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Review Paper

Devolution of healthcare system in Kenya: progress and challenges

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ABSTRACT

Objectives: The aim of the present study was to systematically review the progress and challenges on the devolved healthcare system in Kenya.
Study design: A systematic review design was adopted for the present study.
Methods: Literature search was on biomedical databases of the most recent available electronic data published in English, that is, between January 2012 and April 2020. The populations for eligible studies were stakeholders within the county governments, healthcare workers and community dwellers. The databases included PubMed, EMBASE and Google Scholar. The following were the key words used in the search: 'Devolution of Health' 'Health care system in Kenya' AND 'County Health Facilities' 'challenges' AND 'progress' AND 'Kenya'. Other literature sources were after screening of all the references of all the added articles. Before the development of search terms, we looked for appropriate Medical Subject Headings terms and applied with maximal truncations. The data were qualitatively analysed, and findings were presented by three thematic domains.
Results: The search generated 1109 articles, of which 23 articles met the inclusion criteria. Data were presented and organized under three thematic domains: (1) localised decision-making process, (2) improvement in structural development and (3) inadequate resources/funds/staff.
Conclusion: This is a systematic review which, to the best of our knowledge, is the first study of its kind to present the available evidence on the progress and challenges on the devolved healthcare system in Kenya. The major findings of this review were as follows: there was improvement in the health structural development that was brought by devolution in the country. However, devolution is not free of challenges. The major challenges noted in the postdevolution era within the health sector include inadequate resources/funds from the national government and understaffed health facilities. The study recommends allocation of resources to counties commensurate with the devolved functions. The study calls out for further research on equity and equality of the devolved healthcare system in Kenya.
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Introduction

Decentralization is conceptualised as the transfer of authorities from central government bodies to lower levels within the public sector or to autonomous institutions.[1] Devolution is a form of decentralization or the transfer of authority and responsibility from central to lower levels of government for a range of public functions.[2] Although elsewhere devolution is viewed as a concept quite separate from decentralization, in that it implies the divestment of functions by the central government and the creation of units of governance not in the direct control of central authority.[3] The rationale that has underpinned the application of decentralization by some countries includes responding to local needs and building local capacity, increasing public participation, encouraging intersectoral cooperation, reducing fiscal burden at central level, improving health sector performance and accountability, increasing potential to develop new funding mechanisms and improving cost-effectiveness, autonomy and equity of access to care.[4]

In 2013, Kenya transitioned into a devolved system of governance comprising two levels: the national government and 47 semiautonomous county governments.[5] Under devolution, the health service delivery function was transferred to county

Abbreviations: MOH, Ministry of Health; PHC, Primary Health Care.

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governments while the national government retained policy and regulatory functions.[5] County government holds responsibility for planning, management and budgeting.[6] County-level governments make decisions on priorities by drafting county integrated development plan; annual planning and budgeting; service delivery for public health, disease surveillance, community health services, primary health services, ambulance, county hospital services; recruitment and human resource management (includes facility and community health workers) and partner coordination.[6]

Healthcare service in Kenya is provided by public health hospitals, private-for-profit facilities and non-governmental organizations.[7,5] Public health facilities are organized around a four-level system: (1) community services, (2) primary health services, (3) county referral services and (4) national referral services.[8] Although both private and public facilities charge user fees to clients, fee is subsidized at level one and two in public hospitals.[7] The private facilities are more expensive compared with public primarily serving wealthier individuals, whereas those from poorer households more commonly rely on public care providers or use lower standard, private care facilities.[9] County governments are responsible for providing services in levels one to three, and national government is responsible for providing national referral services.[8] In addition, under the new framework, responsibility for health service delivery is assigned to the counties, whereas policy, national referral hospitals and capacity building are the national government's responsibility.[10]

