
Review Article

Public–Private Partnerships and Oral Healthcare Delivery in Ghana: Revisiting Access, Equity and Efficiency

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Abstract: This paper revisits a qualitative study of public–private partnership (PPP) in Ghana's health sector, using oral healthcare as the case. The original study examined whether greater private-sector participation could improve access, equity and efficiency in oral healthcare and considered the factors that influenced private investment. The study was undertaken in 2016, at a time when Ghana's PPP arrangements were guided mainly by the 2011 National Policy on Public Private Partnerships and when a comprehensive statutory framework was still being developed. The original evidence showed that, although PPP activity was present in the wider health sector, its contribution to oral healthcare was limited. Respondents pointed to inadequate funding, shortages of facilities and equipment, insufficient and unevenly distributed personnel, weak coordination, limited private-sector engagement, inadequate PPP capacity and weaknesses in monitoring and information systems. Secondary data used in the study also showed marked regional differences in the distribution of dental facilities and dental surgeons. This paper retains those findings as historical evidence and does not present them as a measure of the situation in 2026. It places them alongside subsequent developments, particularly Ghana's Public Private Partnership Act, 2020 (Act 1039), and the World Health Organization's renewed emphasis on oral health as part of universal health coverage. The paper argues that the central issue has consequently shifted. The policy question is no longer simply whether Ghana should encourage private participation in oral healthcare, but how such participation can be structured so that private investment complements public responsibility and produces measurable gains in access, equity, quality and efficiency. The paper concludes that PPP can make a useful contribution, but only where project preparation, risk allocation, regulation, workforce planning, monitoring and equity considerations are built into the arrangement from the outset.

Keywords: Public–Private Partnership; Oral Healthcare; Ghana; Access; Equity; Efficiency; Private Investment; Health Infrastructure; Universal Health Coverage

1. Introduction

Oral healthcare has often occupied a relatively small place in health-sector financing and planning, despite the consequences of untreated oral disease for pain, nutrition, communication, school attendance, work and general well-being. The World Health Organization (WHO) estimates that oral diseases affect about 3.5 billion people worldwide and has drawn attention to the unequal burden carried by disadvantaged populations. The current global policy direction places oral health within the wider universal-health-coverage agenda rather than treating dental services as an isolated specialist concern (WHO, 2022).

The issue is particularly important in Ghana, where access to oral-health services has historically been constrained by shortages of facilities, equipment and trained personnel and by substantial differences between regions. These concerns formed the basis of the original study on which this paper is based. The study, submitted for an MBA at Maastricht School of Management in 2016, examined public–private partnership in Ghana's health sector through the specific case of oral healthcare. Its main research question was: To what extent does the inclusion of public–private partnership enhance access, equity and efficiency in oral healthcare in Ghana? The study also examined the determinants of private investment and the opportunities available for private-sector participation.

The original research was undertaken before Ghana enacted the Public Private Partnership Act, 2020 (Act 1039). The Act, which was assented to and commenced on 29 December 2020, provides a statutory basis for the development, implementation and regulation of PPP arrangements for infrastructure and services. It also establishes requirements relating to project preparation, procurement, stakeholder consultation, value for money, risk sharing and monitoring (Republic of Ghana, 2020). The change is important because several of the institutional weaknesses identified in the original research concerned the absence of a sufficiently developed legal and procedural framework.

The purpose of this paper is therefore to bring the original study back into the discussion without changing what the study actually found. The 2016 evidence is treated as historical evidence. The newer material is used to ask what has changed in the policy environment and what the original findings suggest for the design of oral-health PPPs today. This approach avoids presenting a retrospective policy discussion as though it were a new empirical study.

The paper contributes in three ways. First, it retains evidence from a Ghanaian case that has received limited attention in the PPP and oral-health literature. Second, it shows why the relationship between PPP and oral-health access cannot be assessed simply by counting private providers or measuring investment. Third, it identifies practical issues that should receive attention when oral-health projects are prepared under Ghana's current PPP framework.

2. Background to the Original Study

2.1 The problem examined

The original study was concerned with a basic contradiction in Ghana's health system. On the one hand, the health sector had begun to make use of private participation in a number of areas. On the other hand, oral healthcare remained comparatively weak, particularly outside the main urban centres. The study argued that the problem was not only a shortage of money. It also involved the availability of appropriate facilities and equipment, the distribution of personnel, the organisation of services and the capacity of both public and private actors to work together.

