Analysis Of Managed Care In Primary Health Care Services In Indonesian Health Insurance Management

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Abstract.

This study aims analyzes and to evaluate the implementation of the National Health Insurance Program (JKN) in Indonesia, through the perspective of the managed care model. Managed care itself is an approach that combines financing mechanisms and health services in a single integrated system, with a focus on cost efficiency and improving service quality, as implemented by BPJS Kesehatan in Indonesia. This study used a systematic literature review method of 30 scientific articles published between 2016 and 2025. The results of the study indicate that the capitation payment system and INA-CBGs play a role in increasing spending efficiency and expanding access to health services. However, several challenges remain, such as infrastructure gaps, unequal distribution of health workers, and barriers in the referral system. This study also discusses various managed care models such as EPO, IDS, HMO, PPO, and POS, and the relevance of their implementation in the Indonesian context. The findings of the proposed improvement strategies include the use of digital health service technology, strengthening community-based public education, revising more adaptive capitation rates, and improving the monitoring system for service quality and costs. These steps are necessary to support the sustainability and equity of health services throughout Indonesia going forward, along with concrete solutions.

Keywords: *BPJS health; capitation; health financing; health care system and managed care.*

I. INTRODUCTION

Health is a basic right guaranteed by the state, as stipulated in Indonesia Law Number 36 of 2009, which defines health as a physical, mental, spiritual, and social condition that enables a person to function productively. To achieve this, the government has implemented the National Social Security System (SJSN) through the National Health Insurance (JKN) program, which is based on the principles of mutual cooperation and social insurance[1], [2]. In its implementation, JKN adopts the principle of managed care, an approach that integrates financing and healthcare services to improve cost efficiency and service quality. This model enables risk management through selective contracts between service providers and BPJS Kesehatan (Social Security Agency for Health)[3].Managed care is an effort undertaken by insurance companies or healthcare financing organizations to control costs and service quality through a system that integrates financing and healthcare services while still considering risk sharing[4]. This system allows for selective contracts between health insurance providers, healthcare providers, and insurance participants[5]. One element of managed care is that services are provided by specific providers, namely those that meet established criteria covering aspects of administration, facilities, infrastructure, procedures, and work processes. In other words, it encompasses business processes, production processes, facilities, products, and services[6]. In this way, the fund manager (insurance) participates in controlling the quality of services provided to its participants[7]. Managed Care is a term used in discussions about health insurance, reflecting the current function of the BPJS (Social Security Agency for Health) which integrates the financing and provision of healthcare into a system that manages costs, providing easy access for all participants, ensuring efficient and effective/targeted financing.

BPJS financing is referred to as contributions. These contributions are borne by individuals and families of BPJS participants, employers, and the government covers contributions for the underprivileged[8].One form of managed care implementation in primary care is the capitation system, where healthcare facilities receive regular payments based on the number of registered participants,

regardless of the number or type of services provided[9]. Community Health Centers (Puskesmas) and independent clinics receive different rates, adjusted according to their respective resources and operational responsibilities. While this system aims to reduce the direct cost burden on the community, challenges such as disparities in facilities, distribution of healthcare workers, and variations in service quality still need to be addressed[10]. As of August 2024, JKN coverage had reached 98.19% of the national population, reflecting a significant expansion of access. However, JKN Program participation should be viewed not only in terms of the number of residents covered, but also how they can access every health service they need. A high UHC rate will be meaningless if it is not accompanied by the availability of health services needed by the community, so good governance is needed to realize this program[11]. Therefore, the effectiveness of the managed care system, especially in primary care, needs to be continuously evaluated to ensure the sustainability and equitable distribution of service quality[12]. Based on this background, this study aims to evaluate the implementation of JKN through a managed care approach in primary care, using a systematic literature review method of relevant publications in economy and healthcare[13].

II. METHODS

This study uses a systematic literature review approach to examine the issue of adverse selection in health insurance schemes[14]. The literature search was conducted in May 2025 using scientific databases such as Google Scholar, PubMed, ScienceDirect, and SpringerLink. The keywords used include: "INA-CBGs" AND "JKN health insurance", "BPJS health insurance" AND "manage care", "capitation" AND "supplementary healthcare service", "primary health insurance" AND "dropout", and "health insurance risk" AND "risk behavior". This combination of keywords was designed using Boolean operators to increase the accuracy of the search results. This approach was chosen to gain a comprehensive understanding of the patterns, causal factors, and impacts of adverse selection reported in various cross-country studies and insurance schemes, both public, private, and community-based[15].Inclusion criteria included peer-reviewed articles in English, published between years 2016 and 2025, with an empirical focus (quantitative or qualitative) that discuss adverse selection in health insurance. Editorial articles, opinion articles, and non-peer-reviewed studies were excluded.

