

## Experience of public-private partnership in healthcare in Morocco: What lessons from purchasing hemodialysis services?

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## **Abstract**

This article examines the implementation and effectiveness of a public-private partnership between the Ministry of Health in Morocco and the association of nephrologists to provide access to private hemodialysis centers for uninsured patients. Specifically, it investigates the role of strategic purchasing within this partnership framework, focusing on aspects such as cost-effectiveness and service quality.

The partnership for hemodialysis services represents an innovative and effective solution for ensuring patients access to healthcare. It offers a satisfactory cost-benefit ratio for the Ministry of Health and provides economic opportunities for private hemodialysis centers. However, there appears to be limited integration of strategic purchasing principles within this partnership model.

This study addresses the gap in public hemodialysis facilities and provides insights into the implementation, limitations, and advantages of the partnership. By exploring these aspects, decision-makers can better allocate resources and design future contracts with a focus on performance-based approaches, thus enhancing the effectiveness of healthcare partnerships in addressing public health needs.

**Keywords : : Public-private partnership-Strategic purchasing-Quality-Health insurance**

## Résumé

**Objectif :** Cet article examine la mise en œuvre et l'impact d'un partenariat public-privé entre le ministère de la Santé au Maroc et l'Association des néphrologues pour faciliter l'accès des patients non assurés aux centres privés d'hémodialyse. Il s'intéresse particulièrement au rôle de l'achat stratégique dans ce partenariat, en mettant l'accent sur l'efficacité économique et la qualité des soins.

**Méthodologie :** La recherche repose sur des méthodes qualitatives, incluant des entretiens avec des professionnels de santé et des patients dans deux centres d'hémodialyse à Fès, ainsi que des observations directes. En outre, une revue de la littérature pertinente a été effectuée, comprenant des rapports ministériels, des rapports de la Cour des comptes et des guides de référence.

**Résultats :** Ce modèle de partenariat pour les services d'hémodialyse constitue une approche innovante et efficace pour améliorer l'accès aux soins de santé. Il présente un ratio coût-bénéfice favorable pour le ministère de la Santé et offre des opportunités économiques aux centres privés d'hémodialyse. Cependant, l'intégration des principes d'achat stratégique dans ce cadre reste limitée.

**Originalité/Valeur :** L'étude traite du déficit en infrastructures publiques d'hémodialyse et apporte des éclairages sur la mise en œuvre, les avantages et les limites de ce partenariat. En explorant ces dimensions, elle fournit aux décideurs des pistes pour optimiser l'allocation des ressources et concevoir des contrats futurs axés sur des approches basées sur la performance, améliorant ainsi l'efficacité des partenariats en santé publique face aux besoins des populations.

**Mots clés :** partenariat public-privé ; achat stratégique ; qualité ; assurance maladie

**Acronyms and Abbreviations :**

CfCs: Conditions for Coverage

DGOS : Direction Générale de l'Offre de Soins

DMS: delegation du ministère de la santé (Ministry of Health delegations)

ESA: erythropoiesis-stimulating agents

ESRD: end-stage renal disease

FFS: Fee-for-service

HAS : Haute Autorité de Santé

OECD: Organisation for Economic Co-operation and Development

PPP: public-private partnership

RAMED : régime d'assistance médicale aux économiquement démunis

THE total health expenditure

TNR : tarif national de référence

UHC: universal health coverage

WHO: world health organization

## Introduction

Changes in the structure of morbidity and mortality worldwide, as well as in Morocco, are unveiling a new reality: chronic, non-communicable diseases are gaining prominence over infectious and communicable pathologies. In essence, health issues are evolving, resulting in increased expenditure and strain on already limited resources.

In Morocco, end-stage renal disease (ESRD) exemplifies this shift, affecting 2.9% of the adult population, with various etiologies (studies indicate diabetes at 32.8%, hypertension at 28.2%, and urinary lithiasis at 9.2% (Ministry of Health, 2009).

Hemodialysis stands as the primary treatment for ESRD. However, the intricate nature of the equipment, the frequency of sessions, and the healthcare needs of this patient category collectively make it one of the most costly treatments, posing a challenge for healthcare system resources

In Morocco, the average cost of hemodialysis sessions is estimated at 130,000 Dirhams (DH) per patient per year (\$13,000). Considering that total health expenditure (THE) per capita is 1,700 DH per year (Ministry of Health, 2018), this cost is significant. Approximately 110 centers constitute the public hemodialysis facilities, catering to nearly 10,000 patients out of 31,000 beneficiaries in both public and private sectors. Additionally, there's an annual incidence of almost 4,200 cases of end-stage chronic renal disease (Bourquia, 2020).

