# Impact of Budget Increase on Primary Health Care Performance in the Era of National Health Insurance: Case Study in Buleleng District

# Dampak Peningkatan Anggaran terhadap Kinerja Puskesmas di Era Jaminan Kesehatan Nasional: Studi Kasus di Kabupaten Buleleng

Kadek Suranugraha\*, Ni Made Sri Nopiyani\*\*, Pande Putu Januraga\*\*

\*Buleleng District Health Office, Bali, Indonesia, \*\*Department of Public Health and Preventive Medicine, Faculty of Medicine, Udayana University, Bali, Indonesia

#### Abstract

Since 2014, there has been an increase in funds for primary health care (PHC) coming from the National Health Insurance program capitation funds and the Health Operational Assistance Fund. This study aimed to explore the effect of this budget increase on the health care services at PHC. The case study used a qualitative approach and interviews from 19 PHC health workers with the highest and lowest budget. Data were analyzed using thematic analysis and supported by quantitative data. The positive impact of the increasing PHC budget was felt by PHC staff due to the addition of operational equipment and incentives provided. Nevertheless, there was also a negative impact such as feeling overwhelmed due to an increase in the quantity of PHC activities and additional administrative affairs. It also triggered a negative interaction between staff due to the number of incentives received. The regulation on the use of budget empowers PHC to better arrange the schedule of activities and manage human resources. However, these regulations are considered restrictive and the administrative flow of funds is too long that hinder the optimal use of the budget.

Keywords: Budget increase, Health Operational Assistance Fund, National Health Insurance, performance, primary health care

#### Abstrak

Sejak tahun 2014 peningkatan anggaran terjadi di pusat kesehatan masyarakat (puskesmas)yang bersumber dari dana kapitasi Jaminan Kesehatan Nasional dan program Bantuan Operasional Kesehatan. Penelitian ini bertujuan menggali dampak peningkatan anggaran pada komponen sistem layanan di puskesmas. Penelitian studi kasus menggunakan pendekatan kualitatif dan wawancara mendalam 19 orang tenaga kesehatan puskesmas dengan jumlah anggaran tertinggi dan terendah. Data kualitatif dianalisis dengan analisis tematik serta didukung dengan data kuantitatif. Dampak positif peningkatan anggaran puskesmas dirasakan oleh petugas karena adanya penambahan peralatan operasional dan insentif yang disediakan. Namun, dampak negatif juga dialami oleh petugas seperti perasaan kewalahan karena adanya peningkatan jumlah kegiatan serta penambahan urusan administrasi. Hal tersebut juga memicu interaksi negatif antar petugas karena besaran jasa pelayanan yang diterima. Regulasi pemanfaatan anggaran mendorong puskesmas untuk mengatur jadwal kegiatan dan sumber daya manusia dengan lebih baik. Meskipun demikian, regulasi pemanfaatan anggaran dinilai sangat ketat dan alur pemanfaatan dana juga dinilai terlalu panjang sehingga menghambat pemanfaatan anggaran secara optimal.

Kata kunci: Peningkatan anggaran, Bantuan Operasional Kesehatan, Jaminan Kesehatan Nasional, kinerja, puskesmas

**How to Cite**: Suranugraha K, Nopiyani NMS, Januraga PP. Impact of budget increase on primary health care performance in the era of national health insurance. Kesmas: National Public Health Journal. 2018; 13 (2): 92-98. (doi:10.21109/kesmas.v13i2.1875)

**Correspondence**: Ni Made Sri Nopiyani, Faculty of Medicine, Udayana University, PSIKM Building, PB Sudirman Street, Denpasar, Phone: +62361-222510, Email sri.nopiyani@unud.ac.id Received: November 19<sup>th</sup> 2017 Revised: April 18<sup>th</sup> 2018 Accepted: May 14<sup>th</sup> 2018

Copyright @ 2018, Kesmas: National Public Health Journal, p-ISSN: 1907-7505, e-ISSN: 2460-0601, Accreditation Number: 30/E/KPT/2018, http://journal.fkm.ui.ac.id/kesmas

# Introduction

The Government of Indonesia has made various efforts to improve the budget of health programs and services.<sup>1</sup> In 2004, the Law No. 40 initiated the reform of the health financing system in the National Health Insurance (NHI). The government began to pay attention to the preventive program aspects by providing the Health Operational Assistance Fund for primary health care (PHC) since 2010.<sup>2</sup> The government re-issued a Presidential Regulation (Law No. 12) on 2013 for Health Insurance, followed by the Regulation of Health Minister No. 71 of 2013 for NHI Health Services that regulates the granting of PHC funds. Since 2014, these regulations have resulted in a noticeable increase in the budget of PHC throughout Indonesia, including in Buleleng District.