In addition, studies outside the context of health insurance, such as vehicle or property insurance, were also excluded[16].The article selection process consisted of three stages: (1) title and abstract selection, (2) full-text review to ensure compliance with the inclusion criteria, and (3) data verification, then from the initial search results of more than 50 articles, 25 final articles that met the criteria were selected. Two researchers conducted the screening process independently to minimize bias. If there were differences in assessment regarding article inclusion, the two researchers discussed to reach a consensus. If the discussion did not result in an agreement, a third researcher was asked to review and decided. Primary data studies were extracted using a standardized format that included title, authors, year of publication, study locus, type of insurance, methods, and main findings related to adverse selection. Risk of bias assessment was performed independently by two investigators, with the same procedure for resolving discrepancies as in the selection stage. Quality scores were used for sensitivity analyses and to interpret the overall strength of evidence[16].

III. RESULT AND DISCUSSION

The National Health Insurance (JKN) system implemented in Indonesia is a manifestation of managed care principles, namely a system that integrates the financing and provision of healthcare services within a framework of quality and cost control. This model aims to ensure efficient resource use and equitable distribution of healthcare services across the population. BPJS Kesehatan, as the primary provider of JKN, implements these principles through a capitation system at primary care facilities and an INA-CBGs system at secondary care facilities[17].In its implementation, managed care in Indonesia presents complex dynamics. Several studies indicate that this system has successfully expanded coverage and reduced the burden of direct financing for the public[18]. However, its implementation still faces structural and operational challenges such as disparities in healthcare facilities, uneven distribution of human resources, and constraints in the referral system and cost control.Evaluating the implementation of JKN and Managed

Care in various regions, based on a study, JKN implementation in DKI Jakarta has achieved Universal Health Coverage (UHC), but still found inactive participants and limitations in the referral system, particularly in island regions such as the Seribu Islands[19]. Meanwhile participation only reached 60% because many people still lacked understanding of the program. Evaluations of the National Health Insurance (JKN) program in Indonesia also revealed a number of challenges in its implementation[20]. Therefore, concrete government steps are needed in the form of continuous monitoring, comprehensive reviews, and strategic improvements to optimize the effectiveness of the National Health Insurance (JKN) in strengthening the national healthcare system[21].

Cost Control Management in the INA-CBGs System

The INA-CBGs system is a key component in controlling inpatient healthcare costs, emphasize the importance of oversight by three key actors: the Ministry of Health, BPJS Kesehatan, and healthcare facilities to ensure costs do not escalate without sacrificing service quality[22]. This aligns with the managed care model, which focuses on cost containment and quality control[23].A study by G. Ayu et al. (2003) found that managed care is a systematic solution that emerges when challenges and problems arise in the implementation of healthcare services, and aims to control healthcare costs while still providing quality patient care. This study also highlights the importance of managed care in reducing healthcare costs and improving quality care, and provides examples of managed care plans and models that have been successful in other countries[7].

Implementation of the Capitation System: Challenges and Potential

Research concluded that the capitation system has provided benefits in providing financing certainty and reducing out-of-pocket costs. However, challenges remain in facility distribution, varying service quality, and suboptimal management of capitation funds. Independent clinics often experience greater financial pressure than community health centers (Puskesmas) due to the lack of government subsidies[24]. Study at Hospital, Jakarta, involving 308 inpatients with internal medicine, using a mixed-methods approach[25]. They found that the average cost recovery rate (CRR) for BPJS claims was well below 100%, ranging from 38–70% depending on the type of illness, length of stay, age, and severity; the class of hospitalization had no significant impact[26], [27].These findings emphasize the need for disciplined implementation of clinical pathways and routine cost-efficiency evaluations to optimize managed care services in hospitals, including in the context of primary care in Indonesia[28]. The implementation of managed care has brought various benefits, but challenges cannot be ignored. The high number of patient visits at Primary Health Facilities (FKTP) has resulted in increased costs, especially for private providers that rely on capitation funds[29].

Community and Field Implementation Perspectives

The low health literacy and the circulation of hoaxes hindered rural community participation in the non-PBI National Health Insurance (JKN) program[30], [31]. Meanwhile, Agustini et al. (2025) found that JKN program implementers themselves still lacked understanding of implementation guidelines, resulting in suboptimal implementation in the field[32].

Managed Care During the Pandemic and Lessons from Other Countries

Study compared the managed care system in Indonesia with countries such as the United States, the United Kingdom, and Thailand. This study concluded that the managed care system became highly relevant during the pandemic due to its ability to control costs while maintaining service quality. The main challenges that emerged were limited human resources and logistics, as well as system fatigue due to the pandemic[33]. Based on the research results of the US concluded that managed care has had a positive impact on controlling healthcare cost growth without negatively impacting quality and has resulted in innovative practices focused on better quality and cost management for chronically ill patients[34]. The results of managed care practices have been very positive, with improvements in the quality of healthcare services and cost reductions, although challenges remain, such as the need for structural changes in healthcare financing and provision[35]. Based on the literature reviewed, several strategies are considered effective for improving the performance of the managed care system in the implementation of the National Health Insurance (JKN)[2], including digitalization of healthcare services and data integration between facilities, increasing

public health literacy through a community-based educational approach adjusting capitation rates to local needs and workloads in primary healthcare facilities, and strengthening quality and cost oversight mechanisms by BPJS Kesehatan through regular audits and more transparent reporting.

