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Qualitative Research

The National Health Insurance System of Indonesia and primary care physicians' job satisfaction: a prospective qualitative study

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Abstract

Background: The implementation of the National Health Insurance System (NHIS) in Indonesia has been changing the primary care physician (PCP) work condition and their job satisfaction.
Objective: This research aimed to explore the reasons behind PCPs' satisfaction and dissatisfaction with job satisfaction's aspect under the NHIS reform.
Methods: We conducted an exploratory qualitative study within two areas in Central Java, Indonesia, using semi-structured in-depth interviews with 34 PCPs and 19 triangulation sources. We conducted both inductive and deductive analyses by the NVivo 11.
Results: Most PCPs felt dissatisfied with the following aspects of the NHIS: referral system, NHIS health services standard, NHIS programmes, performance evaluation and pay-for-performance, relationship with patient and workloads. PCPs felt constrained with the referral regulation and non-specialist diagnoses, which led to dissatisfaction with performance evaluation and the pay-for-performance implementation. Furthermore, an increase in workload and conflict with patients resulted from patients' misunderstanding the NHIS health service procedures. However, PCPs felt satisfied with the chronic disease management programme and patients' appreciation.
Conclusions: This study presents the reasons behind PCPs' satisfaction and dissatisfaction with job satisfaction's aspect under the NHIS reform. There is a need for additional discussion among all stakeholders (Ministry of Health, Social Security Agency for Health/SSAH, primary health care and physician's professional organizations about the non-specialist diagnoses list, performance evaluation and pay-for-performance). The government and SSAH need to improve the communication and socialization of the NHIS procedures/regulations.

Lay summary

In 2014, Indonesia implemented a National Health Insurance System (NHIS). The reform affected the primary care physicians' (PCPs') work conditions and job satisfaction. This qualitative study explored the reasons behind PCPs' satisfaction and dissatisfaction with the job satisfactions' aspect in the NHIS. We interviewed 34 PCPs and 19 triangulation sources in Semarang City and Demak Regency (Central Java). Findings showed that most physicians felt dissatisfied with the

Key Messages

- The PCPs were dissatisfied with non-specialist diagnoses and referral regulation.
- The PCPs criticized the indicators and punishment of the performance evaluation.
- The PCPs received a lack of and great appreciation from the patient/community.
- The PCPs' workload increased due to the additional new NHIS programmes.
- Improved socialization on NHIS procedures and regulations were needed.

NHIS referral system, health services standard, some NHIS programmes, performance evaluation and pay-for-performance, relationship with patients and workload. Mostly, the patients–PCPs' conflicts were due to the misunderstanding of the NHIS health service procedures. However, the PCPs also received patients' appreciation. For improving the reform implementation and PCPs' job satisfaction, the physicians' concerned, leading to dissatisfaction, must be addressed.

Key words: Health care reform, job satisfaction, national health insurance, primary care physicians, primary health care, qualitative research.

Background

Patients' and physicians' satisfaction are important quality indicators in health care. Physicians' satisfaction and wellness contributes to patient satisfaction and health system quality (1). Work condition, personality, value and social influence all help to determine job satisfaction (2). For example, China health care reforms transform community health services as gatekeeper, created physicians' work conditions changes, which changed their job satisfaction (3,4).

In 2012, a small number of primary health care (PHC) facilities in Indonesia served Askes health insurance (for civil servant, armed forces and police) patients, which paid by capitation system (5,6), and had a low satisfaction level with the system (7). While, about one-third of the Indonesia population did not have health insurance. To reach universal coverage, the government launched a National Health Insurance System (NHIS) in 2014 and the Social Security Agency for Health (SSAH) organized the funding (8,9). This motivated health care providers to have contracts with SSAH.