To address the high demand and inadequate public provision, the Ministry of Health entered a partnership agreement with the Moroccan Association of Nephrologists in February 2012. This association, a private organization whose members own hemodialysis centers, aims to provide care for approximately 3,000 RAMED beneficiaries on waiting lists in these private hemodialysis centers, in exchange for remuneration determined by the tender procedure. *(RAMED is a state-funded health coverage program for the poor and vulnerable population, provided for in law 65-00 on basic medical coverage, and effectively launched in 2013, guaranteeing access to care, only in public health establishments).*

Despite the significance of this partnership, could the Ministry of Health have directed it towards the objectives outlined within the framework of strategic procurement?

This research aims to examine the advantages, limitations, and areas for improvement to enhance the effectiveness and economic benefits of these financing instruments.

To this end, the article will be organized into two main axes:

- 1- Implementation of the PPP
- 2- Strategic purchasing in improving PPP conditions

## 1. Implementation of the PPP

The contract for purchasing hemodialysis services was established through an agreement signed in February 2012. While this method of healthcare provider payment is of significant interest to all parties involved, it requires additional performance evaluation tools.

### 1.1 Benefits of PPP

This partnership offers several positive aspects:

**For Patients:** The most notable benefit is improved access to hemodialysis services for individuals facing severe socio-economic challenges. Previously, some patients endured up to a two-year waitlist for public centers, resulting in financial strain and health deterioration. The majority of patients expressed satisfaction with the avoidance of such hardships since the agreement's implementation. Furthermore, the decentralization of hemodialysis centers across provinces and prefectures has provided patients with geographical proximity to services and noted improvements in reception, hygiene, and food services.

**For the Ministry of Health:** Hemodialysis session, priced at 700 DH in private centers (often the basis for tendering three sessions a week), closely align with the national reference rate (TNR) for hemodialysis in public centers. This represents a favorable financial arrangement for the Ministry, potentially resulting in cost savings with careful cost accounting. (The TNR serves as the tariff used by health insurers and service buyers to reimburse healthcare providers.)

**For the Healthcare System:** One of the primary objectives of any healthcare system is ensuring equity and eliminating inequalities. However, this patient demographic previously faced barriers due to inadequate public infrastructure, financial constraints, and limited health coverage for accessing the private sector. The PPP has played a crucial role in addressing these disparities and promoting equitable access to care for end-stage renal disease patients.

### 1.2 The limits of PPP patient management

Despite the advantages offered by PPP/hemodialysis, our interviews with patients and observations have revealed weaknesses associated with integrated care.

- Firstly, there is incomplete management due to a cap on the number of sessions allowed per month under the contract. Hemodialysis patients may require up to 12 sessions per month for optimal health, yet the contract often limits sessions to 10. This discrepancy can result in suboptimal care for patients.
- Secondly, diagnostic tests and specialist consultations are not conducted on-site, despite their periodic and systematic necessity. This requires patients to seek these services at public hospitals, where access can be difficult. The lack of on-site services and

integrated management clauses in the contract contribute to fragmented care for patients.

### **1.3 Weaknesses in hemodialysis procurement procedures**

The inadequacy of real competition in procurement processes is a significant concern. While the procurement is based on open calls for tenders, the limited number of competitors, sometimes with only a single candidate participating on behalf of a group, undermines competition and efficiency.

Moreover, the Court of Accounts noted several shortcomings (Court of Accounts, 2017), including:

- Lack of monitoring and control by the Ministry of Health delegations (DMS) of contract execution, leading to inefficiencies.
- Failure to appoint a manager as stipulated in the specifications, resulting in incomplete documentation and reports.
- Failure to produce audit reports for contracts exceeding five million DH, violating public procurement regulations.

The court called for urgent action from the Ministry of Health, which responded positively by implementing new regulations for hemodialysis contracts and ensuring strict adherence to contractual clauses. In response to the court's observations, Fez DMS, for example, has established multi-disciplinary commissions comprising medical, administrative, technical, and social workers. These commissions are tasked with producing detailed reports on contract performance by verifying compliance with specifications.

## **2. Strategic Purchasing to improve PPP Conditions**

Strategic purchasing, as defined by the World Health Organization (WHO), involves aligning funding and incentives with legal entitlements to health services. It requires detailed information on provider performance and the health needs of the population served (Mathauer et al., 2019). A passive approach to purchasing, where providers receive funds without performance monitoring, can lead to inefficiencies and poor-quality healthcare. Transitioning to a more active or strategic approach involves linking funds to provider performance or population health needs.

Data from several countries, as collected by the OECD, highlights the prevalence of unsafe and poor-quality healthcare, leading to the wastage of scarce health resources. However, many countries have successfully improved the quality of care by implementing strategic purchasing

practices (OECD, 2011) . Quality measurement plays a crucial role in this process, particularly as medical techniques advance and healthcare delivery becomes increasingly multidisciplinary. To progress towards more strategic procurement practices, certain conditions must be met. The Ministry of Health or the buyer must review payment methods, focusing on improving the information system and implementing quality measurement indicators.