Health financing is an important component of the health system and influences other factors.<sup>3</sup> Changes in health financing can have an impact on human resources, types of service provided, fund allocation, the technology used, health information, and institutional leadership.<sup>3-8</sup> However, there is evidence that while grant incentives for financing health care providers can increase the financial benefits of service providers and improve health care activities, these do not necessarily contribute to the improvement of health status in the community.<sup>9</sup>

Studying the impact of the increased budget on PHC's performance in the NHI era has never been done before. Such a study is necessary in order to provide important input for policymakers and ensure the improvement of health system outcomes.<sup>10</sup> This study aimed to examine the changes and impacts on PHC's performance in Buleleng District.

#### Method

This was a case study with data collected on May 2017. PHC selection was determined by the budget level. The PHC with the highest budget was Buleleng I Primary Health Care and the PHC with the lowest budget was Seririt III Primary Health Care. Qualitative data were collected through semi-structured interviews using interview guidelines, and quantitative data were collected from the budget and performance reports of selected PHC. The interviewed participants included the head of PHC, head of the administrative sub-division, Public Health Program Manager, Individual Health Program manager, pharmaceutical service manager, and laboratory service manager at each PHC. From Buleleng I Primary Health Care 9 participants were interviewed and 10 were interviewed from Seririt III Primary Health Care.

Changes and impacts of PHC budget improvements were analyzed using thematic analysis methods based on the Quality of Care framework by Campbell. The analysis was performed on the structure and process components of health services. The component structure consisted of building and environment aspects of PHC, health equipment, medications, human resources, management and leadership, funding, information system, and process component consisting of health service and management implementation. The information obtained was coded, then grouped into a code list to make better define by theme. Validation strategies used were a triangulation of data, including the combination of data drawn from the different interviewed participant, and methodological triangulation using interviews and secondary data review.

This study was reviewed and approved by the Medical Ethics Committee of Udayana University/ Sanglah Public Hospital with Number 1256/UN.14.2/KEP/2017 on May 18<sup>th</sup>, 2017.

#### Results

Buleleng I Primary Health Care and Seririt III Primary Health Care are located in urban areas and carry out health services mandated by the government. However, Buleleng I Primary Health Care has a range of work area of 1,202 km<sup>2</sup> that is larger than Seririt III Primary Health Care with a working area of 754 km<sup>2</sup>. Buleleng I Primary Health Care also has a larger population, 66,164 people compared to Seririt III Primary Health Care with a population of 13,121 people. The increase in funds led to an increase of Buleleng I Primary Health Care's budget from IDR 1,894,829,000 in 2014 to IDR 3,750,456,000 in 2016, while Seririt III Primary Health Care's budget increased from IDR 381,528,500 in 2014 to IDR 993,391,281 in 2016.

The existing budget was used to finance the implementation of Public Health Programs, improve the structure component, operational equipment, and human resources.

Analysis of secondary data revealed that the performance of both PHCs in terms of coverage of Individual and Public Health Program, and management was improved. Coverage of the Individual Health Program in both PHCs also increased after the increased budget. The coverage of Public Health Programs in both PHCs especially in maternal and child health services, family planning,

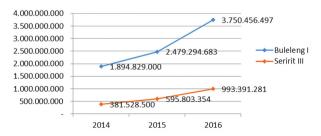


Figure 1. The Total Budget of Buleleng I Primary Health Care and Seririt III Primary Health Care in 2014–2016

Year	Health Services Coverage Buleleng I Seririt III		Management Coverage		PHC Classification	
Iear			Buleleng I	Seririt III	Buleleng I	Seririt III
2012	87.1	83.6	6	6	Level 3 (poor)	Level 2 (fair)
2013	88.0	85.5	6	6	Level 3 (poor)	Level 2 (fair)
2014	88.8	81.7	6.6	6.6	Level 2 (fair)	Level 2 (fair)
2015	86.8	86.3	7.7	7.7	Level 2 (fair)	Level 2 (fair)
2016	91	91	8.9	8.9	Level 1 (good)	Level 1 (good

