SYSTEMATIC REVIEW

Public hospitals’ finance management systems, and accountability mechanisms in the context of decentralized health systems in low- and middle-income countries – A thematic review [version 1; peer review: 1 approved, 1 approved with reservations]

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Abstract

Background: Health sector decentralization, defined as the transfer of decision making over health sector resources from a central to a peripheral entity; has been and continues to be a widely adopted health system reforms in many low and middle-income countries (LMICs). However, its reported effects have been varied. Nevertheless, decentralization reforms aimed at providing public hospital management autonomy are increasing in prevalence in many LMICs. The range and form of this autonomy because of these reforms has often produced mixed effects. We set out to understand the range of financial management autonomy that has been granted to public hospitals in decentralized health systems in LMICs, and what forms of accountability arrangements have been used to facilitate this autonomy.

Methods: We systematically searched PubMed, Google Scholar, Web of Science and CINAHL databases for published articles on this subject. We only included articles that reported empirical findings on hospital level financing and financial management in the context of decentralization in LMICs and/or those that included findings on hospital level finance management accountability arrangements. After a systematic search we found four articles that met our inclusion criteria. We undertook a thematic synthesis of the data and narrative reporting of our findings.

Results: From the review – we find that decentralization reforms did not result in improved funding flows, finance management autonomy or accountability mechanisms and for public hospitals. These outcomes were irrespective of the mode and form of decentralization reform adopted.

Conclusion: From our review, it is evident that though health sector decentralization reforms have been widely promoted and adopted in the past few decades across LMICs, there is minimal evidence that these
reforms have improved funding flows to public hospitals, improved financial management autonomy or accountability mechanisms; so as to enhance the performance of these hospitals at sub-national level.

**Keywords**
Hospital Finance Management, Hospital Autonomy, Health System Decentralization

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Introduction

Decentralization, defined as the transfer of power or authority on decision making and resource management, from the central government or body to the local level or subnational unit or institution, has been and continues to be a common health sector reform in many low and middle-income countries (LMICs)\(^1\). Though it takes multiple forms, a common classification used in decentralization literature refers to a four-class typology of decentralization which can be in the form of devolution, deconcentration, delegation and privatization. This classification defines devolution as the transfer of decision making to an elected sub-national level entity, deconcentration as the transfer of decision making to a sub-national entity appointed by the central authority, delegation as the transfer of decision making to a semi-autonomous government entity and privatization as the transfer of decision making to a private entity\(^2\).

Historically, health sector decentralization goals have their roots from the Alma Ata declaration of 1978 which emphasized the need for community participation in health services delivery and general health systems decision making and management\(^3\). Over the years, health system decentralization has been a widely adopted health system reform due to its perceived ability to increase the participation of community members, and enhance efficiency in health sector resource allocation and management\(^4,5\). It has also been promoted as a good governance practice for the improvement of health sector resource allocation efficiency in the context of planning and budgeting\(^6\).

Even with the wide adoption of decentralization in the health sector, its outcomes in most LMICs have been varied. In Uganda for example, decentralization has been reported to result in increased hospital autonomy with regards to priority setting, resource management and decision making in the health sector; though at the same time reported to reduce budgetary allocations to primary healthcare facilities\(^7\). In a review of health sector decentralization across various LMICs, Collins and Green reported a wide range of negative effects of health sector decentralization reforms including increase in inequalities in the health service provision between the poor and the rich\(^8\).

Accountability has often been viewed as a characteristic of “good governance” of the health system. The level of interaction of the different actors in governance and the factors influencing their interactions including social, political and institutional factors influence accountability within the system. Within the health system, good accountability has been linked with prudent financial and resource management, enhanced community involvement and participation in health service delivery and general enhanced health system functioning and performance, which are critical goals of health system decentralization\(^9\). Given the persistent shortages of health sector resources in most LMICs, appropriate and prudent public finance management (PFM) systems continue to be a key influence on what resources are received by the public health, how those resources are channelled and what use they are put to in order to meet the health service delivery objectives\(^10\).

