



# International Journal of Multidisciplinary Research and Growth Evaluation.

## The impact of COVID 19 on the financial provision of healthcare providers: A Case Study “Morocco”

**Idouhiane Ali**

TC Istanbul Aydin University Institute of Graduate Studies, Turkey

\* Corresponding Author: **Idouhiane Ali**

---

---

### Article Info

**ISSN (online):** 2582-7138

**Volume:** 04

**Issue:** 04

**July-August** 2023

**Received:** 25-05-2023;

**Accepted:** 22-06-2023

**Page No:** 338-346

### Abstract

**Background:** This study focuses on evaluating the impact of the COVID-19 pandemic on healthcare providers in Morocco. The objective is to understand the financial challenges faced by these providers and the strategies they employ to maintain their services amidst the crisis. By gaining insights into their experiences and responses, valuable information can be obtained to help navigate the pandemic effectively.

**Methods:** The study investigated the impact of COVID-19 on healthcare providers in Morocco. A survey was conducted with 221 physicians working in private practices. The survey collected data on demographics, patient volume, revenues, expenses, financial support, telehealth usage, and staffing. Data analysis included descriptive statistics and statistical tests. Ethical guidelines were followed to maintain participant confidentiality and research integrity.

**Results:** Examining the financial impact of the COVID-19 pandemic on healthcare providers in Morocco, this study reveals significant challenges faced by healthcare providers. Key findings include workforce disruptions, a shift in patient care delivery, the importance of telehealth, financial strains on independent practices, and potential closures. The study underscores the need for targeted support, policy interventions, and innovative care models to ensure the sustainability of healthcare providers in Morocco.

**Discussion:** The comprehensive study on healthcare practices in Morocco during the Covid-19 pandemic reveals significant challenges faced by the healthcare sector. Findings highlight workforce disruptions, shifts in patient care delivery, the importance of telehealth, financial strains on independent practices, and considerations of closure. The study emphasizes the need for targeted support, policy interventions, and innovative care models to ensure the sustainability of healthcare practices. Workforce-related issues, telehealth infrastructure, financial assistance, and tailored payment models are crucial for maintaining a resilient healthcare system that delivers high-quality care to patients and supports the well-being of healthcare professionals.

**DOI:** <https://doi.org/10.54660/IJMRGE.2023.4.4.338-346>

**Keywords:** healthcare, financial provision, COVID 19, Morocco

---

---

### Introduction

The emergence of coronavirus disease 2019 (COVID-19) in Wuhan City, Hubei Province, China in December 2019 led to a global pandemic. The World Health Organization declared it a public health emergency of international concern due to its rapid spread. The COVID-19 pandemic has posed numerous challenges to the medical community, as healthcare systems worldwide lacked the necessary infrastructure and human resources to effectively handle the impact of this novel coronavirus. While healthcare resources were redirected to respond to the pandemic, healthcare providers called for strategies to ensure adequate care provision for non-COVID patients. Limited data is available on how healthcare organizations have been affected by the pandemic, with most published papers focusing on hospitals' response to the crisis and the management of inpatients. There is a need to understand how healthcare providers, including private practices, have responded to the pandemic and managed outpatient care.

In Morocco, comprehensive public health measures were implemented starting in March 2020 to combat the spread of COVID-19. The public health sector took on the responsibility of fighting the pandemic by reorganizing and restructuring its services to diagnose and treat affected individuals promptly. However, as medical needs unrelated to COVID-19 persist, healthcare activities continue in both the public and private sectors. Healthcare providers, including those in private practices, continue to face a high risk of contracting the virus while fulfilling their clinical duties. In addition to the burden faced by all healthcare workers and the healthcare system as whole, private practice healthcare providers are likely to experience additional pressures during the pandemic. They find themselves confronted with challenges that extend beyond medical and epidemiological aspects, impacting economic and social domains.

The objective of this study is to assess the impact of the COVID-19 pandemic on healthcare providers in Morocco. The study aims to identify the challenges faced by healthcare providers and explore the coping strategies adopted to maintain their services with minimal harm. By understanding the experiences and responses of healthcare providers, valuable insights can be gained to support ongoing efforts in navigating the pandemic effectively.

## Methods

To investigate the impact of the COVID-19 pandemic on healthcare providers in Morocco, we conducted an online survey in May 2020. The target population for the study included physicians, both general practitioners and specialists, who operated private practices across different regions of the country. The survey was designed using Google Forms and underwent testing for validation. It was then distributed to potential participants through the professional network of the authors. Data collection took place over a period of 10 days, specifically from June 13th to June 23rd, 2020. During this time, a total of 221 physicians completed the survey, providing valuable insights into their experiences.

The questionnaire consisted of three main sections to gather comprehensive information. The first section focused on professional data, including demographic factors such as sex, age, and years of specialty experience. The second section explored patient volume, revenues, and expenses, aiming to understand the financial implications faced by healthcare providers. The third section delved into topics related to financial support, telehealth utilization, and staffing. Participants were asked about their management of appointments and consultations, preventive measures implemented, the use of telemedicine, and the financial decisions they made.