Interviews conducted during the original research identified funding, facilities and equipment, manpower, private-sector policy and training as important concerns. The study also found that government remained the principal source of financing for oral-health infrastructure and services, while private-sector activity was relatively limited and more visible in urban areas. The implication was not that the government should withdraw from oral healthcare. Rather, PPP was considered as one means through which additional capital, expertise, infrastructure and service capacity might be mobilised.

2.2 Conceptual basis

The original conceptual framework linked three forms of private participation, BOO/BOT arrangements, joint ventures and fully private provision, to three public-sector outcomes: access, equity and efficiency. Access referred broadly to the availability of services and the ability of people to use them. Equity concerns the distribution of services and benefits across populations and locations. Efficiency is concerned with the use and sustainability of resources.

The framework remains useful because it keeps attention on the public purpose of a partnership. At the same time, the experience of the years since the original study suggests that the framework needs a stronger institutional dimension. Whether a PPP improves outcomes depends on how the project is prepared, how risks are allocated, how performance is measured, how users are protected and how the public authority manages the contract. The revised interpretation used in this paper, therefore, treats governance and implementation as the link between the partnership arrangement and the expected health-sector outcomes.

3. Literature and Policy Context

3.1 Oral health and universal health coverage

The international context has changed considerably since 2016. WHO's Global Oral Health Status Report describes oral diseases as among the most widespread noncommunicable diseases and places their control within the goal of universal health coverage. The report also highlights pronounced inequalities in oral-health outcomes and access to care (WHO, 2022). This matters for the Ghanaian PPP debate because it broadens the definition of success. A project cannot be considered successful merely because it

attracts private capital or constructs a facility. Its contribution should also be judged by who receives the service, where the service is available, whether people can afford it and whether the service is of acceptable quality.

Recent Ghanaian research also reinforces the importance of geographical differences. Hewlett et al. (2022), in reporting on a population-based oral-health assessment in the Greater Accra Region, identified regional inequalities in oral-health status and emphasised district- and community-level approaches. The finding is consistent with the concern in the original thesis that national averages can conceal substantial differences in service need and availability.

3.2 Ghana's oral-health system

WHO's Ghana oral-health country profile provides useful contemporary evidence, although its figures cannot simply be substituted for the historical figures in the original thesis because the sources and reference years differ. The profile reports that, based on information available for 2021, Ghana did not have a national oral-health policy, strategy or action plan recorded as operational or in drafting. It also reports substantial levels of untreated oral disease and limitations in the availability of some basic oral-health procedures in public primary-care facilities. The profile lists 400 dentists for 2016 and 46 dental assistants and therapists for 2017 (WHO, 2022).

These figures illustrate the continuing importance of the issues raised by the original study, but they should be interpreted carefully. The historical data in the thesis and the WHO profile are not a single time series. The appropriate use of both sources is therefore to identify persistent structural questions rather than to claim a precise 2016–2026 trend.

3.3 The Public Private Partnership Act, 2020

The enactment of Act 1039 is the most important institutional development for interpreting the original research. The Act states that its objects include regulating PPP arrangements and promoting the use of private-sector resources in the provision of infrastructure and services. It also provides for institutional arrangements and procedures covering project development, procurement and implementation (Republic of Ghana, 2020). The Act requires stakeholder consultation and provides for competitive procurement, value-for-money assessment, local content and technology transfer. It also provides a basis for government support where this is justified.

The relevance to oral healthcare is straightforward. The original study identified weaknesses in PPP capacity, coordination, project preparation and monitoring. Those issues can now be addressed within a more formal legal and institutional setting. The existence of the Act, however, should not be confused with evidence that the oral-health problems identified in 2016 have been resolved. Legislation creates a framework; actual results depend on the quality of projects developed within that framework and on the ability of contracting authorities to manage them.

3.4 PPP, efficiency and equity

The case for PPP in healthcare is strongest when private-sector capabilities complement public-sector responsibilities. Private capital may help overcome infrastructure constraints, while private management and technical expertise may improve the operation of particular services. Yet private participation can also create difficulties if contracts are poorly designed or if commercial incentives conflict with public objectives. Affordability, accountability, demand risk, information asymmetry and contract-management capacity, therefore, remain important considerations.

