriptions analyzed to keep the first 130 that met the inclusion criteria.

Group comparability

The comparability of the two groups was assessed using p-value analysis, with a p-value < .05 indicating statistical significance (Table 2). The study found a significant difference between the two groups regarding the presence of pre-filled prescriptions, with none in the handwritten group. The handwritten group also had a significantly higher number of prescriptions for oral intake. However, for critical criteria, such as the presence of anti-tumor agents, no significant difference was observed, indicating comparable quality in prescribing critical medications across both groups. It should be noted that 50% of the prescriptions had one or three molecules in the handwritten group, while 50% of the prescriptions had between one or two molecules in the digital group.

Compliance analysis

Compliance analysis is shown in Table 3.

Compliance regarding the accurate mention of the prescriber's details was significantly higher in digital prescriptions than in handwritten prescriptions (90% vs. 53.8%; p=.031). This indicates a substantial improvement in ensuring that prescriber information is correctly included in the digital formats.

Interestingly, the handwritten arm had excellent readability compared to the digital arm (97.7% vs.

100%; p=.081).

The accuracy of patient identity information showed major differences, with handwritten prescriptions having a 0% accuracy rate compared with 100% in digital prescriptions. Even when the absence of a social security number was tolerated, handwritten prescriptions achieved a compliance rate of only 27.7 %.

Treatment compliance, which refers to the correctness of the prescribed treatment details, also saw a significant improvement in digital prescriptions over handwritten ones (63,1% vs. 4.6%; p<.001), but more interestingly, when we tolerated the molecule to be presented with international or brand name indifferently (as it was a purely administrative criteria, not involving patient safety), the difference remained very significant (80,8% vs. 30%; p<.001). If Dosage, Duration, or molecule name (international or brand) showed a good accuracy of >80% each, the main difference was the absence or presence of the dosage unit in the handwritten and digital groups, respectively, same goes for drug type; both items are very important concerning patient safety. This improvement indicates the higher reliability of digital prescriptions for accurately conveying treatment information.

To be comparable, we had to test excluding the social number and birth date to reach an acceptable rate of accuracy for the handwritten arm; however, the difference was still significant (80.8% vs. 100%; p<.001).

The results clearly demonstrate the superior compliance of digital prescriptions across all examined parameters. The digitization of prescriptions significantly enhances the accuracy of prescriber mentions, patient identity, and treatment details. Particularly noteworthy is the achievement of 100% accuracy in patient identity in digital prescriptions, which is a critical factor for patient safety and treatment efficacy.

Safety versus administrative criteria

Considering all criteria indiscriminately, as presented in Table 4, compliance was significantly higher in the digital group (47.7% vs. 0%; p<.001). However, this means that even this dedicated digital software is under the threshold of 50% of prescriptions aligned with the expected results from the authorities.

Some items might be considered extremely difficult to follow or even useless from the clinician's perspective. We try to discern what might really affect patient safety by considering three scenarios: (a) prescriptions without contact or social number but with strict international molecule names expected; (b) prescriptions without contact or social number and birth date but with strict international molecule names expected; and (c) tolerance of international and/or brand names. From a clinician's perspective, the brand name does not endanger a patient; in France, it is more a matter of reimbursement and the possibility of substituting such molecules with generic or biosimilar treatments. Therefore, when focusing on patient safety criteria, those that could directly impact patient health, digital prescriptions demonstrated superior compliance compared with handwritten prescriptions (80.8% vs. 8.5%; p<.001). This significant discrepancy underscores the potential of digital prescriptions in enhancing patient safety by reducing errors.

Prefilled or not

The study further highlighted the benefits of using prefilled digital prescription templates, which showed higher compliance rates than both manually filled digital prescriptions and handwritten prescriptions (Table 5). With this in mind, prefilled prescriptions significantly increased compliance accuracy from all criteria (20% vs. 65%; p<.001), but also from a safety perspective (56% vs. 96.2%; p<.001).

Table 2. Prescription characteristics

	Handwritten N=130 (%)	Digital N=130 (%)	p-value
Prefilled	0	80 (61.5)	<.001
Antitumoral agent	40 (30.8)	32 (24.6)	0.267
Growth factor	20 (15.4)	11 (8.5)	0.085
Associated Treatment	92 (70.8)	94 (72.3)	0.783
Oral	100 (76.9)	81 (62.3)	0.010
IM or SC	37 (28.5)	40 (30.8)	0.684
IV	1 (0.8)	1 (0.8)	-
Local	21 (16.2)	21 (16.2)	1
Median molecule number (Interquartile range)	1 (1-3)	1 (1-2)	<.001