With the NHIS, the work conditions changed for health care providers, including primary care physician (PCPs). Majority of PHC facilities' payment systems were changed from fee-for-service (FFS) to the prospective capitation system. They must follow the health services standard stricter than before, e.g. national formulary and tiered referral system (8–10). As gatekeepers, the PCPs must be able to handle patients completely and independently with a non-specialist diagnoses list, which adopted as a tiered referral procedure (11–13). In 2016, the performance evaluation and pay-for-performance (P4P) was piloted in the government-owned PHC facilities in all capital cities of Indonesian provinces (including in Semarang City, one of the study area). The P4P indicators were contact rate (illness and preventive visits, minimum 15%), non-specialist referral ratio (maximum 5%) and chronic diseases management programme/program pengelolaan penyakit kronis-Prolanis (minimum 50%) (14). Furthermore, the SSAH launched new health programmes in PHC facilities: home visit, medical history screening and Prolanis (15,16).

This study was conducted in Demak Regency and Semarang City, Central Java Province, Java Island. The SSAH Semarang Main Branch office coordinated the NHIS in these areas. The PCPs working number in the province was the highest in Indonesia (17), nevertheless the physicians density was 0.13/1000 population (18). Moreover, health indicators in the area were unsatisfactory. The incidence rate (IR) of dengue haemorrhagic fever (DHF) in Demak Regency (54.63) and Semarang City (188.68) was higher than the province's value, 43.3/100 000 population (19). Additionally, Semarang City's IR of DHF was higher than Indonesia's, 78.85/100 000 population (18). The case fatality rate of DHF in Demak Regency (1.3%) and Semarang City (1.72%) was higher than the national standard, 1% (19). Maternal mortality rate per 100 000 live birth in Semarang City, 121.50, was the third highest in the province (20), while Demak Regency was 72.53 (21). Further, PCPs' satisfaction in a study showed moderate levels, 3.19 out of 5.00. The single-handed physician had the highest satisfaction score, followed by PHC clinic, health centres with and without inpatient care physicians. The PCP who had a managerial task felt more satisfied than those who did not (22).

Objectives

This study aimed to explore the reasons behind PCPs' satisfaction and dissatisfaction with job satisfaction' aspects under the NHIS reform.

Methods

Study design

This was an exploratory qualitative study with in-depth interviews. A Bahasa Indonesia semi-structured guideline was developed based on a previous research questionnaire (22). Open-ended questions were included by asking the participants why they were satisfied/dissatisfied with 19 job satisfaction's aspects (Supplementary 1). We conducted an interview trial (March 2016) in the Semarang Regency (similar characteristic and coordinated by the same branch office of SSAH in 2014–2015) and revised the guideline.

Data collection

We recruited participants from a previous quantitative survey study purposively (22). Inclusion criteria were PCPs who participated in the previous study, worked for at least 3 months in PHC facilities, which had provided health services for NHIS members for at least 3 months. We recruited PCPs with characteristic combinations based on areas (Demak Regency and Semarang City), practice type (PHC

clinics, single-handed practitioners and government-owned PHC facilities—health centres with and without inpatient care) and work descriptions (only as physician, having a managerial task, manager and owner). Data collection was finalized when the interview results were saturated (34 PCPs). For checking the credibility, the results were compared with 19 triangulation sources: heads of health centres (four people), regional health officers (nine people), heads of physicians professional and health care organizations (five people) and the SSAH officer (one person).

The face-to-face interviews were conducted in Bahasa Indonesia, audio recorded (15–100 minutes) by the first author and a team in the PCP's practice place (April–June 2016). The team was trained by the first author on how to use the guideline and develop questions.

Data analysis

Recorded interviews were transcribed and anonymized before identifying the initial codes. All transcripts were analysed in Bahasa Indonesia. This study used a content analysis approach (23), iterative process and NVivo version 11 (QSR International Pty Ltd). The first author created initial codes and second author added the codes. Main codes were analysed deductively (based on the job satisfaction's aspects in guidelines) and inductively (for additional aspects, Supplementary 1). The main codes were divided into subcodes (satisfaction and dissatisfaction feeling) and broken down inductively into the PCPs' satisfaction reasons codes. The intercoder reliability test between the two coders (Cohen kappa) was 0.92, indicating a nearly perfect agreement (24). We also checked with triangulation data source. Four transcripts (from participants and triangulation sources) were translated into English for discussion with other authors. In the Result section, we only showed five most discussed aspects by the participants and related aspects.