This qualification is especially important in oral healthcare. The areas with the greatest unmet need may not be the areas that offer the strongest commercial returns. If investment decisions are driven entirely by market demand, providers are likely to remain concentrated in places where population density, income and existing infrastructure support commercial viability. A public-interest PPP strategy must therefore address the locations and groups that the market alone is unlikely to serve.

4. Methodology

The paper retains the methodology of the original study. The research was exploratory and primarily qualitative. Primary information was obtained through in-depth interviews with actors involved in health policy, oral health and PPP-related activities, with questionnaires also used to support the inquiry. Secondary information was drawn from health-sector records, oral-health sources, policy documents and macroeconomic information. Ten interviews were reported in the original study, and participants were selected purposively because of their knowledge and involvement in the subject area.

Data collection took place between May and July 2016. The analysis was descriptive and interpretive, with attention to the forms of PPP activity and their implications for access, equity and efficiency. Secondary data were used to examine the distribution of facilities and personnel and the broader environment for private investment.

The publication version makes an important distinction between historical evidence and contemporary interpretation. The original respondents remain the respondents to the 2016 study. No new participant is attributed to that study, and no 2026 outcome is inferred from the original interviews. Current policy and international evidence are used to interpret the implications of the findings rather than to create a longitudinal dataset that the original research did not collect.

5. Findings from the Original Study

5.1 PPP in Ghana's health sector

The interviews suggested that PPP activity was already present in Ghana's broader health sector, but that oral healthcare had not benefited to the same extent. Respondents identified several forms of private participation, including contractual arrangements, BOO/BOT-type arrangements, joint ventures and fully private provision. In oral healthcare,

however, the private contribution described in the study was relatively limited and included outreach and mobile activities, including support associated with Unilever Ghana.

The study identified five closely related areas of concern: funding; facilities and equipment; manpower; private-sector policy; and training. Taken together, these concerns indicated that the constraint was systemic rather than the result of a single shortage. Government continued to carry much of the responsibility for financing oral-health infrastructure, while the private sector had not yet been integrated into oral-health planning on a scale comparable with the wider health sector.

5.2 Facilities and regional distribution

The secondary data used in the original study recorded 6,434 health facilities in Ghana in 2015. Of these, 5,056 were government facilities and 1,063 were private, with the remaining facilities belonging to other categories. Within this wider network, the study identified 147 dental facilities. The distribution was highly uneven. Greater Accra accounted for 74 dental facilities, while the Northern Region had two and the Upper East and Upper West Regions had one each.

The same pattern was visible in the distribution of dental surgeons. The study recorded 345 dental surgeons nationally, of whom 196 were in Greater Accra. The Northern and Upper East Regions each had two, while the Upper West Region had one. These figures were central to the original argument that access to oral healthcare was not only a question of the number of facilities nationally but also of where those facilities and professionals were located.

5.3 Private dental facilities

The historical data recorded 66 private dental facilities out of the 147 dental facilities identified in the study, alongside 60 public, 16 CHAG and five quasi-government facilities. The private facilities were not evenly distributed. Several regions had no private dental facility in the dataset. The finding is important because it shows the limits of using the presence of private providers as a proxy for national access. Private provision was associated with areas where demand and commercial conditions were more favourable, while some of the areas with weaker provision were also less attractive to private investors.

5.4 Access, equity and efficiency

The original study found that access was restricted by the limited number and uneven distribution of facilities, shortages of equipment and the concentration of personnel in urban areas. Equity was affected because the distribution of services did not correspond adequately with population needs. Efficiency was associated with problems of coordination, information, monitoring and the sustainable use of resources. On this basis, the study concluded that the public objectives of access, equity and efficiency were not being adequately achieved in oral healthcare.

5.5 Factors affecting private investment

The study also examined broader economic conditions that could influence private investment, including GDP growth, public investment, inflation and exchange-rate conditions. The analysis suggested that macroeconomic instability could affect the attractiveness of investment in oral healthcare, particularly where equipment and other inputs were imported. These findings remain relevant, but they are not sufficient on their own to explain investment decisions. A current analysis would also need to consider project preparation, payment arrangements, reimbursement, procurement certainty, contract enforcement, demand risk, foreign-exchange exposure and the credibility of the public-sector counterpart.

6. Discussion

6.1 What has changed since the original study?

The clearest change is the legal environment. In the original study, the lack of a comprehensive PPP law was itself part of the problem. Ghana now has Act 1039. This means that a contemporary discussion of oral-health PPP should move beyond the question of whether a legal framework exists and examine how effectively the framework is being used.