The 2010 new constitution that ushered in devolution stipulated a key framework on government revenue sharing in Kenya.[11] It noted that revenue raised nationally shall be shared equitably among national and county governments.[12] Criteria used in allocating funding include ‘economic disparities within and among counties and the need to remedy them’ and ‘the need for affirmative action in respect of disadvantaged areas and groups’.[12] County governments are allocated at least 15% of national revenue, with a further 0.5% of revenue allocated through an equalization fund.[13] Equalization fund is thus one way of managing the economy in such a way that weaker regions (counties) are supported to reach the level of the strong counties.[13] The respective devolved governments use the funds from national government in offering services/functions that were devolved to include health care.[14] On average, the 47 devolved governments allocate 27% of the total county budgets to health care.[12] The proportion of total government budget (TGB) allocation to health at both national and county levels has ranged from 7.8% in 2012/2013 to 9.2% in 2018/19.[15]

Before devolution, the Kenyan national government was characterized with a myriad of challenges that included marginalization, vast inequalities and mismanagement of resources and exclusion of many communities from the decisions process.[16] Devolution came at a time where the previous political system, which was centralized, was blamed for vast inequalities, exclusion and deep divisions in Kenyan society.[16] The main purpose of the devolution in Kenya was to decentralize power, resources and representation to a more local level.[17] It is simply stated that, smaller organizations, properly structured and steered, are inherently more agile and accountable than are larger organizations.[3] However, some theory suggests that decentralization may, in fact, increase regional disparities because as resources are passed to subcentral governments or regions, it consequently weakens interregional distribution intended for regional convergence.[18] Opponents of devolution argue that devolution will place poorer counties and subcounties at a disadvantage.[19] They therefore content that devolution may intensify inequalities.[19]

The devolution of health services in Kenya has been characterized with many challenges.[20] These include strikes by health workers in different counties and resignation of some health workers and inequitable distribution of available health workforce due to health workers leaving certain counties in favour of others that have better working conditions among others.[20] The aim of the present study was to systematically review the progress and challenges on the devolved healthcare system in Kenya.

Methodology

Study design

A systematic review design was adopted for the present study.

Inclusion and exclusion criteria

All descriptive or cross-sectional or observational studies reporting on the present research problem were included. An article was included if it met the following criteria: (1) conducted in Kenya and published between January 2012 and April 2020, (2) had study participants as county government stakeholders or health providers or the community within its setting or the patients and (3) published in English. Conference abstracts, letters to editors, review and commentary articles were excluded.

Data sources and search strategies

A literature search of articles from PubMed, EMBASE and Google Scholar databases was conducted in accordance with a detailed search strategy (Fig. 1). The search comprised both Medical Subject Headings and free text words (title and abstract word searches). The following search terms were used: ‘Devolution of Health’ ‘Health care system in Kenya’ AND ‘County Health Facilities’ ‘challenges’ AND ‘progress’ AND ‘Kenya’. The full electronic search strategies were included in the (Fig. 1). In addition, researchers searched grey literature resources such as a database/website of dissertations and theses and WHO (World Health Organization) websites. The reference list of included studies was manually searched for possible additional eligible articles. The searches were conducted from August 2019 to April 2020. In particular, the researchers used the following search terms in the PUBMED database: ‘Devolution of Health’ ‘challenges’ AND ‘progress’ AND ‘Kenya’ ‘Health care system in Kenya’.

Selection of studies for inclusion in the review

Titles and abstracts of studies retrieved from each database search were stored in Mendeley Research Manager. Duplicates were removed before the screening process was initiated. Four review authors (B.B.M., K.M., J.T. and R.M.) independently reviewed the titles and abstracts of all studies, and disagreements were solved by discussion. The same steps were taken for full-text screening of the results.

Data extraction and management

Using a standardized data extraction form, four review authors (K.M., J.T., B.B.M. and R.M.) independently extracted data from eligible studies including first author's last name, year of publication, study location, participant characteristics, study design used, major findings of the study.