Table 2. Summary of the In-depth Interview Results

Variable	Result
Buildings	Improvement of the condition of PHC buildings and environment due to increased budget
Supporting facilities	Improvement of the quantity and quality of supporting facilities due to increased budget
Human resources	Improvement on the provision of financial incentives for staff due to increased budget
	Improvement on staff performance due to a better PHC supporting facilities and environment
	Increase in staff's motivation due to improvement on incentive provision
	Increasing staff's workload due to additional service activities and administrative tasks
	Decreased interaction among staff due to differences in the number of activities performed and the number of incentives received
	Payment mechanism led to a change in work ethic. Some staff tend to work only on the basis of rewards given
Leadership	Changes in the internal policy of PHC to adapt to the regulation of NHI capitation fund and Health Operational Assistance Fund
Financing	Long and complicated process for using NHI capitation fund and Health Operational Assistance Fund
	Inability to utilize the budget optimally and according to PHC needs due to strict regulations
X C	Obstacles in the preparation of financial accountability reports due to lack of staff' knowledge and experience
Information system	The increased budget did not affect the health information system
Health service delivery	The increased budget did not bring equitable effect across all the PHC programs. It mainly benefited essential Public Health
(public and individual	Program
health programs)	Increased quantity and quality of Public Health Program activities
	Reactivation of some development activities in the Public Health Program
	Increased quantity of individual health service
Management	More intensive monitoring and supervision on the utilization of NHI and Health Operational Assistance Fund
	Regulation on the utilization of funds forces the PHC to better plan activities and more intensively manage human resources

health education, integrated health care, integrated health care for non-communicable diseases, promotion of exclusive breastfeeding, and monitoring of vitamin A administration was also increased. Furthermore, improvements in management aspects were observed in both PHCs after the increase of fund.

Ultimately, an improvement on the health services and management leveled up the performance score of Buleleng I Primary Health Care and Seririt III Primary Health Care. Classification of PHC performance was presented in Table 1.

Based on the budget report of Buleleng District Health Office in 2014 to 2016, the existence of capitation funds tends to be utilized for the procurement of administrative equipment whose addition has improved staff performance in carrying out administrative activities.

"So helpful...really makes our work easier, we used to have only 1 computer to work with, now we have more so it's easier to work" (UKM1\_PB)

The positive impact was also felt by the PHC staff due to the provision of cash incentives based on the number of activities performed, as well as in the form of transportation allowance. As clarified in one statement from a respondent.

"We have always been enthusiastic about our work, but now we feel more appreciated, our contributions are *better acknowledged…*" (UKM7\_PS)

Unfortunately, others problems have arisen, particularly regarding human resources. Higher budgets indirectly lead to an increase in the number of activities carried out, thereby requiring more people to perform those activities. On the other hand, the number of staff available did not align with the program's needs, which made staff feel overwhelmed. Buleleng I Primary Health Care officials revealed that if the staff was forced to carry out activities in accordance with the existing budget, they would have difficulty being accountable.

"If we are asked to do more nothing will get done properly because there simply aren't enough of us..." (UKM2\_PB)

Adequate administrative requirements and inadequate staff's accountability has resulted in some staff feeling the strain of the additional workload.

"That's a matter of the administration; sometimes we don't really understand how to make the accountability files." (KTU\_PB)

Some program managers also revealed that the PHC's budget increase has not been utilized in accordance with the needs of the health program. The budget for programs should be equitable across the board; however, this is not always the case, as one respondent explained.

"There is a very small budget for child health because

it has been redirected to maternal health. You can see the difference in the quality and scope of activities in the early childhood health class, compared to the maternal health class..." (UKM2\_PS)

PHC leaders should be more open to discussing these problems. Another staff was not aware of what a budget constraint entails.

"The thing is that not everyone fully understands what is going on, where the money is going and what for..." (KPS\_PS)

"The funds are all divided according to the different programs in different PHC sections..." (UKM4\_PS)

This gap ultimately leads to new problems, such as the changes in the interaction between health workers triggered by the difference in the number of activities between officers. The difference in the number of activities affects the number of incentives received by the officers, which decrease the interaction among the staff, as expressed by some program managers.