Public hospitals at the sub-national level are a critical component of the primary health care (PHC) referral network. In addition, they consume the bulk of health sector resources allocated to these levels\(^11\). The role and importance of these hospitals is increasing in significance as a primary referral level, as most LMICs move toward universal health coverage (UHC) in this era of the Sustainable Development Goals (SDGs)\(^12\). There is thus a need to understand how the ongoing decentralization reforms in LMICs is affecting or possibly improving the financial resource availability and managerial function of public hospitals at the sub-national level. With the hospitals being the point where the spending of the allocated financial resources takes place particularly in decentralized health systems, there is need for effective financial management and accountability mechanisms at these facilities to ensure that better services are offered to people seeking for services\(^13\). This calls out for a need to understand how PFM affects the function of public health sector hospitals. For this reason, we set out to understand what is the range of financial management autonomy that has been granted to hospitals in decentralized health systems in LMICs, and what forms of accountability arrangements have been used to facilitate this autonomy.

Methods

We conducted our review – broadly guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines\(^14\). However, as indicated in the PRISMA checklist (see reporting guidelines\(^15\)), some of the PRISMA guidelines where not applicable as this was a qualitative review rather than a quantitative review and meta-analysis.

Literature search

We carried out a search for published peer review articles in PUBMED, Google Scholar, Web of Science and CINAHL in August 2018 and updated it in December 2018. We purposively selected these databases because of their high probability to index published articles of relevance to our review question. We used the search terms, hospitals AND financing OR “finance management” OR “finance management systems” OR accountability AND decentral* OR devolution, for the search in PUBMED.

We used the key words and terms to search for relevant articles in Google Scholar, Web of Science and CINAHL. We used the following key terms; hospital, financing, “finance management”, “finance management system”, accountability, decentral* OR devolution.

We also carried out a manual search through snowballing from paper references.

Inclusion criteria

We included in our review, only papers reporting on empirical findings on public hospital finance management systems and/or accountability mechanism for public hospital finance management in the context of decentralised health systems. For a paper to be included it had to be published in English or its translation...
to English had to be accessible for those published in other languages, and it had to have been published between the years 1990 to 2018. The article had also to be based on low- and middle-income country according to the World Bank Classification. We only included articles published in peer reviewed journals.

**Search results**

Our search generated a total of 1,957 records from the databases search. 1,327 were from Google scholar, 672 from Web of Science and 3 from PUBMED. Snowballing through paper references generated 322 records. After excluding the duplicates, 1,455 articles records remained. We excluded 937 by title for not being related to our study question. We examined the abstracts of the remaining 518 articles, upon which we excluded 453 articles for not meeting the inclusion criteria. We accessed the full articles of the remaining 65 articles and assessed their content. Finally, only 4 articles met our inclusion criteria; and are the ones we included in the review. *Figure 1* is the flowchart illustrating how we went about the screening of the records retrieved (see reporting guidelines15).

**Description and characteristics of the included papers**

All the four included articles were qualitative case studies. Two of the included studies were based in Kenya with one reporting findings on overall public hospital management autonomy after political devolution11, while another reported findings on hospital priority setting, planning and budgeting in the context of health systems deconcentration16. One paper was from in Indonesia reporting findings on hospital finance management in the context of health system deconcentration17, while the fourth article was reported findings from case studies from 6 countries of health system decentralization and governance. In this article the data for Bolivia, Chile, India, China, and Uganda related to whole system decentralization and not specific to the hospital level; and only data for Pakistan was based on hospital level finance management system in the context of deconcentration—we only included the Pakistan data from this article in our review18. *Table 1* is a summary of all the four papers included in the review, and their characteristics.

**Quality appraisal**

In appraising the papers included, we utilized the qualitative research Critical Appraisal Skills Programme (CASP) checklist. This checklist outlines qualitative research appraisal screening questions, to assess the reliability, validity and objectivity of the evidence reported in the papers19. *Table 2* summarizes the quality appraisal results. All the four studies scored well in all the criteria elements in the checklist.