Quality assessment

Four review authors (K.M., J.T., B.B.M. and R.M.) independently assessed the quality of all included studies using the Critical Appraisal Skills Programme. K.M. and J.T. assessed the quality of the

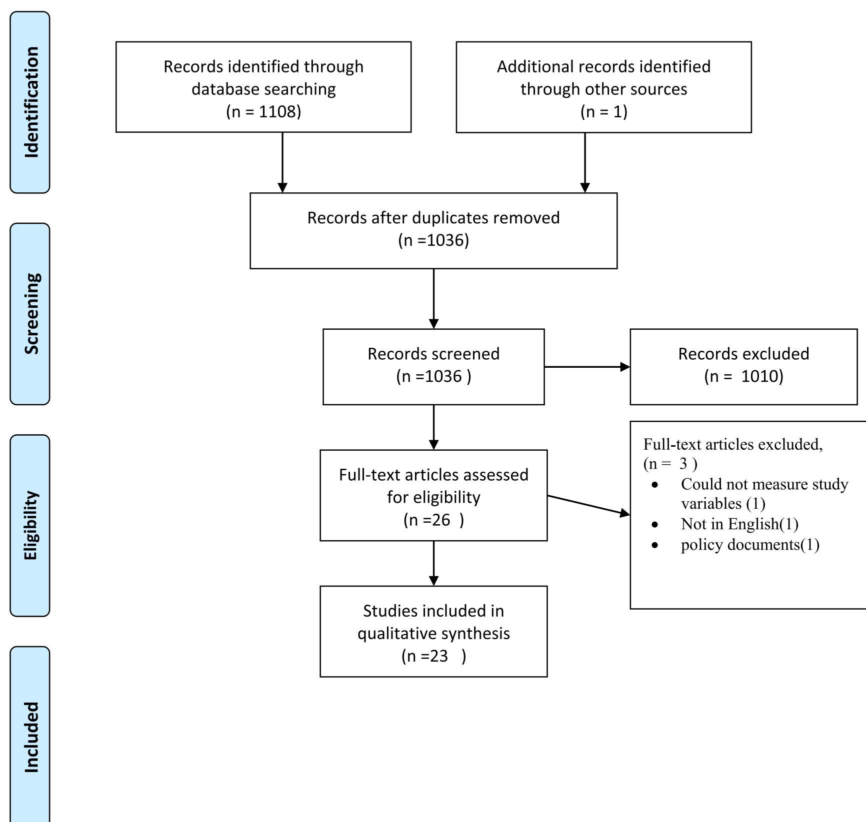

Fig. 1. Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram.

included studies while B.B.M. and R.M. checked the assessed studies. Disagreements were resolved by discussion between the four review authors. No study was excluded at this point after the quality assessment.

Synthesis of results

The qualitative analysis was approved by the technical task team who got expert experience in biomedical systematic review. This was a secondary analysis, and all identifiers of the individual participants were removed or presented using unique codes. This study adopted Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (Fig. 1) reporting as demonstrated previously by Liberati et al.[21] Data were presented and organized under three thematic domains: (1) localised decision-making process, (2) improvement in structural development and (3) inadequate resources/funds/staff.

Results and discussion

The search generated 1109 articles, of which 73 duplicate articles were removed. After the screening process of their titles and abstracts, only 26 articles were identified and were thereafter included in the full-text review. The identified articles were further assessed using the adopted inclusion criteria. Among 26 articles, only 23 met the inclusion criteria (Fig. 1). According to Table 1, the specific study settings of the articles used the following counties: Meru, Wajir, Bomet, Samburu, Kisumu, Uasin Gishu, Kericho, Bomet, Nairobi, Kilifi, Bungoma, Homa Bay Kajiado Kitui, Kwale, Marsabit, Nyeri, Turkana, Vihiga and three studies were conducted across the 47 counties. The study participants were stakeholders within the respective county governments, healthcare workers and community dwellers. Table 1 gives a further description of the articles used.