Results

Table 1 describes the participants' characteristics. Table 2 shows all reasons and Table 3 shows the selected quotations.

Referral system

All participants expressed their dissatisfaction with referral system in the reform. However, 20 participants simultaneously expressed their satisfaction, e.g. the hospitals' way for accepting patients properly.

The participants reported feeling of constrained by many and unstable referral regulations, i.e. the diagnoses list on PCP's competence/non-specialist diagnoses must be treated in the PHC facilities, tiered referral system and referral destination mapping. Three participants expressed difficulty with not being able to directly refer patients to a tertiary hospital, but three participants agreed that the tiered referral system for reducing patient overload in hospitals. Moreover, PHC facilities could only refer the patients to the nearest, specific, pre-selected destinations (referral destination mapping rule). The PCPs and patients refused the rule, and SSAH revoked the regulation.

Then, seven participants were confused with the differences referral letter validity period in hospitals. Many patients repeatedly asked for referral letters from PCPs because the internal hospital referral was not well implemented.

NHIS health services standards

The PCPs were asked about non-specialist diagnoses that must be treated in PHC facilities, medicines and diagnostic examination. Twenty-five participants complained about the non-specialist diagnoses regulation. They argued that some cannot be treated in PHC facilities and must be referred to hospitals (i.e. DHF, HIV/AIDS, hepatitis, essential hypertension, myopia, hypermetropia, presbyopia and tetanus) due to a lack of medicine provided and formulary in PHC facility. They also needed further diagnostic examinations to confirm the diagnoses and pay for those.

PHC facilities, physician's professional organizations and the regional health office made a new agreement, then proposed to SSAH to reduce the number of diagnosis that must be treated by PCPs. However, according to a triangulation source, the acknowledged ability to treat a disease should be based on the PHC facility's type, which would require more time and discussions.

Table 1. Characteristic of the primary care physicians (n = 34) included into the data collection between April and June 2016 in Semarang City and Demak Regency, Central Java province, Indonesia

No.	Description	Semarang City	Demak Regency	N
1	Type of practice			34
	Health centre without inpatient care	7	2	9
	Health centre with inpatient care	2	4	6
	PHC clinic	10	1	11
	Single-handed practice	6	2	8
2	Working description			34
	As physicians, manager and owner	10	2	12
	As physicians and manager	3	3	6
	As physicians and having managerial task	5	1	6
	Only as physicians	7	3	10
3	Age (years old)			34
	Until 30	2	0	2
	30–45	9	4	13
	45–60	9	5	14
	Above 60	3	0	3
	Missing data	2	0	2
4	Sex			34
	Male	9	5	14
	Female	16	4	20

Table 2. Reasons behind primary care physicians' satisfaction and dissatisfaction towards specific aspects of job satisfaction (April–June 2016)