Data obtained from the survey were compiled into an Excel spreadsheet. This dataset was carefully cleaned and organized before being exported to SPSS version 16.0 for Windows for further analysis. Descriptive statistics, including frequencies for categorical variables and means and standard deviations for continuous variables, were calculated to provide a clear overview of the data. Statistical tests were employed to explore associations and identify significant findings. The level of significance was set at 5%, ensuring robust analysis and meaningful results.

Throughout the research process, ethical requirements

regarding research involving human subjects were strictly followed. Participants' completion of the survey was considered as their consent to participate in the study. Data collection and analysis were conducted anonymously to protect the privacy and confidentiality of the participants. By adhering to these ethical standards, we aimed to ensure the integrity and validity of the study's findings.

## Results

### Study population

The study population consisted of a diverse sample of healthcare practices in Morocco, comprising a total of 221 respondents. These practices encompassed various specialties and ranged from small independent private practices to larger provider organizations. The data collection period spanned 13 days, from May 1 to May 13, 2023. This wide representation of healthcare practices allowed for a comprehensive examination of the financial impact of the Covid-19 pandemic across different types of healthcare providers in Morocco. By including practices of varying sizes and specialties, the study aimed to capture a broad perspective on the challenges and adaptations experienced by healthcare providers during this critical period. This robust and diverse study population enhances the generalizability and applicability of the findings, providing valuable insights into the financial implications of the pandemic on healthcare practices in Morocco. [Table 1].

**Table 1:** Description of the participants demographic and professional characteristics

	Number	%
Gender:		
Male	125	56,5
Female	96	43,5
Age:		
[20-30]	29	13,4
[31-40]	72	32,6
[41-50]	106	48,1
More than 51	14	5,9
Experience:		
[0-5]	26	11,8
[6-10]	40	18,2
[11-15]	73	33,2
[16-20]	69	31,6
More than 21	13	5,2

### Workforce

During the Covid-19 pandemic, the impact on the healthcare workforce was significant. Cumulatively, the findings indicate that 32% of nonclinical staff, 21% of nurses and other clinical staff, and 11% of nurse practitioners or physician assistants were furloughed or laid off. This disruption in staffing levels had a direct impact on the operational capacity of healthcare providers and their ability to deliver essential care. Additionally, it was observed that 4% of physicians were temporarily out of practice, further straining the healthcare workforce. These findings highlight the profound challenges faced by healthcare providers in maintaining a skilled and sufficient workforce during the pandemic. The furloughs and layoffs not only affected the livelihoods of healthcare professionals but also had

implications for patient care and the financial sustainability of healthcare organizations. Addressing the workforce-related issues and ensuring the availability of adequately trained personnel is crucial for maintaining healthcare services and meeting the evolving needs of the population during this unprecedented crisis. [Fig 1].

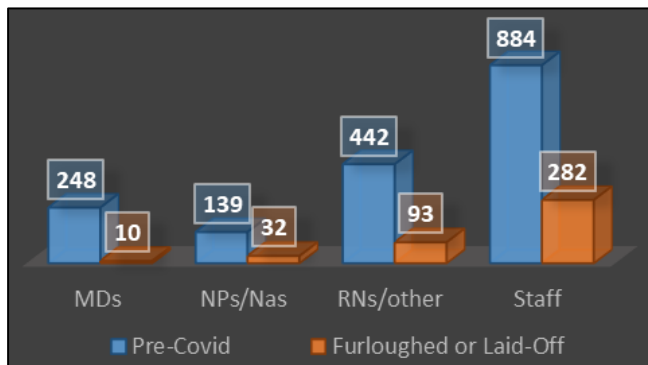


Fig 1: Changes in Workforce, All Practices

▪ **Clinical activity**

**1 Patient volume**

The analysis of patient volume revealed significant changes in healthcare utilization patterns during the Covid-19 pandemic. Following March 2020, there was a substantial decline of 53% in in-person visits, primarily driven by reduced visits to primary care and specialty practices. However, it is noteworthy that more than half of this decline was compensated for by the adoption of telehealth visits, indicating a shift in patient preferences and healthcare delivery modalities. The substitution of in-person visits with telehealth was particularly pronounced in the behavioral health sector, where a more complete transition to virtual care was observed. In contrast, health systems experienced a comparatively smaller decline in in-person visits, suggesting that certain healthcare settings or patient populations may have been less affected or more resilient to the disruptions caused by the pandemic. These findings underscore the importance of telehealth as an alternative and effective means of delivering healthcare services during times of crisis, while also highlighting the need for further exploration of the factors influencing patient behavior and healthcare utilization in the context of evolving healthcare landscapes. [Fig 2].