Community Health Workers (CHWs) in Medicaid Managed Care Organizations (MCOs) play a critical role in supporting high-risk patients through outreach, case coordination, and social referrals[36]. CHWs employed directly by MCOs receive better training and benefits than those contracted. These findings emphasize the importance of training, incentives, and team integration of CHWs in the development of managed care in primary care in Indonesia[37]. As part of a reflection on global learning, Green and Rowell (2011) categorized managed care organizational models into six main types, each with distinct cost management and service quality characteristics. These models include Exclusive Provider Organizations (EPOs), which emphasize services through a specific network with a fee-for-service payment scheme; Integrated Delivery Systems (IDSs), which integrate various service providers, such as hospitals and clinics, into one system; and Health Maintenance Organizations (HMOs), which require participants to follow referrals from their primary physicians and only use facilities within the network. Furthermore, there are Point-of-Service (POS) Plans, which are a hybrid of HMOs and PPOs. Preferred Provider Organizations (PPOs), which provide greater flexibility in choosing providers; and Triple Option Plans, which offer a combination of HMO, PPO, and FFS options in one package. Understanding these model variations provides important references for developing the National Health Insurance (JKN) system in Indonesia to be more adaptive to local needs and health policy dynamics.

Psychosocial Impacts and the Dynamics of Physicians' Roles in Managed Care

The transition to a managed care-based healthcare system, particularly in the context of JKN, places significant psychological pressure on primary care physicians. In the current tiered scheme, physicians' professional autonomy tends to be reduced due to the dominance of a bureaucratic system[38]. Workloads increase with patient volume, and the lack of clarity between promotive-preventive and curative roles leads to confusion in practice, which impacts income. These factors contribute to the emergence of stress symptoms and a tendency to withdraw from social or professional environments. Therefore, psychological resilience strategies and supporting policies are needed to protect the well-being of medical personnel[7].

A study demonstrated that education on managed care through elective learning can improve pharmacy students' understanding and confidence in providing telehealth-based transition of care (TOC) services. These results indicate that the integration of practice-based learning in the context of managed care significantly contributes to the preparedness of healthcare workers in facing the transformation of the healthcare system, including the digitalization of primary care[39]. These findings are relevant to efforts to develop a managed care model in Indonesia, particularly in strengthening human resource competencies for primary care services oriented towards efficiency, care coordination, and prevention of recurrent hospitalizations.

Strengthening the Function of Primary Care Facilities

The despite increasing visits and referrals under the National Health Insurance (JKN), the effectiveness of the Community Health Center (Puskesmas) as gatekeepers remains suboptimal[40]. This is due to doctors' limited understanding of clinical guidelines and a lack of supporting infrastructure, such as laboratories and information systems. It is recommended that human resource capacity be increased, information technology facilities added, and infrastructure budget allocations by local governments be allocated to support primary care functions more comprehensively and sustainably[41].

The Role of Technology and Data in Managed Care Management

Research demonstrated that the use of technology and data has the potential to align services between service delivery organizations and community organizations. Data is used for participant needs screening, case management, and program effectiveness evaluation[38]. However, differing interests and perceptions regarding data access and privacy often hinder cross-sector collaboration[42]. This study provides a lesson that the National Health Insurance (JKN) system needs to strengthen its data technology infrastructure to support evidence-based decision-making. Based on the literature, also recommends the use of technology and integration between pharmaceutical and medical benefits to improve the efficiency and

consistency of the decision-making process[43]. Research also explains that automatic assignment of primary care providers can be a risk factor contributing to low healthcare utilization. These findings are underscores the importance of a more targeted technology automation approach for healthcare providers[44].

IV. CONCLUSION

This study highlights the importance based on the literature review, it can be concluded that the implementation of a managed care system within the National Health Insurance (JKN) program in Indonesia has significantly contributed to expanding access to healthcare services and increasing cost efficiency. The capitation payment system and INA-CBGs have proven effective in reducing out-of-pocket costs and supporting service quality control. However, the implementation of this program still faces several challenges, such as infrastructure inequality, uneven distribution of healthcare workers, and low public literacy and understanding among program implementers in the field. Managed care models such as EPO and IDS, adopted by BPJS Kesehatan (Social Security Agency for Health), show significant potential, but their implementation needs to be tailored to the local context. Improvement efforts through service digitization, strengthening the referral system, increasing health literacy, and adjusting capitation policies are crucial for the sustainability and equity of the JKN program. With strategic and collaborative steps between the government, healthcare facilities, and the community, the managed care system in Indonesia can develop more effectively in realizing equitable, high-quality, and sustainable healthcare services.

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