The present study aimed to systematically review the progress and challenges on the devolved healthcare system in Kenya. The findings were presented and discussed under three thematic domains: (1) localised decision-making process, (2) improvement in structural development and (3) inadequate resources/funds/staff.

Progress

Localised decision-making process

This review noted that during postdevolution, the local community is able to participate in health development agendas more directly than before though with mixed level of satisfaction. This is possible through public participation forums or through electing representatives in the devolved government. County governments are mandated to propose interventions and replicas that suit their local jurisdiction healthcare needs; this involves also identifying of health problems and management health systems.[14] In support of this, the current Kenyan constitution recognizes the right of communities to manage their own affairs and to further their development.[11] Other avenues available for local participation include the community and health facility management committees that help run the health facilities.[6] This provides the opportunities for the local communities to participate in decision-making processes in the provision of health services.[22] Conversely, in Ghana, the devolved system provided little or no mechanism for local governance popular participation in health sector decision-making.[4]

Improvement in health structural development

Health infrastructure relates to all the physical infrastructure, non-medical equipment, transport and technology infrastructure

Table 1
Description of the articles used in the present review.

Articles	Year	Design	Participants	Setting	Results
(Miriti, 2016)[24]	2016	Descriptive research design	86	Meru County	Majority of the respondents indicating that finances were not received on time.
(Ore & Juster, 2018)[14]	2018	Descriptive survey	65	Wajir	should ensure that they employee adequate staff members in order not to over stretch the few existing ones
(Kirui & Moronge, 2016)	2016	Descriptive research design	66	Bomet	No enough budgetary allocation for financing health infrastructures. There
(AHPSR, 2016)[22]	2016	Both retrospective and prospective	22	Samburu	Political interference
(Murkomen, 2012)[11]	2012	Descriptive review and analysis,	–	Nairobi	Capacity building especially among the marginalised counties
(Owino & Coovadia, 2014)[30]	2014	Conference reports	–	Nairobi	harmonising all allowances
(Kilonzo et al. 2017)[27]	2017	Mixed methods approach	32	Kisumu and Uasin Gishu counties	Staff dissatisfaction
(Korir, 2013)[40]	2013	Descriptive research design	84	Kericho	Poor funding of devolution services from the central government
(Sang, 2018)[25]	2018	A cross-sectional study		Bomet County	PHC facilities increased from 109 to 132 Staff numbers show 87.2% increase from 553 in 2012 to 1035 by 2015.
(Kathambara et al. 2015)	2015	Prospective		47 counties	Inequality in staffing
(Ngigi & Busolo, 2019)[16]	2019	Prospective		47 counties	Corruption
(Mwai & Barker, 2014)[10]	2014	A cross-sectional study	–	47 counties	None of the counties met the national benchmark for population density of medical practitioners
(Gimoi, 2017)[23]	2017	A cross-sectional study	169	Nairobi County health facilities	No personnel
(Mccollum et al. 2018)[6]	2018	A cross-sectional	120	2 counties	Limited priority setting capacity
(Tsofa et al. 2017)	2017	Qualitative case study design	20	Kilifi	Political interference
(Shilibwa & Kiruthu, 2019)[26]	2019	descriptive research design	189	Nairobi	Good infrastructure
(Kagwanja et al. 2020)[38]	2020	Descriptive research design	29	Kilifi County	Resource scarcity, lack of clarity in roles and political interference
(Awino, 2016)	2016	Case study	7	Nairobi	Delayed and inadequate funding
(Gilson et al. 2017)	2017	Analytical	–	Kilifi	Drug stockouts and funding constraints, also unpredictable staff as challenges
(Nyikuri et al. 2017)	2017	Learning site approach	15	Kilifi	Less funding
(Barasa et al. 2017)	2017	Qualitative case study approach	21	Coastal Kenya	Reduced autonomy of county hospitals
(Kipruto & Letting, 2017)[43]	2017	Descriptive survey	37	Bungoma	Under funding
(McCollum, 2017)[42]	2017	Descriptive survey	–	Homa Bay Kajiado Kitui, Kwale, Marsabit, Meru, Nairobi Nyeri, Turkana, Vihiga	Under funding

PHC, primary health care.