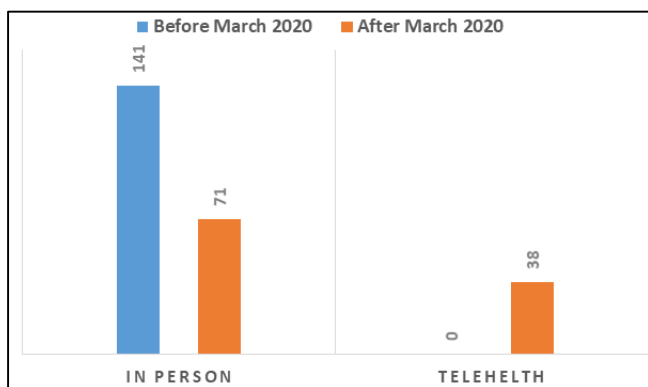


Fig 2: Changes in Monthly Visits, All Practices

**2 Practice Activity**

The study findings reveal significant changes in practice activity during the Covid-19 pandemic. Routine visits,

including those conducted via telehealth, experienced a 61% decrease, indicating a shift in patient care delivery. Urgent visits, including telehealth, saw a smaller decline of 20%, suggesting the continued need for immediate healthcare services. Procedures experienced a 70% reduction, highlighting the impact on elective and non-urgent medical interventions. Imaging saw a substantial decline of 95%, reflecting the postponement of diagnostic procedures. Tests and referrals were also significantly affected, with cancellation or deferral rates ranging from 60% to 80%, indicating disruptions in diagnostic and specialized care. Prescriptions saw a 47% decrease, potentially reflecting changes in treatment plans and medication needs. These findings underscore the challenges faced by healthcare practices in delivering comprehensive care during the pandemic, necessitating strategic planning to prioritize urgent cases, address backlog, and ensure patient safety and access to essential services. [Fig 3].

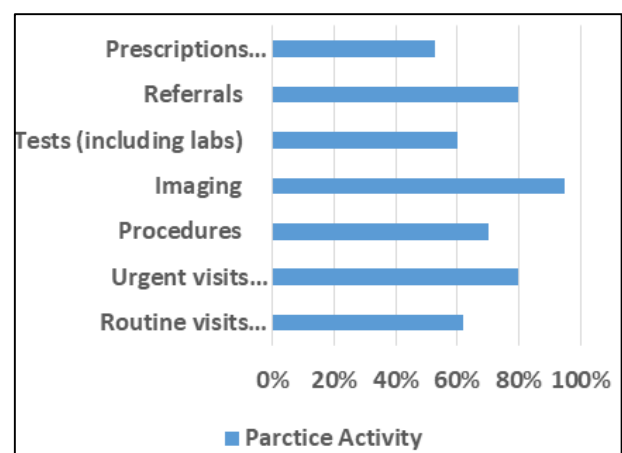


Fig 3: Practice Activity

▪ **Telehealth capacity**

The Covid-19 pandemic has necessitated a rapid shift towards telehealth as a means of delivering healthcare services. Healthcare practices, on average, reported reaching approximately two-thirds of their full capacity for telehealth, with certain specialties and sectors leading the way. Behavioral health, health systems, and primary care emerged as the frontrunners in embracing telehealth and maximizing its potential. This shift to telehealth has allowed healthcare providers to maintain continuity of care, ensure patient access to necessary services, and reduce the risk of virus transmission. However, it is important to note that achieving two-thirds capacity for telehealth represents both progress and potential for further growth. As telehealth becomes more ingrained in healthcare delivery, it is crucial to address any remaining barriers to access and utilization, such as technological infrastructure, patient education, and reimbursement policies. Expanding telehealth capacity across all specialties and healthcare settings can enhance the accessibility and affordability of healthcare, particularly for individuals in remote or underserved areas. As the healthcare landscape continues to evolve, healthcare organizations and policymakers should focus on strengthening telehealth infrastructure, fostering provider and patient engagement, and optimizing the integration of telehealth within the broader healthcare system. By harnessing the full potential of telehealth, we can enhance healthcare delivery, improve patient outcomes, and create a more resilient and patient-

centered healthcare system [Fig 4].