No.	Aspects	Satisfaction			Dissatisfaction		
		Reason of satisfaction	P1	P2	Reason of dissatisfaction	P1	P2
1.	Referral in NHIS era	– The existence of a tiered referral	3	20	– It was unstable, complicated and limitations in the number of referrals (including, non-specialist referrals)	10	34
		– The presence of referral destination mapping rule (bring health care closer to patients and especially in Demak Regency)	4		– Non-specialist diagnoses that must be treated in PHC facilities and the requirement of maximum results by minimum standards facilities in PHC facilities	27	
		– The referral destination mapping rule removal	8		– The use of the P-care system for the referral	7	
					– The difficulty of tiered referral implementation	3	
		– The length of the referral letter validity period	4		– The difficulty of implementation of the referral destination mapping rule	13	
		– Hospitals were willingly accepting referred patients (i.e. excellent communication when the PCP will refer the patient)	11		– Differences in length of referral letter validity (differences rules between hospital and the unstable rules)	7	
		– Proper implementation of counter referral	5		– Unsatisfactory hospital acceptance (i.e. full hospital capacity, differences in hospital policies, arguing with hospitals staff about the rules), miscommunication between PHC facilities and hospital	10	
		– Proper implementation of internal referral within hospitals	2		– Poor implementation of counter referral (i.e. no counter referral letter, incomplete information in counter referral letter, the patient forgot or did not give counter referral letter back)	17	
					– Poor implementation of internal referral within hospitals	13	
					– Performance evaluation by SSAH, especially the limitation on the number of referrals, diagnoses based on the results of the hospital and there was no feedback from SSAH	10	
2.	Health service standard, for NHIS patient for instance non-specialist diagnoses, formulary and coverage of diagnostic examination	– *The rule stating that non-specialist diagnoses must be handled at PHC facilities*: the rule is appropriate on PHC facilities with inpatient care	11	25	– *The rule stating that non-specialist diagnoses must be addressed at PHC facilities*: some diseases which are included in the non-specialist diagnosis being outside PCPs' competence, e.g. DHF, HIV/AIDS, hepatitis, essential hypertension, myopia, hypermetropia, presbyopia, and tetanus	25	31
		– *The rule stating that non-specialist diagnoses must be handled at PHC facilities*: the new agreement regarding the rule	6		– *Laboratory*: the lack of laboratory equipment and examination coverage, and costing some laboratory examinations through the capitation fund	13	
		– *Laboratory*: enough[a]; good laboratory examination coverage[b,c]; could refer the patient to the laboratory which cooperates with SSAH[d] and the laboratory examination system	10		– *Medicine*: dissatisfied with national formulary (i.e. lack of drug types, lesser good drugs, different content between the national formulary and the MOH regulation for health centres)	19	
		– *Medicine*: no problem exists with the formulary[b], additional types of medicine on the national formulary every year and different types of drugs (either generic or patent) are the same, there are many factors for curing the diseases	11		– *Medicine*: running out of drugs stock (i.e. Prolanis drugs, no existing generic drugs, besides patented drugs and out of stock of the drug at the supplier) and the drug procurement system using e-catalogue (public health centre)	10	
		– *Medicine*: the ability to add others type of drug outside the national formulary[d]	4				
		– *Medicine*: sufficient regulation for using capitation for purchasing drugs[b]	1				
		– *Medicine*: adequate drug stock	3				