"In the past, those outside our direct management line didn't have a lot to do, we only speak with them when needed something, but now that we have a competitive compensation program, people don't want to get involved unless they are compensated..." (UKM2\_PS)

These conditions indicate a change in the staff work ethic. The officer tends to only conduct activities for which they get paid, thus prioritizing work on the basis of rewards given. The differences in the size of compensation foster a feeling of dissatisfaction among the PHC staff. Some informants considered that the basis for the provision of services was not in accordance with the conditions at PHC. The assignment of managers of health programs at Buleleng I Primary Health Care and Seririt III Primary Health Care I was based on the criteria of healthcare worker suitability with the health program for which they will be responsible. At these two PHC, there was no degree of responsibility differentiating between the sizes of the programmer's responsibilities from the level of education, thus the level of education does not guarantee that the staff performs more tasks than those with lower levels of education. It can be assume that educational level did not have a significant effect on the workload of staff.

"For example, an undergraduate level officer is responsible for program development and has not a lot of paperwork to carry out, but those with a lower technical school degree are responsible for immunization which has more reporting, VCT services, and other activities... " (UKM6\_PS)

The increased PHC's budget has resulted in an increased number of Public Health Program activities, quality improvement of Individual Health Program, and PHC management quality improvement. The Health Operational Assistance Fund program report on both PHCs indicates that there is an increased frequency of implementation of 14 types of health activities. The director of Seririt III Primary Health Care also revealed that they had reactivated some development activities, such as sport health activities, nutrition, and traditional treatment activities.

"Because some activities have been reintroduced and we have funds to carry this out we really need to carry them out effectively..." (UKM4\_PB)

In addition, the increase in budgetary revenues also has an impact on the addition of new activities such as high risk pregnant women's home visits, postpartum home visits, exclusive breastfeeding, family and care coaching, a new type of laboratory examination, new immunization services that now include Japanese Encephalitis vaccination and the existence of a chronic disease management program.

On the Individual Health Program side, both PHCs experienced an increase in the number of outpatient visits since 2014, as indicated by reports from the Health Services Profile of Buleleng District Health Office from 2012 until 2016. This indicates an increase in the quantity of Individual Health Program activities inside the PHC building. There was also an increase in demand for blood samples. This is reiterated by laboratory service workers.

"There is an increase in patient's seeking testing, sometimes up to 150 per month..." (PL\_PB)

On the other hand, the PHC budget increase also has a positive effect on management aspects. All activities financed by the Health Operational Assistance Fund must be contained in the PHC's activity implementation plan documentation. This is done to avoid administrative errors and compliance with applicable rules, hence the staff is able to carry out activities without having to worry about the division of tasks and implementation times that might clash with other activities.

Besides, the utilization of NHI capitation and Health Operational Assistance Fund also faces several obstacles, such as strict regulation that enable the optimal use of budget according to the PHC needs. The director of Seririt III Primary Health Care revealed that they did not need the extra funds for the procurement of consumables, as their consumables stock supplies exceed a oneyear requirement, but every year a proportion of NHI capitation budget has been set for consumables procurement, and cannot be used for other purposes.

"For example, if only the regulation could be more flexible we could divide the funds for 60% staff wages and 40% operational costs, so it would be helpful if we could re-allocate those unused funds for something more urgent...." (KPS\_PS)

Health program managers also felt the barriers to the use of funds because of such regulations. Because there

are regulations on budget utilization for certain health programs, the existing budget cannot be used for some health programs at PHC.

"The increase has helped us to better carry out activities...there are now available funds... ...but if these activities are not stipulated within the guidelines we can't" (UKM6\_PS)

This has resulted in the incomplete distribution of available funds for the PHC, as expressed by the director of administration.

"No...if there are funds leftover we cannot use these...there is some leftover..." (KTU\_PS)

Officials also felt that the administrative flow of budget utilization was too time-consuming which complicates the process.

"There are funds from NHI...so things should be easier, but for example, we can't simply make whatever purchases we like, we have to place a request to the District Health Office, and then getting signatures which is timeconsuming" (UKP\_PB)

Health providers attempted to increase budget absorption by maximizing the possibility of channeling funds in each health program.