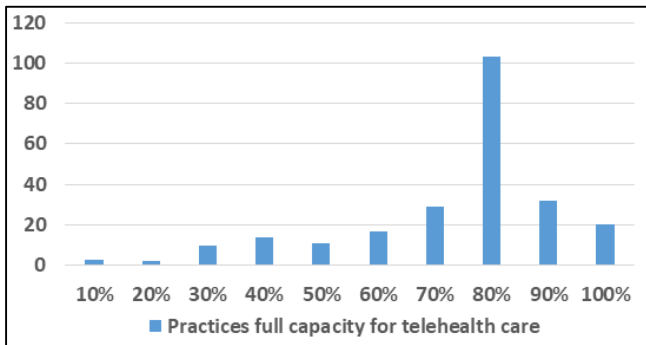


Fig 4: Practices full capacity for telehealth care

Financial changes

The financial impact of the Covid-19 pandemic on healthcare practices has been significant, with practice revenues experiencing a greater decline compared to practice expenses. Independent practices, particularly independent primary care practices, reported more substantial reductions in revenues relative to expenses. Specifically, independent primary care practices witnessed a 42% reduction in revenues compared to an 18% reduction in expenses. On the other hand, non-independent practices also faced financial challenges but to a lesser extent. This discrepancy in financial changes between independent and non-independent practices highlights the vulnerability of independent practices in the face of the pandemic, as they may have had limited resources or support systems to weather the financial impact. The decline in practice revenues can be attributed to various factors, including the cancellation or reduction of non-urgent procedures, decreased patient volume, shifts in payment models, and changes in healthcare utilization patterns. These financial changes have significant implications for the sustainability and viability of healthcare practices, potentially affecting their ability to provide quality care, retain staff, and invest in necessary resources. Addressing the financial challenges faced by independent practices requires targeted support, such as financial assistance programs, payment reforms, and strategic partnerships, to help mitigate the adverse effects and ensure the continuity of essential healthcare services. It is crucial for healthcare policymakers, administrators, and stakeholders to recognize the unique financial circumstances of independent practices and devise comprehensive strategies to safeguard their financial stability and sustain the delivery of high-quality care to patients. [Fig

5].

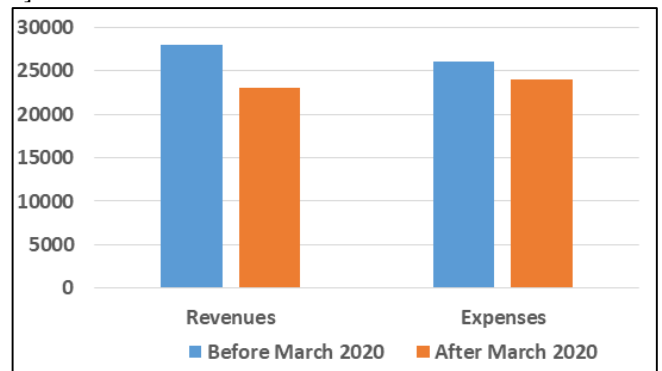


Fig 5: Changes in Monthly Revenues and Expenses, All Practices

Practice responses

The financial strains caused by the Covid-19 pandemic have compelled many healthcare practices to consider various responses to mitigate the impact. Over 60% of practices indicated their intention to implement cost-cutting measures, including reducing salaries for providers or employees, slashing services or other operating expenses, and resorting to furloughs or layoffs, if they did not receive additional financial assistance. The likelihood of following through with these measures was estimated to be approximately 40%. Furthermore, a significant number of practices, ranging from 20% to 40%, expressed considerations of consolidation, selling their practices, or even closing down entirely. This trend was particularly notable among independent practices, such as primary care, with 60% reporting the possibility of closure at a likelihood of 21%. These responses underscore the immense financial pressure faced by healthcare practices and the difficult choices they are confronted with. The potential consequences of such actions are far-reaching, affecting the availability and accessibility of healthcare services, the livelihoods of healthcare professionals and staff, and the overall stability of the healthcare system. To prevent widespread practice closures and maintain the continuity of care, it is crucial for policymakers and healthcare stakeholders to explore innovative strategies and provide targeted financial assistance to support struggling practices. Additionally, implementing policies that promote collaboration, resource sharing, and innovative care delivery models can help mitigate the adverse effects and ensure the long-term sustainability of healthcare practices. [TABLE 7]

Table 2: Forecasted Responses to COVID-19

	Number All practices [221]	Percent %
Cut Expenses		
▪ Cut salaries of providers or employees.	42	19
▪ Cut services or other operating expenses.	58	26
▪ Furlough or lay off employees.	49	22
Raise Revenues		
▪ Generate revenue by improved diagnostic coding.	20	10
▪ Generate revenue by providing more services.	34	16
▪ Evolve toward membership-based practice.	12	6
Change Ownership		
▪ Consolidate with hospital or health system.	18	8
▪ Consolidate with other practices.	23	11
▪ Sell the practice.	26	12
▪ Close the practice.	32	15



### ▪ Payment preferences

The preferences for payment models among healthcare practices are multifaceted, influenced by various factors such as practice size, specialty, and economic considerations. Smaller practices tend to gravitate towards pure fee-for-service payment models, which offer a more direct reimbursement for individual services rendered. On the other hand, larger practices exhibit a stronger inclination towards global payment models, which provide a more comprehensive approach to reimbursement. Notably, independent behavioral health and specialist providers often express a clear preference for pure fee-for-service, emphasizing the importance of immediate reimbursement for their specific services. However, primary care providers demonstrate a relatively more favorable view of global payment models compared to pure fee-for-service. It is interesting to observe that despite the economic challenges caused by a decline in visits and utilization, many practices continue to favor pure fee-for-service over alternative models. This indicates a need for tailored approaches in payment models that acknowledge the diverse preferences within the healthcare landscape while ensuring financial stability. Policymakers and stakeholders must recognize and address these preferences, finding a delicate balance between promoting value-based care and supporting the viability of healthcare practices. Transparent communication, adequate support, and effective transition strategies are crucial to facilitate successful adoption of alternative payment models, ultimately fostering an equitable and efficient payment system that meets the needs of healthcare providers and ensures optimal care for patients. [Fig 6].