(including ICT [Information and Communication Technologies]) required for effective delivery of services.[23] This implies that improvement in these sectors positively influences the healthcare outcomes. This review further noted that there was a surge in infrastructural development across counties after devolution. Demonstrating this, Miriti's study noted that there was significant rehabilitation and improvement of Meru Level Five Hospital during the post devolution compared to pre-devolution period.[24] Furthermore,devolution has achieved physical availability of health facilities within seven Kilometres radius in most counties.[14] Hospitals in Bomet County increased in number from 3 in 2012 before devolution onset to 8 in 2015 after the commencing of devolution in Kenya.[25] In Nairobi, healthcare infrastructure under devolution was rated good by most respondents, although some respondents indicated that it was average.[26] The county governments have expanded or constructed health facilities, purchased ambulances and constructed rural feeder roads.[22] In Kisumu and Uasin Gishu counties, there was a remarkable improvement in the means of transport and condition of roads, both of which directly influence physical and cognitive accessibility to health facilities.[27]

It is also possible that the observed development was a result of funding changes brought by the devolved governance system in Kenya. Devolution brought some level of resources (funds) and development to the local level and particularly to counties that have been marginalised for a long time.[28] In many counties there are new health centres, roads and street lights that would not be there without devolution.[28] A marginalised area means a county that for historical and/or for other reasons has been unable to fully benefit from national development compared with other counties.[13] Formerly marginalised counties now benefit from higher levels of funding (15% revenue share and an equalization fund) from national government, along with the decision space to invest in health.[6]

However, the observed developments may also be attributed to an increase in health budget allocations by both governments. For instance, the proportion of TGB allocation to health at both national and county levels increased from 5.5% in 2013/2014 to 9.2% in 2018/2019.[15] Conversely, in Nigeria, the federalism (devolved) governance in health has been characterized by lack of and underdeveloped health facility infrastructure.[29]

Challenges

Inadequate resources/funds/staff

As earlier mentioned, during predevolution, the Kenyan national government was characterized with a myriad of challenges that included marginalization, vast inequalities and mismanagement of resources and exclusion of many communities from the decisions process.[16] Although the devolution was to bring solution to the previous challenges, this review noted that there is still existence of problems and inequalities in the health sector.

The Constitution empowered the counties to establish offices and employ individuals performing functions allocated to them.[30] Substantiating this, reports across 44 counties in 2013–2015

showed that a total of 7484 health workers were recruited.[31] In 2012, a year before devolution was rolled out, Bomet County had a total of 553 health workers spread across the county.[25] This however increased to 1035 by the year 2015.[25] Although the devolution employed new staff, the review noted that the county health staff were inadequate in majority counties. Statistics show that there is one (1) doctor for ten thousand (10,000) persons with one nurse per six hundred and fifty persons in Kenya compared with the WHO recommendation of one doctor for 1000 persons and one nurse per 280 persons.[32] For instance, the study by Kathambara[31] discontented that understaffing resulted into long working hours for the staff. Similar trends of challenges such as staff shortages were previously noted in the health devolved system of South Africa.[33]

This review further noted that it is not unusual to find instances of an employee of the same job qualifications being remunerated differently within and across counties. Owino and Coovadia[30] called for harmonising of all staff allowances. In western Kenya counties, evidence demonstrated late payment of county staff and considerable disaffection among health professionals.[27] Despite there being late payments, the staff are underpaid too.[34] This has resulted into regular strikes witnessed in public health facilities.[34] This review noted that, all these myriad of staff challenges might negatively affect the quality of healthcare services provided with the unmotivated staff. Alliance for Health Policy and Systems Research recommended that the solution to the poor health service delivery in Kenya lies with the provision of incentives to health workers to help achieve the desired outcomes through a motivated and dedicated health worker.[22] Currently, health workers have petitioned the national government to create a Health Services Commission to preserve their terms of service, ensure timely payment of salaries and retain control over their professions.[2] Elsewhere in the devolved system of Nigeria, health workers' salary is often delayed and irregular.[35] This has been attributed to delays in transfer of funds from the national to subnational governments as also noted in Kenya.[35]