"We always try to make sure that funds are used... and offer them across all the management programs... .to help meet targets" (UKP\_PB)

## Discussion

This study suggests that improvement of the budget from the NHI and Health Operational Assistance Fund at both PHCs had positive and negative consequences. Financial improvement support enabled PHC to improve the procurement of supporting facilities, such as computers and medical equipment. This made the administrative works easier and supported the implementation of computerized health information system. Integrated health information with the computerized system has better accuracy, saves time, and is more efficient.<sup>11</sup> Moreover, budget improvement leads to more resources available to support operational PHC activities and provide incentives for PHC staff. It could be concluded that the budget improvement brought a direct positive impact in improving the quantity and quality of health management and health care at PHC. The regulatory aspect of NHI also had a positive impact on health care quality. The Regulation of Health Ministry HK.02.02/MENKES/ 514/2015 on Clinical Practice Guidelines for Physicians at First Level Medical Service Facilities elucidates that there are 179 diseases that should be treated by primary healthcare services. The PHC has an obligation to handle a number of diagnoses and/or follow through with the referral process so that the quality of the services is provided according to the patient's needs. Regulation on clinical practices guideline for physicians in primary

health care services is effective in improving the quality of individual health care and reducing non-specialist referrals.

On the other side, improvement in the financial aspect, healthcare equipment, and technology should be balanced with human resources optimization. Based on the Health Minister's Regulation Number 75 of the Year 2014 concerning Primary Health Care, both PHCs in this study have not met the minimum quantity standard of human resources. Lack of human resources at PHC could impede healthcare provision and budget utilization.

A limited number of human resources at PHC caused a burden among the staff to conduct health care services and related administrative tasks. Improvement of the budget was accompanied by an increase in administrative tasks to report the use of NHI capitation fund and Health Operational Assistance Fund. Buleleng District Health Office and PHC have not undertaken workload analysis of their staff; therefore, job allocation was not equitable among staff. Disproportionate workload distribution leaves some staff with higher workload pressure than others.

This study reveals that the improvement of budget received by PHC has led to the improved implementation of Individual Health Program and Public Health Program, particularly the essential Public Health Program. The finding is in line with the result of a study by Nurmansyah & Kilic,12 that showed the improved revenue from capitation fund of NHI has improved health promotion activities of PHC in South Tangerang City. However, in line with the findings of other studies, improvement of budget does not necessarily result in an increase in financial support for all PHC programs. Availability of more funding does not guarantee the equitable improvement of resources across all the PHC programs. Some programs benefited more than others. Therefore, equity is an important aspect to ensure that all PHC programs receive an adequate allocation from the improved budget.<sup>13</sup> Furthermore, disproportionate shares of the budget among programs affected the number of activities undertaken by the staff. The number of activities conducted by the staff will determine the number of their service incentives. Therefore, inequitable budget allocation indirectly leads to the different amount of service incentives and triggers jealousy among PHC staff.

Different amount of service incentives could negatively influence the staff's satisfaction. Review of current regulation about the calculation of service incentives is perceived important by PHC staff since it is considered less fair and inappropriate with the current working situation on PHC. Similar findings from the previous study conducted in Karangasem District suggested that staff of PHC in this District perceived that the scores given for each type of health workers was inappropriate and could diminish interaction among staff.<sup>14</sup>

Financial incentives may affect healthcare performance at PHC, but it could also be potentially harmful to the working environment.<sup>4</sup> Incentives providing mechanisms should be undertaken cautiously as there is limited evidence to support the use of financial incentives for improving the quality of PHC services over the longer term.<sup>15,16</sup> Performance-based financial incentives could change the staff's work ethic. PHC staff prefer to take paid activities and avoid activities with no incentives. This practice resulted in a shifting of the organization culture.<sup>17,18</sup>

A complex effect of budget improvement on human resources has a significant implication for health care, as human resource is one of the main aspects of health care and it could influence other health care components.<sup>3,19</sup> If the negative impacts of improved budget on human resources are not seriously overcome, it could lead to a decrease in staff quality of work, working satisfaction, bad communication, and consequently lead to poor health-care provision for the community.

PHCs in Buleleng District could have different results if compared to other PHCs. Therefore, the results of this study can be used as a theoretical reference on the intervention in a similar context or situation. Study replication in other locations could produce different results, and considering the design of this study is a case study, it is premature to make any conclusive deductions.

#### Conclusion

Increasing PHC's revenue in the NHI era coincides with improved performance in both program and management coverage, but there are still some problems and barriers that have a negative impact. Human resources are affected by the increase in PHC's budget. Considering that human resources are an integral aspect of the health system, the relevant actors need to make efforts to minimize the negative impact and inhibiting factors in order to have an optimum and profitable increase in the budget for the implementation of health care services at PHC in Indonesia.