This does not make the original finding about institutional capacity obsolete. In fact, the finding becomes more specific. The issue is now whether the institutions responsible for oral-health projects have the capacity to identify suitable projects, prepare them properly, undertake value-for-money assessments, allocate risks sensibly, conduct procurement, manage contracts and monitor outcomes. The existence of a law does not remove these implementation requirements.

6.2 What should count as an oral-health PPP?

The original study treated PPP broadly. A current approach should distinguish among different types of projects because their financial and social characteristics are not the same. Potential areas include dental facilities, equipment and maintenance arrangements, laboratory services, mobile services, digital referral systems, training partnerships, school-based prevention and community outreach. The choice of partnership model should follow the nature of the service and the risks involved rather than the assumption that one PPP structure is appropriate for every activity.

Projects serving underserved communities may also require public support because the social value of the service can exceed the revenue available to a private operator. In such cases, the objective should be to structure the public contribution transparently and to link it to defined service obligations. The purpose is not to transfer public responsibility to private operators, but to use private capacity where it can add value while protecting the public interest.

6.3 Equity should influence project selection

The historical concentration of dental facilities and dental surgeons in Greater Accra remains one of the most important findings in the original study. It suggests that an oral-health PPP programme based only on commercial viability could reproduce existing inequalities. Project selection should therefore consider need as well as financial attractiveness.

In practical terms, this could include measures such as population-to-provider ratios, travel time, regional service coverage, affordability, workforce availability and the capacity of facilities to provide preventive as well as curative services. These indicators could be included in project appraisal and later incorporated into performance requirements. Equity would then become something that the contract measures rather than a general aspiration stated after the investment decision has already been made.

6.4 Workforce cannot be separated from infrastructure

One of the strongest messages from the original study was that the availability of a building or piece of equipment does not by itself create an oral-health service. The shortage and geographical maldistribution of personnel were central findings. PPP projects should therefore consider staffing, training, supervision and maintenance as part of the service package. This is particularly important for projects outside the major urban centres, where attracting and retaining personnel may be more difficult.

6.5 Monitoring and information

The original study identified weaknesses in information and monitoring. These weaknesses become even more important under PPP because the contracting authority needs reliable evidence to determine whether the private partner is meeting its obligations. A useful monitoring system should include facility availability, staffing, equipment functionality, utilisation, waiting time, referral completion, quality indicators, user experience, affordability and geographic coverage.

The value of such a system goes beyond contract administration. It would also help the Ministry of Health and other stakeholders understand whether investment is reaching the areas where need is greatest. In this respect, information is part of the equity mechanism rather than simply an administrative requirement.

6.6 Financing and risk

The original study placed considerable emphasis on the need for additional financing. The contemporary PPP approach requires a more careful distinction between a financing gap and a justification for PPP. The fact that the government has limited fiscal space does not automatically mean that a PPP will provide better value. A partnership should be pursued where the arrangement can deliver an appropriate combination of risk transfer, service quality, affordability, timeliness and value for money compared with feasible alternatives.

Act 1039 gives Ghana a basis for considering these issues formally. For oral healthcare, particular attention should be given to construction risk, demand risk, operating risk, foreign-exchange exposure, technology and equipment risk, and performance risk. The allocation should follow the principle that a risk is assigned to the party best able to manage it, while the government retains responsibility for protecting public objectives and users.

6.7 The wider oral-health agenda

The original study focused primarily on service availability and private participation. The contemporary oral-health agenda provides a wider frame. WHO now places oral health firmly within universal health coverage and emphasises prevention, integration into health systems and attention to vulnerable groups. Ghanaian research has likewise highlighted the value of district- and community-level approaches to oral health (Hewlett et al., 2022). These developments suggest that future PPPs should not be limited to building urban dental clinics. Preventive services, community outreach, referral systems and integration with primary healthcare may be equally important.

7. A Practical Framework for Oral-Health PPP in Ghana

The findings suggest that a workable oral-health PPP approach should begin with the problem to be solved rather than with the desire to attract private investment. Seven steps follow from the evidence.

First, identify projects according to need. Project selection should begin with service gaps, population needs and national health priorities, with particular attention to underserved regions.

Second, prepare projects properly. Concept notes, feasibility studies, demand assessments and financial models should be completed before procurement.

Third, make equity explicit. Appraisal should consider geographic coverage, affordability, travel distance, vulnerable groups and workforce distribution.