### **2.1 Adequate information system**

The experience of public-private partnerships (PPPs) in healthcare procurement, particularly in the context of purchasing hemodialysis services, underscores the critical role of information systems in guiding decision-making processes. A robust information system serves as the backbone for strategic purchasing, facilitating the gathering and analysis of relevant, reliable data. This data not only aids in planning and forecasting but also forms the basis for informed decision-making regarding service provision.

Effective monitoring of patients' health status, service utilization rates, and the achievement of predefined objectives is pivotal in shaping procurement strategies. Moreover, computerization of information systems offers dual benefits by enhancing medical monitoring capabilities and facilitating cost analysis. By providing stakeholders with transparent and accountable information, these systems contribute to improved decision-making processes within PPP frameworks.

However, as highlighted by the World Health Organization (WHO, 2016), gaps in the health information system in Morocco, including deficiencies in civil status and vital statistics, pose challenges to effective procurement practices. Addressing these shortcomings is essential for enhancing the efficacy of PPPs in healthcare procurement.

Digitization plays a crucial role in enabling buyers to gain deeper insights into service providers and make informed choices based on accreditation and certification systems. By aligning procurement decisions with quality standards, public purchasers can enhance contract performance and ultimately improve clinical outcomes. This underscores the importance of integrating accreditation and certification criteria into procurement frameworks to ensure the delivery of high-quality healthcare services.

### **2.2 Quality measurement and payment for performance:**

Article 9 of the partnership agreement between the Ministry of Health and the Association of Moroccan Nephrologists, titled "Respecting care quality principle," mandates that "the care of beneficiaries must adhere to quality standards encompassing reception, resource deployment,

diagnostic and treatment procedures, adherence to good practice guidelines, and compliance with current regulations”.

However, neither the Ministry nor any other regulatory or governance body has developed a specific reference framework for hemodialysis services, apart from a few indicators outlined in specifications. This situation underscores the need for a closer examination of the efforts of international bodies and experiences from other countries in quality control of these services. Indeed, various models utilize quality of care indicators to determine payment for healthcare services, including *Value-Based Purchasing* in the United States, *Best Practice Tariffs* in England, and *Quality-Based Medical Procedures* in Ontario, Canada. Additionally, payment systems can significantly impact the costs of hemodialysis, prompting many systems to employ a combination of these approaches.

International experiences offer valuable insights into the implementation of quality measurement and payment for performance models in healthcare procurement. Various models, such as Value-Based Purchasing in the United States, Best Practice Tariffs in England, and Quality-Based Medical Procedures in Ontario, Canada, utilize quality of care indicators to determine payment for healthcare services. These models emphasize the importance of aligning payment incentives with quality outcomes, thereby promoting the delivery of high-quality care while containing costs.

A better illustration is provided by the indicators proposed by the French *Haute Autorité de Santé (HAS)* and the *Direction Générale de l'Offre de Soins (DGOS)*, which have implemented a national collection of indicators to equip all healthcare facilities with dashboards for monitoring the quality and safety of care. This initiative is part of a global approach to improving the quality and safety of care in healthcare facilities (HAS, 2017), Key indicators developed by professionals include:

- Anemia control
- Monitoring of the martial status of patients treated with ASE (erythropoiesis stimulants)
- Assessment of purification – Prescription of 3 sessions and 12 hours weekly
- Nutritional monitoring - Nutritional status
- Nutritional monitoring - consultations with a dietician
- Annual assessment of access to transplantation, ...

In USA, the Conditions for Coverage (CfCs) for End-Stage Renal Disease (ESRD) Facilities, published in 2008, outline the minimum health and safety rules that all Medicare and Medicaid participating dialysis facilities must adhere to (CMS, 2008). These rules include:

- Infection control (incorporating the Recommended Infection Control Practices for Hemodialysis Units At A Glance CDC guidelines; patient isolation procedures)
- Water quality (incorporating the updated 2001 American National Standard/Association for the Advancement of Medical Instrumentation guidelines for water purity)
- Patient plan of care (e.g., dose of dialysis; nutritional status; anemia; vascular access)
- Quality assessment and performance improvement (infection control; mineral metabolism and renal bone disease; patient satisfaction)

Moreover, quality and patient satisfaction have consistently driven the adoption of service payment methods for healthcare providers. As (Emrani et al., 2023) suggest, various countries have implemented different payment models. For instance, a global budget may be allocated to each geographical area, as seen in countries like Australia and France. This budget can then be distributed to individual dialysis centers through capitation or per-treatment methods, as observed in Belgium and the USA. Subsequently, payment to nephrologists within each center may take the form of a salary or fee-for-service method, as practiced in England and France.