## References

- Rokx C, Schieber G, Harimurti P, Tandon A, Somanathan A. Health financing in Indonesia, a reform road map. Washington DC: The Wordl Bank. 2009.
- Kementerian Kesehatan Republik Indonesia. Keputusan Menteri Kesehatan Republik Indonesia nomor: 494/Menkes/SK/IV/2010 tentang petunjuk teknis bantuan operasional kesehatan. Jakarta: Kementerian Kesehatan Republik Indonesia; 2010.
- 3. Roberts M, Hsiao W, Berman P, Reich M. Getting health reform right.

Oxford: Oxford University Press; 2002.

- Franco LM, Bennett S, Kanfer R. Health sector reform and public sector health worker motivation: A conceptual framework. Social Science & Medicine. 2002; 54(8): 1255-66.
- McDonald R, Harrison S, Checkland K, Campbell S. M. Roland M. Impact of financial incentives on clinical autonomy and internal motivation in primary care: Ethnographic study. BMJ. 2007; 334 (7608): 1357-62.
- Gosden T, Forland F, Kristiansen I, Sutton M, Leese B, Giuffrida A, et al. Capitation, salary, fee-for-service and mixed systems of payment: Effects on the behaviour of primary care physicians (Review). Cochrane Database of Systematic Reviews. 2000; (3): 1–25.
- Musgrove P, Creese A, Preker A, Baeza C, Anell A, Prentice T. The world health report 2000: Health systems: Improving performance. Switzerland: World Health Organization; 2000.
- Australia Indonesia Partnership For Health Systems Strengthening. Pembiayaan kesehatan dan cakupan kesehatan semesta. Jakarta: Kementerian Kesehatan Republik Indonesia. 2015. Available from: http://aiphss.org/wp-content/uploads/2015/09/Policy-notes-Bahasa-WEB-PEMBIAYAAN-KESEHATAN-DAN-CAKUPAN-KESEHATAN-SEMESTA-K.-NOTA-KEBIJAKAN-1.pdf (2015).
- Fleetcroft R, Cookson R. Do the incentive payments in the new NHS contract for primary care reflect likely population health gains? Journal of Health Services Research & Policy. 2006; 11(1): 27–31.
- Smith PC, Mossialos E, Papanicolas I. Performance measurement for health system improvement experiences, challenges and prospects. Denmark: World Health Organization; 2008.
- Tomasi E, Facchini LA, Maia M de FS, Fatima MD, Maia S. Health information technology in primary health care in developing countries : A literature review. Bulletin of the World Health Organization. 2004; 82(11): 867–74.
- Nurmansyah MI, Kilic B. Impact of national health insurance policy towards the implementation of health promotion program at public health centers in Indonesia. Kesmas: National Public Health Journal. 2017; 11(3): 103-10.
- Pay DMN, Sinaga M, Pelokilla MR. Utilization of health operational assistance (BOK) in nutrition services in public health center. Jurnal Kesehatan Masyarakat. 2017; 12(2): 313–22.
- Hendrayani NWA, Indrayathi PA, Wijaya IPG. Persepsi Pegawai Puskesmas tentang sistem pembagian jasa pelayanan Jaminan Kesehatan Nasional (JKN) di Kabupaten Karangasem. Public Health and Preventive Medicine Archive. 2015; 3(2): 158–66.
- Scott A, Sivey P, Ouakrim DA, Lisa W, Naccarella L, Furler J, et al. The effect of financial incentives on the quality of health care provided by primary care physicians. Cochrane database of systematic reviews (Online). 2011; 9: CD008451.
- Oxman AD, Fretheim A. Can paying for results help to achieve The millennium development goals? Overview of the effectiveness of resultsbased financing. Journal of Evidence-Based Medicine. 2009; 2(2): 70– 83.
- 17. Chaix-Couturier C, Durand-Zaleski I, Jolly D, Durieux P. Effects of financial incentives on medical practice: Results from a systematic review of the literature and methodological issues. International Journal for Quality In Health Care: Journal of the International Society for Quality

in Health Care. 2000; 12(2): 133-42.

- Scott T, Mannion R, Davies HTO, Marshall MN. Implementing culture change in health care: theory and practice. International Journal for Quality in Health Care. 2003; 15(2): 111–18.
- Hogg W, Rowan M, Russell G, Geneau R, Muldoon L. Framework for primary care organizations: The importance of a structural domain. International Journal for Quality in Health Care. 2008; 20(5): 308–13.