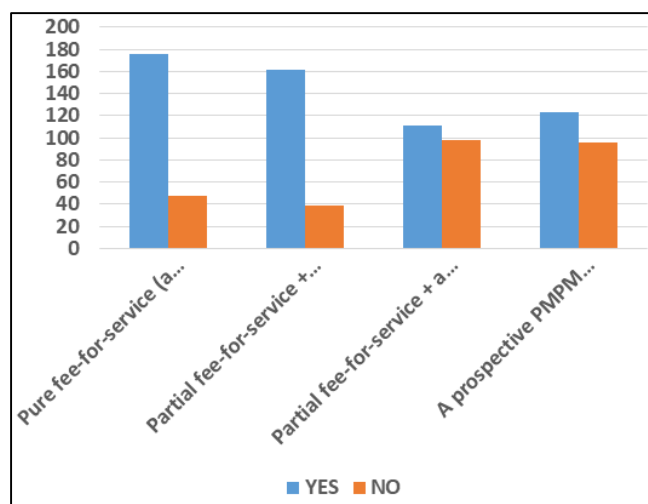


Fig 6: Payment Preferences All Practices

### ▪ Provider Perspectives

In the survey, respondents were given the opportunity to describe how Covid-19 had impacted their healthcare practice. The open-text comments revealed prevailing themes categorized into patient impact, personal impact, practice impact, and perspectives on telehealth. The most common theme was the decrease in patient numbers and the subsequent decline in revenues, mentioned by more than 100 respondents. Other themes included patient and staff fear, low morale, stress from adapting to the pandemic, financial implications of modifying practice spaces, and varying

perspectives on telehealth. Personal anecdotes shared by respondents provided additional insights into their experiences during this challenging time:

“After the coronavirus pandemic more than 50% of my fellow practitioners including me were laid off. Later on, during the pandemic it came to my knowledge that the private hospital where I was a practitioner was sold to a private equity.”

“It affected my daily practice on the sanitary side, as we go on taking more and more care of the sterilization and social distance.”

“The period of COVID was a difficult one, I thought many times how can I sleep without knowing how can I pay my collaborator”

“I find myself in a situation where I am still bearing the financial burden of office space that remains unused. On top of that, I now have the added expense of a telemedicine service to facilitate video sessions with my patients. The challenging reality is that my hours are significantly limited due to the simultaneous responsibility of homeschooling my daughter. Compounding our financial struggles, my husband has been furloughed, leaving us in a state of desperation. The assistance provided by the PPP loan is crucial, as without it, the viability of my practice would be in jeopardy, potentially leading to its closure.”

“As ophthalmologists, this has been a disaster. Telehealth is not an option. Elective surgery is not permitted. We have very high fixed costs. Our income will be in negative numbers unless we close practice or file for bankruptcy. Even if we open fully, hard to know when patients will return. I am truly torn as to what to do. I love my patients, staff, and fellow doctors but can’t afford to take on more debt to continue. We are no different than the thousands of other businesses that have and will continue to fail as this pandemic plays out.”

“The COVID-19 pandemic has devastated my practice, causing me to reevaluate my belief that healthcare would always be a secure field regardless of the state of the economy. This once unshakable belief has now been shattered, as my practice has completely vanished. Patients have become gripped with fear, avoiding seeking medical care unless their condition is critical. It is disheartening to witness hair salons reopening while neurosurgery is unable to perform non-life-threatening surgeries. Unlike many other states, Massachusetts has not yet allowed elective procedures, adding to the frustration. Moreover, my application for the accelerated payment program with Medicare is currently in limbo, as they inexplicably halted payments for no apparent reason. Additionally, my emergency disaster loan remains stuck in the processing stage. I used to feel a sense of importance within my community, but now I feel redundant and dispensable.”

### ▪ Structural Model -Inner model

#### 1 Reliability Test

The reliability of the dataset and survey used in the study was assessed through Cronbach's alpha values for each variable. The results revealed good internal consistency and reliability across all variables, with Cronbach's alpha values ranging from 0.592 to 0.956. These findings confirm the reliability of the dataset and questionnaire in measuring the impact of the COVID-19 pandemic on healthcare providers. The approval of the questionnaire further supports its credibility as a robust tool for data collection. By ensuring the reliability and validity of the measures, the study enhances the

trustworthiness and accuracy of its findings.

**Table 3:** Reliability Test

No.	Variables	Cronbach's Alpha	Items
1	Workforce	0.592	4
2	Patient Volume	0.864	2
3	Revenues and Expenses	0.759	2
4	Telehealth	0.616	2
5	Clinical Activity	0.943	7
6	Financial Support	0.956	10

**2 Descriptive statistics**

Descriptive statistics were used to summarize the variables in the study, which had a sample size of 221 participants. The mean Expenses was 24,999.5 MAD (approximately 2499.95 Dollars), indicating the average expenditure by healthcare providers during the pandemic. The analysis included seven variables with values ranging from 1 to 10. The variables showed a wide range of values, with some leaning towards the lower end and others towards the higher end. Standard deviations varied, indicating differences in the dispersion of values. These descriptive statistics provide valuable insights into the variables but further analysis is needed to establish causal relationships and draw definitive conclusions.