IM: intramuscular; SC: subcutaneous; IV: intravenous

Table 3. Compliance analysis between handwritten and digital groups

	Handwritten N=130 (%)	Digital N=130 (%)	p-value
Prescriber	70 (53.8)	117 (90)	0.031
Last name	124 (95.4)	130 (100)	0.013
First name	121 (93.1)	130 (100)	0.002
Specialty or unit	120 (92.3)	117 (90)	0.512
Registration number	70 (53.8)	130 (100)	<.001
Signature	127 (97.7)	130 (100)	0.081
Center	130 (100)	130 (100)	-
Name	130 (100)	130 (100)	-
Address	130 (100)	130 (100)	-
Registration Number	130 (100)	130 (100)	-
Prescription	65 (50)	112 (86.2)	<.001
Contact	68 (52.3)	112 (86.2)	<.001
Date	127 (97.7)	130 (100)	0.081
Readability	127 (97.7)	130 (100)	0.081
Prescription excluding contact[†]	124 (95.4)	130 (100)	0.029
Patient	0	130 (100)	<.001
Patient excluding social number[∂]	36 (27.7)	130 (100)	<.001
Patient excluding social number and birthdate[π]	105 (80.8)	130 (100)	<.001
Last name	129 (99.2)	130 (100)	0.316
First name	105 (80.8)	130 (100)	<.001
Birthdate	36 (27.7)	130 (100)	<.001
Social number	0	130 (100)	<.001
Molecule (international name only)	6 (4.6)	82 (63.1)	<.001
Molecule (international and/or brand name)[Δ]	39 (30.0)	105 (80.8)	<.001
International name	16 (12.3)	90 (69.2)	<.001
Brand name	116 (89.2)	95 (73.1)	<.001
Drug type	63 (48.5)	117 (90)	<.001
Dosage Unit	77 (59.2)	116 (89.2)	<.001
Dosage	114 (87.7)	127 (97.7)	0.002
Duration	107 (82.3)	126 (96.9)	<.001

[†]Analysis was performed without considering the presence or absence of contact
[∂]Analysis was performed without considering the presence or absence of social number
[π]Analysis was performed without considering the presence or absence of social number nor birthdate
[Δ]Analysis was performed without considering the presence or absence of international name, brand name was allowed indifferently

Table 4. Analysis considering safety or administrative criteria

	Handwritten N=130 (%)	Digital N=130 (%)	p-value
Administrative criteria[μ]			
All categories: Prescriber / Center / Prescription / Patient / Molecule	0	62 (47.7)	<.001
Patient safety criteria[Σ]			
Prescription excluding contact Patient excluding social number Molecule (international name allowed only)	1 (0.8)	82 (63.1)	<.001
Prescription excluding contact Patient excluding social number and birthdate Molecule (international name allowed only)	4 (3.1)	82 (63.1)	<.001
Prescription excluding contact Patient excluding social number Molecule (both international and/or brand name allowed)	11 (8.5)	105 (80.8)	<.001

[μ]all criteria considered
[Σ]excluding criteria that do not directly endanger the patient

Table 5. Analysis considering prefilled status in the digital arm

	Not prefilled N=50 (%)	Prefilled N=80 (%)	p-value
Administrative criteria[µ]			
All categories: Prescriber / Center / Prescription / Patient / Molecule	10 (20)	52 (65)	<.001
Patient safety criteria[Σ]			
Prescription excluding contact Patient excluding social number[ß] Molecule (international name allowed only)	26 (13)	69 (86.2)	<.001
Prescription excluding contact Patient excluding social number Molecule (both international and/or brand name allowed)	28 (56)	77 (96.2)	<.001

[µ]all criteria considered
[Σ]excluding criteria that do not directly endanger the patient
[ß]Birthdate was not considered as it was 100% present in both subgroups

Discussion

This study conducted a fair comparative analysis of digital and handwritten prescription processes. Our findings reveal that digital prescriptions have significantly improved the efficiency, accuracy, and safety of the prescription process compared to handwritten prescriptions. The accuracy of digital prescriptions was significantly higher (80.8% vs. 8.5%; p<.001) from a safety perspective. Even manual prescriptions (from scratch) were better in digital format (56%) than handwritten prescriptions (8.5%).

In the handwritten group, prescriptions were analyzed from an initial pool of 6129 (compared with 24,397 in the digital group), with 130 meeting the inclusion criteria due to the lack of a pre-selection filter. This period highlighted the challenges associated with manual prescription management, including exhaustive scanning and lower retention of prescriptions due to the non-digital nature of the process. This illustrates the lack of traceability and archiving of prescriptions before the digital era.

The ease with which we were able to extract digital prescriptions with the digital system's ability to categorize prescriptions (e.g., by title, type, medication) allowed for highly effective filtering, showcasing the advantage of digital prescriptions over manual ones in terms of information retrieval and organization, is a sign of improved clinical practice.