**Data extraction and synthesis of selected papers**

We read all the four articles to understand the content and to identify the main themes occurring in them. We then prepared

![Figure 1. Flow diagram illustrating screening and elimination of papers accessed.](image-url)
<table>
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<tr>
<th>No</th>
<th>Study</th>
<th>Country/Type of Decentralization</th>
<th>Study design</th>
<th>Financing and finance management systems</th>
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</table>
| 1  | Barasa, E. et al. (2017). Recentralization within decentralization: county hospital autonomy under devolution in Kenya. | Kenya - Devolution               | Qualitative case study     | • Prior to devolution, County hospitals were financed through direct disbursement from Ministry of Health (MoH), user fees on service offered and donations.  
• Hospital Management Teams (HMTs) prepared their budgets which were approved Hospital Management Boards – and HMTs managed the expenditure at the hospital.  
• After-devolution – all finance and procurement management functions were moved from the hospitals to the county treasury thus reducing hospital autonomy in finance management.  
• Hospitals suffered from reduce funding after devolution. | Hospital Management Boards played an oversight role over the HMTs during the pre-devolution era.  
Hospital Management Boards were abolished in the post-devolution era  
Hospital managers appointed by and reporting to county government                                                                 |
| 2  | Maharani, A et al. (2014). Decentralization in Indonesia: lessons from cost recovery rate of district hospitals. | Indonesia – Deconcentration      | Explanatory case study      | • Public hospitals were allowed full autonomy over day to day management of local revenue generated  
• Public hospitals allowed to operate private wings to increase their revenue  
• Most hospitals incurred more costs than their collections from their income generating activities including the private wings  
• Hospitals thus relied on government subsidies to operate. | No clear routine oversight role over hospital finance management responsibilities at hospital level                      |
• User fees were not sufficient and hospitals relied on additional funding from national MoH. | Hospital Management Boards provided oversight for financial management functions undertaken by Hospital Management Teams. |
Bolivia- Deconcentration  
Pakistan- Deconcentration  
China - Deconcentration  
India - Deconcentration  
Philippines- Deconcentration | 6 countries case studies         | • In Pakistan – Hospitals generated revenue through user fees – which was remitted to and managed from the provincial level together with other resources received from centrals government.  
• Provincial level then allocated funds to hospital with no involvement of the hospital. | No reported structured finance management accountability at hospital level. |
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<th>No</th>
<th>Appraisal criteria</th>
<th>Barasa, Manyara et al., 2017</th>
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<th>Maharani et al., 2014</th>
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<th>Mitchell &amp; Bossert, 2010</th>
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a data extraction table with the main themes drawn from the elements of our review question. We read again the articles while extracting relevant data into our data extraction table (Table 1). We used narrative synthesis to present our findings20.

Results

Financing of public hospitals in decentralized health systems

Three articles reported findings on various aspects of hospital financing in decentralized health systems11,16,17. In Kenya during the health system deconcentration era, hospitals were financed through budget allocation from the national Ministry of Health (MoH), collected user fees from chargeable services in the hospital, donor funding and National Health Insurance Fund (NHIF) re-imbursements – for services rendered to NHIF beneficiaries. The hospitals received money directly into their respective bank accounts directly from these funding sources. However, the study reported that the funds from national MoH allocation were always delayed or failed to reach the hospitals, leaving hospitals practically relying on the user fees they collected for their day to day utility needs11. In 2013 when the country transitioned from a deconcentrated to a devolved system of governance the hospitals even lost control of the user fees they collected as they were now required to send these user fees to the newly established consolidated County Revenue Account (CRA) held at the county level which pooled all county revenue. Subsequently, hospitals had to make all their requisitions at the county level, for all their needs and the County Department of Health (CDoH) and County Treasury would make any purchases or payments of bills on their behalf. In addition, devolution led to a centralized procurement and finance management system at county level; and subsequent loss of hospital autonomy for these functions11.

In Indonesia, after decentralization, public hospitals could operate private/commercial sections, in addition to the offering of public non-commercial services to increase their revenues. However it was noted that this did not result in any substantial increase in cost recovery for the public hospitals17. In all the three study hospitals included in the study, it was found that they all still depended on the national government subsidies to operate, 20 years after the introduction of decentralization in the country’s health sector. The cost recovery rates of public sections were found to be better than that of the commercial sections. In general, local funding generation to improve the hospitals financing remained weak17.

In Pakistan – hospitals collected revenue through user fees, but these were remitted to and managed from the provincial level together with allocations from national government. The hospitals thus had very minimal role in the finance management of their day to day needs11.