Table 2. Continued

No.	Aspects	Satisfaction			Dissatisfaction		
		Reason of satisfaction	P1	P2	Reason of dissatisfaction	P1	P2
3.	Performance evaluation and P4P by SSAH	– The existence of evaluation – The evaluation indicators – The evaluation results – The reward and punishment	8 4 3 1	12	– *System and method of evaluation*: not considering the input, only the output and the evaluation which was not provided by PHC facilities groups according to the number of NHIS participants in each facility – *Evaluation indicators*: contact rate (especially regarding the number of illness visits), home visit, non-specialist referral ratios and Prolanis indicators – *Evaluation target*: number of referrals target (there were many numbers of patients with specialist diagnosis) and home visit target (with the lack of worker and time) – *Evaluation results and explanations* – Not using the new agreement for the calculation of non-specialist referral – Differences in the number of non-specialist referrals by PHC facilities and SSAH – Differences between the initial diagnosis by PHC facilities and the final diagnosis by hospital physicians, and incomplete diagnosis writing by the hospital – Error reading of indicator result by SSAH – No detailed explanation of the results of the poor assessment – *Reward and punishment*: there were no rewards, nominal capitation reduction (P4P) and termination of the contract with SSAH; implementation of the P4P only in Semarang City and the way nominal capitation reduction was determined by SSAH without the approval of the MOH	3 9 6 9 9	18
4.	Relationship with NHIS patients	– Having a good relationship and more frequent contact with the patient – Having no complaints from patients – Feeling happy when helping the patient – Most of the patients, patient's family and society appreciated the physicians e.g. the patient obeys the respondents' advice	6 5 1 19	22	– Having problems with patients, e.g. receiving patient's or provoking patient's anger, lack of appreciation from the patient, patient's family and society and patients not complying with respondent's suggestions, i.e. regarding referral procedures, patient therapy – Patient's misunderstanding regarding NHIS procedures, unrealistic patient request, i.e. asked for drugs, diagnoses examination, therapy and referral (i.e. ask to be referred to hospital/specialist without indication or diagnoses examination, to hospital type A or outside the area) the patient's misunderstanding about the counter referral letter	23 25	26
5.	Workload/task as NHIS physicians	– The existing workload corresponds to physicians' duty – The workload is not heavy – Balanced with the income – Physicians were able to cope with the workload, e.g. by having sufficient human resources to share the workload and extending practice hours duration	3 8 5 9	23	– High workload by a large number of patients with the low number of physicians and many additional tasks in the NHIS era, i.e. promotive and preventive care, Antenatal Care, dengue haemorrhagic fever (DHF), home visit, health history screening programme, administrative task and socialize NHIS procedure to patients – Workload as the frontline and inability to perform health services based on medical standards owing to the low capitation – The imbalance between the workload and the income owing to heavy workload[b], unideal salary as employees[c], unideal salary standard, additional tasks and a large number of patients – When PHC clinic and single-handed physicians carried out a health centre physicians' duty[a,d] – Health centre physicians got an overflow of patients from other PHC facilities, to perform laboratory examinations[c]	22 3 19 5 1	27

Table 2. Continued

No.	Aspects	Satisfaction			Dissatisfaction		
		Reason of satisfaction	P1	P2	Reason of dissatisfaction	P1	P2
6.	Health programmes in NHIS, for instance home visit, medical history screening, Chronic Diseases Management Programme(Prolanis), etc.	– The promotive and preventative health programme corresponded with their duties; and was already being carried out[b]	2	25	– The preventive and promotive activities do not get focus, due to the curative activities	9	30
					– There was no coordination between PHC facilities	3	
					Home visit		
		– *Home visit*: a good program, having enough human resources to do the home visit and the PHC facilities being able to execute the program well	14		– A different definition of the home visit (between old and new definition by SSAH; and between SSAH definition and MOH definition)	2	
					– The unimportance of home visit indicators (e.g. home environmental indicators)	5	
		– *Prolanis*: an excellent program, the PHC facilities being able to execute the program well and having enthusiastic patients	21		– Disagreeing with the target of the home visit utilized for performance evaluation	8	
					– Switching health centre's work to PHC clinic and single-handed physician[a,d]	4	
		– *Health history screening*: a good program and the PHC facilities being able to execute the program well	11		– Increasing the workload by recording all NHIS members (by collecting data about health environment of NHIS member's house, family health history, pregnancy history, etc. administrative, not clinical work) and taking much time to conduct the programme	14	
					– Obstacles for conducting the home visits, e.g. do not have all their NHIS member data (name and address), far away/scattered participants' house and resistance from participants	8	
					– The cost of the home visit is included in the capitation (i.e. transportation cost)	12	
					– The absence of follow-up of the programme	7	
					Prolanis		
					– Reduction of the number of treated diseases; of the laboratory coverage and being out of stock of Prolanis drugs	6	
					– Lacking the number of workers in serving the Prolanis participants	2	
					– Insufficient funds, e.g. funding from SSAH which was in the package was not counted based on the number of participants and number of activities	8	
					– Prolanis schedule	1	
					– Participants' hesitation to attend group education	1	
					– The Prolanis participants who are not a participant of NHIS anymore	1	
					Health history screening		
					– The opinion that it is the unimportant program, not understanding the purpose of health history screening, increase workload and no follow-up of the programme	8	
7.	Income	– Being thankful for the amount of income and the additional income (remuneration)	9	22	– Low amount of income and unideal physicians' income standard	8	25
		– A balancing between income and workload	5		– The imbalance between workload and income (see workload, aspect three of this table, dissatisfaction reason)	20	
		– A fair income (including remuneration) calculation system	3		– Unfair salary or income (including remuneration) calculation system for physicians in health centre with inpatient care (compared to physicians in other types of PHC facilities)[c] and PHC clinics (not count based on the number of patients, therapy and not related with capitation)[a]	8	
		– Satisfied with income from NHIS and giving service in outpatient care but not satisfied with the regional government regulation regarding inpatient care income[c]	2		– Experiencing inadequate income for managing the PHC facilities	7	
					– No extras payment outside capitation for additional work	2	
		– A balancing income from non-NHIS patients	1				
		– Sufficient for managing the PHC facilities	8				