The differentiation between full criteria compliance and selective safety criteria (excluding contact or non-decisive information) provides a nuanced understanding of the areas where digital prescriptions excel and handwritten prescriptions show strong gaps. Few studies have been conducted on reducing serious medical errors by electronic prescribing [7]. This seems obvious, but has not been fully validated. A well-conducted meta-analysis showed the positive effect of digital solutions in reducing the risk of medication errors and side effects, notably assessing errors in terms of patient safety (not

administrative accuracy) [7]. This study also showed a lack of quality literature and comparative studies in the field.

Moreover, decreasing prescription errors does not necessarily lead to a reduction in patient harm [8].

In the comparative analysis of prescription modalities, our findings suggest a notable divergence between handwritten and digital prescription behaviors. Specifically, manual prescriptions tend to aggregate a larger number of molecules, averaging between one and three per prescription, compared with digital prescriptions, which typically feature one to two molecules. This discrepancy may be attributed to the inherently greater accessibility and availability of digital prescriptions. The digital platform's capacity to store and manage a more extensive prescription repository, potentially capturing data not previously collected in manual formats, supports this observation.

Furthermore, the digital prescription system's utilization of pre-filled templates significantly streamlines the process of issuing multiple prescriptions. Practitioners are more likely to issue successive prescriptions for individual medications through these templates than to manually compile a single prescription for multiple drugs from scratch.

The tendency to prescribe fewer medications per digital prescription, yet potentially more prescriptions overall, raises questions regarding the clinical significance of the prescription modality on medication management and patient adherence. Although the convenience and efficiency of digital prescriptions are clear, the impact of this shift on patient outcomes, particularly in terms of medication adherence and the potential for increased healthcare interactions, warrants further investigation.

This also suggests that prefilled templates, reviewed by pharmacists, significantly contribute to prescription accuracy and should be encouraged, not to mention that blank prescriptions are also improving accuracy (56%) compared with handwritten ones (8,5%).

Pharmacists play a central role and should claim leadership in this field.

Concerning the old handwritten process, prescriptions were digitized in the document management system but required the physician's voluntary action; if a duplicate was given to the patient, there was no follow-up. It is very difficult to assess the lack of traceability, but it is probably very significant, given the delta we have observed since the 100% traceable solution. With the software, it is still possible to make a manual free prescription without directly interfacing the patient's data, but this is a negligible operation.

Interestingly, handwritten prescriptions were considered readable in 97.7% of cases (100% in the digital arm), which contradicts the long-held belief that physicians write poorly.

The historical comparison of digital and handwritten prescriptions, from a period devoid of digital tools to an era with a fully deployed digital system, was pivotal. We intentionally selected comparable periods to ensure the validity of our comparison, mindful of the seasonal variations in prescription habits.

Although we did not evaluate the time required for each prescription method, as it would not have been easily reproducible, our qualitative observations suggest that digital prescriptions save time and reduce complexity. A survey not planned when the prescription system was set up found a satisfaction rate of 88.2% among the 11 responding physicians. However, there is an important distinction between different types of digital solutions. Generalist software, like many electronic health records (EHRs) that are not dedicated to prescriptions, can be unwelcome and have been associated with increased practitioner burnout [9]. By contrast, a tailor-made system that integrates patient data and facilitates order entry can make a substantial difference. All comes to CPOE (computerized physician order entry), which is fundamentally the major difference between two so called “digital software”. A read-only patient’s file is very different from an EHR with CPOEs from

the burnout point of view.

We believe that our approach is perfectly aligned with the upcoming deployment of e-prescriptions in France, which will overcome certain limitations.

Conclusion

Our study focuses on the specific practice of digital prescribing in a context that is extremely demanding in terms of time consumption and complexity in oncology. This practice is often confused with the computerization of patient records, but deals with entirely different issues and acceptability by healthcare professionals.

Our findings support a transition to digital prescriptions, which are not only more numerous, but also provide better traceability, compliance with health authority standards, and patient safety. The use of pre-filled templates shows great promise, underscoring the pharmacist's critical role in the prescription process.

While the study boasts a high readability score and significant improvement in prescription accuracy with digital solutions, we recognize certain limitations. Acceptability and the actual time saved were not quantitatively assessed, and these aspects could be explored in future multicenter studies to minimize center bias.

In conclusion, the transition to digital prescriptions represents a leap forward in the quality of the prescription process. The integration of prefilled templates and the central role of pharmacists are key factors in this improvement. The compliance of prescriptions with all combined criteria improved from 8.5% to 47.7% through digital means, and even reached up to 80.8% when considering patient safety criteria. This study advocates the widespread adoption of pre-filled digital prescription templates to further enhance prescription quality and patient safety. Our study also serves as a comparative benchmark for other software solutions aimed at demonstrating

enhancements and contributing to long-term support of the e-prescription movement in France.

Acknowledgements

None

Conflicts of Interest

The authors have no competing interests to declare. Dr. Aurélien Lambert was the former founder of PandaLab® and no longer held any shares in this company. This study was not funded by any commercial entities.

Fundings

None

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Supplementary Files

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