Public hospital finance management systems in the context of decentralized health systems

All the four papers included in the review reported findings on various aspects of finance management within public hospitals. In Kenya, prior to 2013, county hospitals used to develop their own strategic plans and annual work plans, of which they would be responsible to implement. The hospitals subsequently directly received (or generated) their own money which they used in the process of implementing their plans. The hospitals would operate and manage their own bank accounts from where they had full budgetary and financial management control. The respective hospital managers were the signatories of the individual hospital bank accounts. The respective hospital managers had full autonomy over the day-to-day operational management activities within the hospitals16. The overall responsibility for this day-to-day financial management role rested with the Hospital Management Teams (HMTs) which was made of all respective department heads and heads of operational units within the hospital; and chaired by the hospital superintendent. The HMT was responsible for budget preparation and execution in line with the hospitals work plan. A Hospital Management Board comprising of community members drawn from the hospitals catchment area undertook an approval and oversight responsibility over this function16.

With the introduction of devolution in Kenya in 2013, all the operational finance management responsibilities of the hospitals including budget preparations, procurement of commodities and payments of routine recurrent bills was removed from the hospitals and recentralized to the county level11. In addition, the hospital management lost control over their respective bank accounts which they had operated for the management of hospital generated user fees. The running of these bank accounts was jointly taken over by CDoH and County Treasury officials. Hospital managers could only deposit the user fees collected by their respective hospitals into these accounts but had no direct access to these funds once deposited. The Hospital Management Boards were also abolished11.

With reduced autonomy over financial resources due to re-centralized finance management systems, hospitals experienced delays in supply of essential services and goods because of the centralized procurement process. This led to major challenges especially in addressing emergency supplies – and hospital managers resorted into spending the collected user fees at source without banking it as per the requirement11.

In Indonesia on the other hand, decentralization led to increased authority in the management of finances and the procurement process at hospital level. The money collected at the facility from the services offered were used by respective hospital managers for running day-to-day hospital operations, paying salaries for non-technical staff and providing incentives for technical staff. Central government however retained the responsibility for capital investments and expenditures for the hospital17. In addition, even though the hospital managers had increased authority over the day-to-day financial management authority at their respective hospitals; they had limited decision space over the determination of user fees; and all user fees proposed by hospitals had to be approved by the respective local governments where the hospital operated. Hospital planning and budgeting was also centralized to some extent, as it was controlled from both the district, provincial and national levels. A general

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lack of capacity and support to hospital managers on financial management including on training, was reported to have caused poor financial management performance by hospitals\textsuperscript{17}.

In Pakistan decentralization did not necessarily lead to an increase in hospital finance management autonomy. Hospitals generated internal revenue through user fees, but were not allowed to retain these. Instead, user fees generated from different hospitals were consolidated at provincial level that later reallocated to districts. The districts then had the power to further re-allocate these funds back to the hospitals. This led to a de facto limitation on local power over financial and administrative functions by hospital managers\textsuperscript{18}.

Hospital accountability arrangements in the context of decentralized health systems

Three of the included studies reported on various aspects of the hospital accountability mechanisms under de-centralization\textsuperscript{11,16,17}. In Kenya, prior to 2013, hospitals had hospital management boards (HMBs) comprising of community representatives from the catchment area where the hospital operated. These had a general oversight role and responsibility over the hospital activities including financial management; and specifically, the management of user fees collected locally within the hospital. The existence of these boards provided for them (hospitals) be able to be allocated funds and manage them directly\textsuperscript{11,16}. However, after 2013, HMBs were abolished as the country transitioned to a devolved government system, and the oversight role was for the county government was broadly taken over by the elected County Assembly. Consequently, the county government removed the financial management autonomy from the hospitals and centralized it at the county treasury level\textsuperscript{11}.

The Indonesian study reported that the lack of a clear routine accountability and oversight role over the decentralized financial management responsibilities to hospitals partly led to the poor performance by hospitals in their financial management roles. Because of the lack of clarity of the accountability and oversight roles, local authorities and national ministry of health officials often interfered with the hospital day-to-day finance management responsibilities of hospitals managers\textsuperscript{17}.

Discussion

From our review findings, it is evident that the introduction of decentralization reforms within the health sector does not always translate to improved funding flow and general increased financial management autonomy in public hospitals even in settings where the broader decentralization reform places the oversight of public hospital management within the management of decentralized government units. The findings illustrated that the day-to-day operational finance management activities within hospitals in decentralized settings still depended largely on financial management decisions made at other (higher) levels of the decentralized/ local government units; or at national levels. The review findings also indicate that lack of clarity over accountability and oversight responsibilities over hospital finance management responsibilities, thus stifling hospital managers’ decision space over their decentralized financial management responsibilities.