Table 2. Continued

No.	Aspects	Satisfaction			Dissatisfaction		
		Reason of satisfaction	P1	P2	Reason of dissatisfaction	P1	P2
8.	Capitation system for PHC facilities	– Easier administration	1	19	– *The drawbacks of the capitation system*: unclear and invalid data on the number of NHIS members in PHC facilities; depends on the distribution of the number of NHIS members in PHC facilities and area; the changing of area responsibility of health centre, and overutilization owing to there was no contribution fees per patient's visit, i.e. a small amount of out of pocket payment when visiting PHC facilities	13	27
		– Income certainty[a,d]	1				
		– Additional income/more money for operational activities[b,c]	2				
		– Sufficient capitation nominal	5				
		– Better payment systems and saving the country finance	13				
					– Low nominal capitation with many limitations (i.e. not good drugs)	17	
					– The inclusion of promotive and preventive activities and some laboratory examination in the capitation	5	
					– Feeling restricted and less flexible by the regulations on the use of capitation funds[c,b], e.g. for promotive and preventive activities at the public health centre	2	
					– Other payment systems were better, i.e. fee-for-service, claims, and Coordination of Benefit (COB)	8	

P1: number of participants each reason; P2: total number of satisfied or dissatisfied participants.

[a]For the PHC clinic physician.

[b]For the health centre physician.

[c]For the health centre with inpatient care physician.

[d]For the single-handed physician.

Table 3. Selected quotations by aspects from the interview conducted from April to June 2016