Medical supplies/equipment problems

The tertiary hospitals acquired leased specialized machines and equipment through the national government's Managed Equipment Services (MES).[32] The leasing of medical equipment (Managed Equipment Services-MES) project was initiated in 2015 as an alternative healthcare financing option to scale up health infrastructure for provision of specialized medical care.[36] This review noted that for the hospitals that acquired the medical equipments, the availability of specialized personnel remains a challenge. The underutilisation of the medical equipments was also noted. Supporting this, Gimoi's[23] study demonstrated there being limited specialized medical equipment and the personnel to operate the equipments. The current incongruence on the specialized health workforce and the ongoing upgrading of equipment and infrastructure is a manifestation of weak health system approach to the sector development.[37] The devolved government should ensure not only the availability but also the functioning medical equipment and available specialized health workforce.[30] Conversely, for the facilities that never received equipment, they face most challenges as it is most likely that, they are in remote areas and underresourced at the same time.

Lack of medical supplies and other resources required to effectively deliver their services was further emphasized by there being lack of a centralized drug and medical supply procurement system.[22] For instance, in a study conducted in Kilifi, in response to resource scarcity, researchers observed borrowing drugs across facilities.[38] Similar trends of stockouts of essential commodities in the facilities were observed in Nairobi.[39]

Financial challenges

Recently, Kenya introduced changes to resource allocation and adopted transfer of the equitable share funding from central government to county governments, which takes into account each county's poverty level and needs.[8] This makes each county to have equal chance of growth as the share of resources is equitable.[16] Analysis of the evidence revealed that although there is sharing of resources to the county level, the health sector is underfunded. The Kenyan national government health spending is currently about 9.2% of the country's budget, which is markedly below the 15% mandated by the Abuja Declaration.[36] This results to the poor funding of devolved health services from the central government.[40,41] Despite the underfunded health budget in the county, a large share of the health budget covers wage bills and recurrent expenditures inhibiting capital expenditures.[11] For instance, in the study by Mc-Collum,[42] the county-level respondents from all counties expressed the opinion that the funds from national government are insufficient to deliver optimal health services. In Bungoma County, hospital managers disagreed that the finances received from the county government were adequate to purchase the supplies and equipment required for the day to day running of the health facility.[43] Similarly, in a study conducted in South Africa, the stakeholders reported the following financial challenges: insufficient health system financing, increasing costs, financial unsustainability and lack of financial autonomy.[33]

Conclusion

This systematic review which, to the best of our knowledge, is the first study of its kind to present the available evidence on the progress and challenges on the devolved healthcare system in Kenya. The major findings of this review were as follows: there was improvement in health structural development that was brought by devolution in the country. However, devolution is not free of challenges. The major challenges noted in the postdevolution era within the health sector include inadequate resources/funds from the national government and understaffed health facilities. The study recommends allocation of resources to counties commensurate with the devolved functions. The study calls out for further research on equity and equality of the devolved healthcare system in Kenya.

Author statements

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Ethical approval

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Competing interests

The authors have declared that no conflicts of interest exist.

Author contributions

B.B.M. and K.M. participated in planning, conceptualising, data collection, data analysis and writing the draft manuscript while R.M. and J.T. participated in designing of the data collection form, data collection, data analysis and verifying the final copy of the draft manuscript. All authors read and approved the manuscript.

Consent for publication

Not Applicable.

Availability of data and material

No complimentary data available.

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