From this review, it is evident that different forms of health sector decentralization reforms often result in varying outcomes with respect to public hospitals financing and finance management autonomy. For the case of Kenya for example, we see that different time periods around which the country had different decentralization models had different effects on public hospital financing and day-to-day finance management functions within the public hospitals. First, we see that prior to 2013 when the country had a deconcentrated form of decentralization – the county hospitals had seemingly more finance management autonomy – while the 2013 implementation of devolution which was expected to increase lower level decision making over management of public resources paradoxically led to a significant decrease in hospital finance management autonomy\textsuperscript{16}. In Indonesia on the other hand – a devolution reform within the health sector led to increased autonomy in the management and use of the hospital financial resources\textsuperscript{17}. These observations are consistent with observations and arguments that have been advanced by several decentralization scholars who have observed and opined that due to the political nature of most decentralization reforms, many times the effects and outcomes of these reforms, particularly in the health sector, significantly vary from context to context – irrespective of the nature and form of decentralization applied\textsuperscript{13,15}.

Regarding the financing of hospitals, the review reveals that the increased financial management autonomy of county hospitals in Kenya prior to 2013 allowed hospitals to retain and utilize the user fees generated from services rendered at these hospitals\textsuperscript{16}. Similar observation was also reported in Indonesia\textsuperscript{17}. Both these examples highlight the potential for increasing local resource generation by public hospitals if given autonomy with decentralization reforms. Nevertheless, in both the Kenya and Indonesian example; it was reported that the local resources generated from user fees by the hospitals were not sufficient to meet the respective hospital needs – thus hospitals in both countries still relied on funding allocations from central MoH, most of which is normally allocated with expenditure restrictions thus limiting the decision space of local hospital managers over the utilization of these centrally allocated resources against local priorities. This observation consistent with that made by Bossert\textsuperscript{1}.

Regarding routine operational public hospital finance management functions, the Barasa, et al. study reports some paradoxical findings where by Kenyan hospital managers lost power and decision space over finance management as the country transitioned from a deconcentrated to a devolved form of decentralized governance\textsuperscript{11}. These findings were more surprising because 1. Devolution has been cited as the ultimate form of fiscal decentralization and 2. The country was coming from an already existing different form of decentralization – one would have expected devolution to increase more decision space over finance management responsibilities at lower levels of government. These findings thus emphasize the fact that decentralization reforms are often political and their outcome difficult to predict, hence the need for understanding local context if one is to make sense of any outcomes of decentralization reforms. These findings agree further with the argument by De
Geyndyt that decentralization of decision making to hospital levels usually yields little success, as authorities and people in power at the central level always come up with strategies to keep power at their level especially over finance and human resource matters which are important in the management of hospitals and their performance.

In addition, even where finance management functions were reported to have been successfully decentralized, as was the case in Indonesia, lack of capacity at the hospitals level, and poor or unclear accountability arrangements still resulted in poor finance management performance. These observations are consistent with argument advanced by Tsofa et al., and Bossert and Mitchell, that for successful decentralization reforms to be undertaken, the decision space (what functions to decentralizes to lower levels) should always be matched with the respective capacity of the lower level entities to whom functions are being decentralized to, and the accountability arrangements there in.

Limitations
A potential limitation of our study might be our limiting inclusion criteria. Our decision to only include peer reviewed publication, published in English language potentially indicates that we would have missed out on other examples and case studies not published in peer reviewed journals or those that were published in any other languages rather than English.

Conclusion
From this review, even with the acknowledged importance of public hospitals as an important component of the PHC referral network at the subnational level in most LMICs, and with the growing interest and promotion of health system decentralization reforms, there is minimal knowledge on weather decentralization reforms improves public hospital financing, financial management decision space and accountability mechanisms with the aim to improve their management efficiency and allow them to play their critical role in the PHC referral network especially in this era of the SGDs and Universal Health Coverage (UHC) aspirations particularly in LMICs. There is thus a need to conduct more aimed at understanding how ‘good’ managerial efficiency that encompasses improved funding flow, financial management autonomy and improved accountability arrangements for public hospitals can be achieved with different forms of decentralization reforms in different contextual settings.