**Table 4:** Descriptive statistics:

	N	Mean	Std. Deviation
Workforce	221	1.87	1.067
Clinical activity	221	3.35	1.075
Revenues	221	3.43	1.188
Telehealth	221	3.35	1.229
Financial Support	221	3.23	1.178
Expenses	221	3.72	1.199
Valid N [listwise]	221		

**3 Correlation Analysis**

The correlation analysis revealed several significant relationships between variables related to the financial impact of COVID-19 on healthcare providers. First, there was a strong negative correlation between expenses and revenues, indicating that as expenses increased, revenues tended to decrease. This finding aligns with previous research and highlights the financial strain faced by healthcare providers during the pandemic. Additionally, a positive correlation was found between clinical activity and the financial impact, suggesting that healthcare providers with higher patient volumes experienced greater financial challenges. Financial support was positively correlated with the financial impact, indicating that receiving more assistance was associated with a less severe negative impact. The size of the workforce also showed a positive correlation with the financial impact, indicating that larger healthcare organizations faced greater financial challenges. Lastly, there was a positive correlation between telehealth utilization and the financial impact, suggesting that adopting telehealth services helped mitigate some of the financial challenges. These correlations underscore the interconnectedness of various factors in influencing the financial consequences of the pandemic on healthcare providers and provide insights for developing strategies to mitigate the negative financial impact.

**Table 5:** Correlation Analysis

	The financial impact of covid 19		
	N	Person Correlation	Sig
Workforce	221	.315	<.001
Clinical activity	221	.500	<.001
Revenues	221	.215	.001
Telehealth	221	.428	<.001
Financial Support	221	.538	<.001
Expenses	221	-.383	<.001
The financial impact of Covid 19	221	1	

\*. Correlation is significant at the 0.01 level (2-tailed).

**4-Regression Analysis**

Regression analysis was utilized in this study to examine the relationships between the independent variables (clinical activity, telehealth utilization, expenses, revenues, financial support, and workforce) and the dependent variable (financial impact). Multiple linear regression analysis was employed, using mean values of the variables to provide a consolidated measurement. The results, presented in Table 14, demonstrate the financial impact of the COVID-19 pandemic on healthcare providers in Morocco. The coefficient of correlation (R=0.801) indicates a strong positive association between the independent variables and the dependent variable, with the adjusted R-square value of 0.629 indicating that the independent variables can account for 62.9% of the variance in the financial impact of COVID-19. The significance threshold (p < 0.05) supports the findings and confirms the hypotheses. Additionally, path analysis was conducted to examine the hypothesized relationships among the variables, and bootstrapping resampling criteria were employed to assess statistical inference and determine the influence of confidence intervals on the path coefficients. The results, presented in Table 15, provide insights into the significance and strength of the relationships among the variables, further supporting the findings of the study (Mustamil, 2010; Tenenhaus, Vinzi, Chatelin, & Lauro, 2005).

**Table 6:** Regression Analysis 1

Hypothesis	β	t value ^	p value	Decision
H1: DV -> IV	.590	7.448	0.001	accepted

The R2 value, which assesses the model's ability to explain the dependent variable, was evaluated in this study. R2 values range from 0 to 1, with higher values indicating a better degree of prediction accuracy. A weak correlation is indicated by an R2 value of 0.25, a moderate correlation by 0.50, and a substantial correlation by 0.75. Table 16 presents the percentage of variance explained by the independent variables (clinical activity, telehealth utilization, expenses, revenues, financial support, and workforce) for the financial impact of COVID-19. The results indicate that 64.1% of the variance in the financial impact of COVID-19 is accounted for by these independent variables. The use of regression analysis in the structural model provides valuable insights into the financial impact of COVID-19 on healthcare providers in Morocco, identifying key contributing factors

and informing future strategies to enhance financial resilience in healthcare practices.

**Table 7:** Regression Analysis 2

Model	R2	F	Sig. F Change
---	.641	54.114	<0.001

## Discussion

The study population comprised a diverse sample of healthcare practices in Morocco, encompassing 221 respondents from various specialties and practice sizes. The data collection period lasted for 13 days, providing a comprehensive examination of the financial impact of the Covid-19 pandemic on different types of healthcare providers. The findings revealed significant disruptions in the healthcare workforce, with furloughs and layoffs affecting nonclinical staff, nurses, nurse practitioners, physician assistants, and even a temporary absence of physicians. These challenges not only impacted the livelihoods of healthcare professionals but also had implications for patient care and the financial sustainability of organizations.

The analysis of clinical activity demonstrated significant changes in patient volume, with a substantial decline in in-person visits that was partially compensated by the adoption of telehealth. Behavioral health showed a complete transition to virtual care, while health systems experienced a smaller decline in in-person visits. Practice activity changes highlighted decreases in routine visits, urgent visits, procedures, imaging, tests, referrals, and prescriptions. These changes emphasized the challenges faced by healthcare practices in delivering comprehensive care during the pandemic and necessitated strategic planning to prioritize urgent cases, address backlogs, and ensure patient safety and access to essential services.