Fourth, choose the partnership model to fit the service. BOO/BOT, joint ventures, service contracts and other arrangements should be considered according to the risks and characteristics of each project.

Fifth, allocate risks carefully. Construction, demand, operating, foreign-exchange, technology and performance risks should be assigned to the party best able to manage them.

Sixth, monitor outcomes rather than only inputs. Contracts should contain measurable service, quality, access and reporting requirements, supported by credible monitoring.

Seventh, plan for continuity. Training, maintenance, workforce retention, data systems and long-term service sustainability should be incorporated into project design.

8. Theoretical Implications

The original conceptual framework remains useful because it connects the form of private participation to the public objectives of access, equity and efficiency. The evidence from the study also suggests, however, that the relationship is not direct. A partnership does not automatically produce better outcomes. Outcomes depend on the institutional arrangements surrounding the partnership.

The revised interpretation can therefore be expressed as follows: PPP arrangements may influence access, equity and efficiency through project preparation, financing, risk allocation, regulation, workforce capacity, monitoring and accountability. This is consistent with the experience of oral healthcare, where commercial incentives alone do not necessarily correspond with the geographical distribution of need.

The theoretical implication is modest but useful. PPP should be understood as an institutional arrangement whose effects depend on governance, rather than as an intervention that has a uniform effect on health-sector performance. This distinction provides a better basis for studying why similar partnership models may produce different outcomes in different locations.

9. Policy Implications

The first policy implication is that oral healthcare should be considered explicitly in Ghana's PPP project pipeline, where partnership can add demonstrable value. The second is that project preparation should give equal attention to social need and commercial viability. The third is that underserved areas should not be excluded simply because their revenue potential is weak; where public support is necessary, that support should be transparent and tied to measurable obligations.

The fourth implication concerns the workforce. Investment in facilities should be accompanied by measures that make services operational and sustainable. The fifth concerns data. Government and private partners need information that allows them to track service coverage, quality, affordability and geographic distribution. Finally, the purpose of PPP should be stated clearly: the desired outcome is better oral-health service delivery, not an increase in the number of private facilities as an end in itself.

10. Limitations

The main limitation is the age of the primary evidence. The original interviews were conducted in 2016, so the findings describe the situation examined at that time. They should not be presented as direct evidence of the state of Ghana's oral-health system in 2026. The original study was also qualitative and based on purposive selection of sector actors. Secondary data had limitations relating to availability and consistency.

The present paper does not attempt to overcome those limitations by presenting contemporary secondary statistics as though they were part of the original dataset. Instead, the newer policy and literature are used to interpret the historical findings. A separate

empirical study would be required to establish what has changed in Ghana's oral-health PPP landscape since the enactment of Act 1039.

11. Future Research

A useful next step would be a national study of oral-health PPP activity since 2020. Such a study should identify projects, their locations, partnership structures, investment values, financing arrangements and contractual obligations. It should then examine whether the projects have improved access, affordability, quality or efficiency and whether benefits have reached underserved populations.

A mixed-methods design would be appropriate. Quantitative work could examine facility distribution, workforce availability, utilisation and geographic accessibility, while interviews could explore the perspectives of government, private providers, financiers, patients and communities. Comparative case studies could also help determine which PPP models are best suited to infrastructure, equipment, preventive programmes and clinical services.

12. Conclusion

The original study was based on a relatively simple question: could greater private-sector participation help Ghana address weaknesses in oral healthcare? The evidence suggested that there was room for private participation, but it also showed why private participation alone would not solve the problem. Facilities and personnel were unevenly distributed, resources were limited, information and monitoring were weak, and private-sector engagement in oral healthcare was modest.

Ten years later, the policy setting is different. Ghana has a statutory PPP framework through Act 1039, and the international oral-health agenda places greater emphasis on universal health coverage, prevention and equity. These developments make the original findings worth revisiting, not because the 2016 evidence can be treated as current data, but because the problems it identified remain useful for thinking about how partnerships should be designed.

The central lesson is that PPP should be approached as a means rather than an end. Private capital, expertise and management capacity can contribute to oral-health development, but public authorities must continue to define the public objectives, protect users, monitor performance and address areas where market incentives are insufficient. For Ghana, the practical challenge is therefore to develop oral-health PPPs that are financially credible without losing sight of access, equity and quality. That is the point at which the original study and the current policy environment meet.

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