Data availability

Underlying data

All data underlying the results are available as part of the article and no additional source data are required.

Reporting Guidelines

PRISMA flow diagram and checklist for ‘Public hospitals’ finance management systems, and accountability mechanisms in the context of decentralized health systems in low- and middle-income countries – A thematic review’, https://doi.org/10.7910/DVN/UFZYSI

Data are available under the terms of the Creative Commons Zero “No rights reserved” data waiver (CC0 1.0 Public domain dedication).

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References


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Prudence Ditlopo
Centre for Health Policy, School of Public Health, University of the Witwatersrand, Johannesburg, South Africa

This thematic review aimed to understand the range of financial management autonomy granted to public hospitals in decentralized health systems in low- and middle-income countries (LMICs) as well as the forms of accountability mechanisms that have been used to facilitate this autonomy. The paper is useful in enhancing knowledge on the potential effects of decentralization reforms, especially in cognizance of the fact that there is wide adoption of decentralization in the health sector in most LMICs. However, caution should be made in translating these findings considering that they are based on only four papers due to the limiting inclusion criteria. The paper could be strengthened if the authors addresses the following comments:

- In the Introduction section, paragraph 1, last sentence, the authors mentioned that “privatization as the transfer pf decision making to a private entity” – “pf” should be replaced with “of”.

- The authors need to explain what they considered as accountability mechanisms in the context of their study. Is it about board’s performance and effectiveness? Transparency? Leadership qualities? Similarly, more details on what they considered to be finance management systems is needed.

- Related to the comment above, the paper is phrased as a “thematic review”. Therefore, more details are required on how data extraction and narrative analysis were done to identify the common themes across individual studies in order to give a reflective overview of the findings. For instance, if the authors had provided more explanation on what they considered to be the core elements of accountability mechanisms and financial management systems, I would have expected that common themes would be derived from those elements. The authors also need to provide more details about how intercoder agreement was achieved as well as the role of each author during the coding process. To get some guidance on this, the authors may consider looking at the following article although this is not on the topic of interest of the authors: Riley and Weiss (2016)1.
• It may have been useful if the research methodologies of the reviewed four papers were mentioned.

• In the Conclusion section, line 5, the authors should replace “weather” with “whether”.

References

Are the rationale for, and objectives of, the Systematic Review clearly stated?
Yes

Are sufficient details of the methods and analysis provided to allow replication by others?
Partly

Is the statistical analysis and its interpretation appropriate?
Not applicable

Are the conclusions drawn adequately supported by the results presented in the review?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Health workforce governance, health worker practice and motivation, incentives and health policy analysis, qualitative research.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 21 June 2019

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Shakira Choonara
Global Health Advocacy Incubator, Johannesburg, South Africa

The article’s strength is that it brings clear strong recommendations to the table around decentralization; it is an excellent contribution to the literature.

Suggestions:
1. It would be useful for the article background to also touch on the Astana meeting on Alma Ata which took place recently and if this had any implications on the work, i.e. to be slightly updated.

2. From a policy angle and political commitment angle, the article should also find ways into tying into the United Nations High Level meeting this year on universal health coverage (UHC) - this would make the article more timely and open to robust engagement.

3. It would be interesting to add an angle on the type of funding/financing found in the articles reviewed - are they all government or donor funds? This type of information would be useful for the results section if available.

4. Do the authors have any recommendations linked to outside of public hospitals to other levels of the health system where funding is decentralized too, or even literature they could draw on to strengthen the argument?

5. To further strengthen the paper, a policy-maker may need further convincing going beyond “decentralization weaknesses” of it’s impact (if any) on the health system, processes, patients, etc. - perhaps the conclusion section could touch on this briefly, essentially touching on what the findings mean and why they should be considered?

**Are the rationale for, and objectives of, the Systematic Review clearly stated?**
Yes

**Are sufficient details of the methods and analysis provided to allow replication by others?**
Yes

**Is the statistical analysis and its interpretation appropriate?**
Yes

**Are the conclusions drawn adequately supported by the results presented in the review?**
Yes

*Competing Interests:* No competing interests were disclosed.

*Reviewer Expertise:* Public Health, Demography and Health Policy Research.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.