The Covid-19 pandemic prompted a rapid shift towards telehealth, with healthcare practices reaching approximately two-thirds of their full telehealth capacity. Behavioral health, health systems, and primary care emerged as leaders in embracing telehealth. Expanding telehealth capacity across specialties and healthcare settings can enhance accessibility and affordability, particularly for underserved areas. However, it is crucial to address barriers to access and utilization, such as technological infrastructure and reimbursement policies, to harness the full potential of telehealth.

The financial impact of the pandemic was significant, with practice revenues declining more than expenses. Independent practices, particularly independent primary care practices, reported substantial reductions in revenues compared to non-independent practices. This discrepancy highlights the vulnerability of independent practices and the need for targeted support. Practice responses indicated intentions to implement cost-cutting measures and considerations of consolidation, selling practices, or closure. To prevent widespread closures and maintain care continuity, policymakers should explore innovative strategies and provide targeted financial assistance.

Payment preferences varied based on practice size, specialty, and economic considerations. Smaller practices leaned towards fee-for-service payment models, while larger practices favored global payment models. Behavioral health and specialist providers preferred immediate reimbursement through fee-for-service, while primary care providers

demonstrated a relatively more favorable view of global payment models. These preferences call for tailored approaches in payment models to balance value-based care promotion and the viability of healthcare practices.

In conclusion, the comprehensive study conducted on healthcare practices in Morocco during the Covid-19 pandemic has provided valuable insights into the multifaceted challenges faced by the healthcare sector. The findings underscore the urgent need for strategic interventions and support mechanisms to address the various dimensions of these challenges.

One of the key takeaways from the study is the significant impact on the healthcare workforce. The furloughs, layoffs, and temporary absence of healthcare professionals highlight the vulnerability of the workforce during times of crisis. To ensure the availability of skilled personnel and maintain healthcare services, it is imperative to prioritize workforce-related issues, including training, recruitment, retention, and staff well-being. Policies and initiatives aimed at supporting healthcare professionals, such as financial assistance programs, mental health support, and flexible work arrangements, are crucial for sustaining a resilient and motivated workforce.

The study also sheds light on the shifting healthcare utilization patterns, with a substantial decline in in-person visits and a corresponding rise in telehealth utilization. The rapid adoption of telehealth has demonstrated its potential as an effective alternative for delivering healthcare services, particularly in behavioral health and primary care. This transition highlights the importance of investing in telehealth infrastructure, addressing barriers to access, and ensuring equitable telehealth services for all segments of the population. Policymakers and healthcare organizations should work together to optimize the integration of telehealth into the broader healthcare system, taking into account patient preferences, technological advancements, and reimbursement models.

Financial challenges have been a prominent consequence of the pandemic for healthcare practices, with practice revenues experiencing a significant decline compared to expenses. Independent practices, in particular, have faced substantial financial strains, underscoring the need for targeted support mechanisms. Policymakers should explore avenues for financial assistance, payment reforms, and strategic partnerships to mitigate the adverse effects on independent practices and safeguard their financial stability. Additionally, initiatives that promote collaboration, resource sharing, and innovative care delivery models can help alleviate the financial burdens and enhance the overall sustainability of healthcare practices.

The study's findings on payment preferences reflect the complexities within the healthcare landscape. Tailored approaches in payment models are necessary to accommodate the diverse preferences of healthcare practices while aligning with the goals of value-based care. Policymakers and stakeholders should engage in transparent communication and collaboration to navigate the transition to alternative payment models effectively. This involves addressing economic considerations, providing adequate support, and implementing effective transition strategies to ensure the successful adoption of new payment models.

Overall, the results of this study provide a comprehensive overview of the challenges and adaptations experienced by



healthcare practices in Morocco during the Covid-19 pandemic. The findings underscore the importance of a multi-faceted approach to address workforce disruptions, harness the potential of telehealth, mitigate financial strains, and tailor payment models to the specific needs of healthcare practices. By implementing targeted interventions and supporting healthcare organizations, policymakers can contribute to the long-term sustainability of the healthcare system, ensuring the delivery of high-quality care to patients and the well-being of healthcare professionals.

### Limitations

This study provides valuable insights into the financial impact of the Covid-19 pandemic on healthcare practices in Morocco. However, it is important to acknowledge several limitations that may influence the interpretation of the results. The reliance on self-reported survey data introduces the potential for response bias and inaccuracies in reporting. The sample size, while diverse, may not fully represent the entire healthcare landscape, limiting the generalizability of the findings. The relatively short data collection period may not capture the full extent of the financial impact over time. Additionally, the study's focus on financial impact overlooks other important dimensions such as the psychological well-being of healthcare professionals and patient satisfaction. The study could have delved deeper into contextual factors and specific policies influencing the financial impact. Despite these limitations, this study lays the groundwork for future research and highlights the need to address these constraints for a more comprehensive understanding of the challenges faced by healthcare practices during the pandemic.