However, in the case of PPPs for hemodialysis in Morocco, retrospective payment based on fee-for-service (FFS) remains prevalent in most healthcare establishments, despite its limitations. This payment method fails to facilitate cost control and does not incentivize quality and comprehensive patient management. Recognizing these shortcomings, both the Ministry of Health and the World Health Organization (WHO) acknowledge the challenges associated with FFS payment, including potential incentives for over-provision and over-billing, resulting in inefficient resource utilization and higher total expenditure (Ministry of Health, 2019). Moreover, this payment approach does not necessarily lead to improvements in clinical quality of care.

Given the broader implementation of compulsory health insurance, which necessitates intersectoral complementarity and openness to private providers, public purchasers should carefully consider adopting payment systems that prioritize efficiency and enhance the quality of care. Before finalizing future contracts, it is imperative to evaluate payment methods that align incentives with desired outcomes, ensuring optimal healthcare delivery for all stakeholders involved.

Some payment systems have demonstrated efficiency in the context of hemodialysis. For example, in the American experience, Medicare utilizes a prospective and bundled payment system for reimbursement. This payment model encompasses almost all services provided in the facility, including laboratory tests and medications, and is adjusted annually based on costs

and inflation (Mendu & Weiner, 2020). Such a system has the potential to mitigate incentives for overuse of profitable drugs, with provisions in place to enforce quality standards or face payment reductions for dialysis facilities (Iglehart, 2011).

Bundled payment models for hemodialysis are also implemented in certain European countries. For instance, in the Netherlands, for example, there is an extensive reimbursement package that encompasses all intravenous drugs, while bundled payments in France and Ontario include everything except erythropoiesis-stimulating agents (ESAs) (Vanholder et al., 2012).

In theory, therefore, the adoption of bundled payment systems in the PPP/hemodialysis model in Morocco could enhance cost control and facilitate comprehensive management of beneficiaries' needs. This includes the provision of essential drugs, laboratory tests, and specialized medical follow-up by various healthcare professionals such as cardiologists, ophthalmologists, endocrinologists, and dieticians...

### **2.3 Governance for purchasing**

Governance for purchasing entails adhering to criteria of transparency, fairness, participation, responsibility, and respect for the law. Transparency necessitates the public disclosure of criteria, methods, and procedures used to award contracts or select contractors.

Equity in healthcare access hinges on mechanisms ensuring optimal geographical distribution of services and financial accessibility for all. Achieving this requires solidarity and equitable distribution of financial risks associated with health risks, ultimately leading to the universalization of health coverage (UHC) and equal rights for all patients.

Participation denotes the extent of stakeholders' involvement in contract management, including professionals, civil associations, and notably, patients as primary stakeholders. Feedback and satisfaction measurements should inform continuous improvements in care delivery.

Responsibility lies with service providers to adhere to contract-defined objectives, employing scientifically effective and ethically accepted methods. For public purchasers, responsibility is synonymous with accountability, mandating concrete actions rather than mere debate.

Respect for the law ensures compliance with prevailing regulations governing the procurement process. Adhering to legal standards serves the broader public interest, emphasizing the importance of lawful conduct throughout the procurement process.

Recognize that the study may not fully capture the nuanced contextual factors that could influence the implementation and outcomes of PPP/hemodialysis contracts in Fez city.

Socioeconomic, cultural, and political dynamics may have shaped stakeholders' perceptions and behaviors, affecting the observed outcomes.

## Conclusion

The provision of PPP/hemodialysis represents an innovative and effective solution in ensuring patients' access to healthcare. It demonstrates a satisfactory cost-benefit ratio for the Ministry of Health and presents an economic opportunity for private hemodialysis centers. However, the lack of emphasis on strategic purchasing is evident, as the existing contracts often lack performance measurement tools. While the costs associated with these contracts may be reasonable, there is a missed opportunity to enhance patient care and outcomes through better alignment with strategic objectives and performance evaluation mechanisms.

The initiation of public-private partnerships for the procurement of hemodialysis services is a timely response to the mounting pressure faced by public healthcare facilities amidst increasing demand. This partnership holds promise as a viable solution for patients in vulnerable situations and may serve as a blueprint for future PPP endeavors, provided that concerted efforts are made to enhance the purchasing process.

While awaiting the implementation of universal health coverage, it is imperative that this partnership is complemented by additional initiatives. These include bolstering nephropathy screening and prevention measures, as well as establishing a framework to facilitate kidney transplantation. By addressing these aspects in tandem with PPPs, we can strive towards comprehensive improvements in renal healthcare delivery.

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