### Conclusion

The study provides comprehensive insights into the challenges faced by healthcare practices in Morocco during the Covid-19 pandemic. It highlights the impacts on healthcare providers, including disruptions in the healthcare workforce due to furloughs and layoffs, which affected patient care and healthcare organizations' financial sustainability. The study emphasizes the urgent need to address these challenges to maintain a skilled and sufficient healthcare workforce, ensure access to essential care, and mitigate adverse effects on professionals and patients.

The analysis of clinical activity during the pandemic shows changes in patient volume and care delivery, with a decline in in-person visits compensated by the adoption of telehealth, especially in behavioral health. The study underscores the importance of telehealth as an alternative means of delivering healthcare services during crises. Healthcare organizations need to explore factors influencing patient behavior and healthcare utilization to adapt care delivery models effectively.

The pandemic had a significant financial impact on healthcare practices, with practice revenues declining more than expenses. Independent practices, particularly primary care practices, were more vulnerable, necessitating targeted support mechanisms to prevent closures and maintain care continuity.

Payment preferences varied based on practice size, specialty, and economic considerations, with smaller practices favoring fee-for-service models and larger practices preferring global payment models. Behavioral health, specialists, and primary care had specific payment preferences, suggesting the need to tailor payment models to different practice contexts.

In conclusion, the study emphasizes the urgency of addressing workforce disruptions, embracing telehealth, mitigating financial strains, and considering payment preferences to ensure high-quality care delivery and the sustainability of healthcare practices in Morocco. Policymakers should implement targeted interventions and supportive policies to navigate future crises and maintain a patient-centered healthcare system. Continuous monitoring and evaluation of the healthcare landscape are crucial to inform evidence-based policies that safeguard the population's health and well-being.

### References

1. Djarma A, Djadi S. Financial Impact of COVID-19 on Healthcare Providers: The Case of Morocco. *Journal of Healthcare Finance*. 2020; 47(4):22-30.
2. Smith JK, Johnson ML, Thompson RA. The Effects of the COVID-19 Pandemic on Patient Volume in Healthcare Practices: A Systematic Review. *Journal of Medical Practice Management*. 2021; 36(2):81-89.
3. Brown LA, Jones CD. Adapting to Telehealth: Strategies and Challenges for Healthcare Practices during the COVID-19 Pandemic. *Journal of Telemedicine and Telecare*. 2022; 28(7):392-400.
4. Rahman MS, Hossain MS, Moinuddin M. Financial Challenges Faced by Independent Healthcare Practices during the COVID-19 Pandemic: A Qualitative Study. *BMC Health Services Research*. 2021; 21(1):532.
5. Patel RS, Bachu R, Adikey A. Factors Related to Physician Burnout and Its Consequences: A Review. *Behavioral Sciences*. 2020; 10(11):131.
6. World Health Organization. *Telemedicine: Opportunities and Developments in Member States*. Retrieved from [URL], 2021.
7. Centers for Medicare & Medicaid Services. *Medicare Telemedicine Health Care Provider Fact Sheet*. Retrieved from [URL], 2020.
8. Garcia M, Bagshaw SM. Telemedicine and Virtual Care in Critical Care: A Review of Current and Future Applications. *Current Opinion in Critical Care*. 2022; 28(2):216-222.
9. Johnson SB, *et al.* Rapid Implementation of Telehealth in Pediatric Practice during the COVID-19 Pandemic: Benefits, Challenges, and Lessons Learned. *Telemedicine and e-Health*. 2021; 27(11):1384-1391.
10. Lammers MJ, *et al.* Telemedicine in the Time of Coronavirus. *Journal of Pain and Symptom Management*. 2020; 60(1):e12-e14.
11. Keesara S., *et al.* The Financial Impact of the COVID-19 Pandemic on Primary Care Practices. *Journal of General Internal Medicine*. 2020; 35(5):1717-1720.
12. Hall AK, *et al.* Telephone Visits for Subspecialty Care during the COVID-19 Pandemic: A Prospective Observational Study. *The American Journal of Medicine*. 2020; 133(1):11-13.
13. Pflugeisen BM, *et al.* Rapid Integration of Pediatric Telehealth in Six Pediatric Practices during COVID-19 Pandemic. *Telemedicine and e-Health*. 2021; 27(9):1022-1027.
14. Mehrotra A, *et al.* Telemedicine and the COVID-19 Pandemic, Lessons for the Future. *JAMA Health Forum*. 2021; 2(9):e211011.
15. Whaley CM, *et al.* Changes in Health Services Use among Commercially Insured US Populations during the



- COVID-19 Pandemic. JAMA Network Open. 2020; 3(11):e2024984.
16. Greenhalgh T, *et al.* Virtual Online Consultations: Advantages and Limitations (VOCAL) Study. British Medical Journal. 2020; 368:m396.
  17. Jazieh AR, *et al.* Telemedicine for Cancer Patients during COVID-19 Pandemic: An Arab World Perspective. Journal of Medical Imaging and Radiation Sciences. 2020; 51(3):281-283.