Aspects of job satisfaction	Reason of satisfaction/dissatisfaction	Quotation of physicians and triangulation sources
Referral system	Dissatisfaction due to the diagnoses list on PCP's competence (non-specialist diagnoses) must be treated in the PHC facilities	'… That is why we pity them [the patients], because the patient really needs to be referred, but the diagnosis leads to something that should not be referred, while the clinical condition states that it is impossible for him not to be hospitalized. Thus, we will take the risk of being scolded, but the patient will be served and safe' (P7, HC, M)
	Satisfaction with tiered referral system	'… we make referral to any hospital other than [type A hospital-tertiary level]. I think this is good since it should be performed at each level…' (P6, HC, M)
	Dissatisfaction with tiered referral system	'… It may be good when it is implemented, but it may get complicated. For example, when we know that a patient must be treated in [type A hospital-tertiary level], he must still start his journey to treatment through C and B [secondary level] first' (P15, PHCC, M)
	Satisfaction with referral mapping	'...Mapping actually has a positive side, in bringing services closer between [patients'] home and the referral hospital…' (P1, HC)
	Dissatisfaction with referral mapping	'I do not agree with referral mapping since it is clearly disadvantageous to patients and not all patients agree to go to a hospital pursuant to their mapping…' (P2, HC) 'For me, it should be available anywhere. So, the hospital will compete [with other hospitals], they will give best service, and we also have more choices, unlimited' (P28,HCI)
	Dissatisfaction due to differences in hospital policies for referral letter validity period)	'…for the internal referral, sometimes the patients have to go back and forth… For example, the patient was referred to the eye department because the problem is in the eyes. However, if there is a complaint of dizziness, the oculist advices them to go to the internist. For the Internist consultation, they need to go back to the public health centre (to ask for the referral letter to the internist). Hence, there should be do by an internist in the hospital…' (P26, HC)
Health services standards for insurance patients	Dissatisfaction due to the diagnoses list on PCP's competence (non-specialist diagnoses) must be treated in the PHC facilities	'It is difficult. To take the example from 144, DHF: we cannot refer a patient with DHF to a hospital, except one with shock. Should I wait for the shock first? If without shock, I am not allowed to refer it, but I must be able to cure it, with my every effort…' (P14, PHCC, MT) 'Hmm… There are 144 diagnoses listed for class 4A [non-specialist diagnoses]. However, our facilities and ability cannot handle them. They must go to the hospital, but we cannot refer them' (P18, PHCC, MO)
	Opinion from triangulation source regarding PCP dissatisfaction due to the diagnoses list on PCP's competence (non-specialist diagnoses) must be treated in the PHC facilities	'… that, ideally, the diagnoses list should be based on the PHC facility type because there are differences between a health centre and a PHC clinic…I have faced difficulties with applying the different diagnoses list for each type of PHC facility on P-care [an online software system in PHC facilities]. However, I temporarily employ per regency and city'.... '… It has not been implemented yet, but has been planned and discussed with quality and cost control teams. It was previously suggested that not only the teams, but the health office, PHC facilities, and also specialists. So that there will be some guide. Then, what kind of DHF will be referable, what kind of DHF that should be handled? This cannot be determined unilaterally' (TS 19, SSAH)
	Satisfaction with medicine	'Family physician (single-handed physicians) do not depend on the formulary; they can use either a good medicine or the standard ones [national formulary]' (P34, SHP, MO)
	Dissatisfaction with national formulary	'… the formulary, some drugs are not the same as those from MOH regulation number 75…in the regulation, the health centre must have a nebulizer/fumigation, for asthma. But in the formulary, it is not permissible in PHC facilities. The medicines are in the referral services, so in the hospital. So, it seems there is no synchrony between the regulation and the formulary'.... (P26, HC)
	Dissatisfaction with diagnostic examinations coverage	'We cover for laboratory routine, urine routine test. So, if there is a patient, and we suspect the patient is suffering from Dengue or Typhoid, we send them for a laboratory test. That is our initiative, for me, who only have a few [NHIS] members, it is a bit difficult. …What I foresee if we are able to keep up with only a few participants?' (P21, SHP, MO)

Table 3. Continued

Aspects of job satisfaction	Reason of satisfaction/dissatisfaction	Quotation of physicians and triangulation sources
Performance evaluation and pay-for-performance (P4P)	Satisfaction with the existence of performance evaluation and P4P	'The evaluation will be useful. Thus, we may see which PHC facilities whole-hearted serves patients and which one does not' (P16, PHCC, MO)
	Dissatisfaction with contact rate indicator (unifying of illness and preventive visit target)	'There is a target for the number of patients and a certain number of visits. The purpose is to promote and prevent by reducing the number of illness visits. However, the number should be high. The goal is that we must have many visits, a high number of patients. It means that there must be many people ill. Then, what are the promotion and preventive service for?' (P3, HC, MT)
	Opinion from triangulation source regarding contact rate indicator (unifying of illness and preventive visit target)	'…The contact rate was 150 per mil, or 15%. Many people incorrectly think that the greater number of sick people, the higher my grade will be … The contact rate refers not only to illness visits but also to preventive visits. When the illness visits are low, this is good; then improve your preventive visits' (TS 19, SSAH)
	Dissatisfaction with non-specialist referral ratio indicator	'…For example, if we have a diabetic patient that cannot control their blood glucose, the reason why can be difficult to diagnose. It is type 2 diabetes, but despite education and treatment, the levels do not decrease, it may be due to lifestyle… but we cannot refer the patient because it is included in the 155 [non-specialist diagnosis]. …we need to set what a level of complication [in P-care system and referral letter]. However, we will get a warning [in the evaluation] because our specialist referral ratio increases' (P25, SHP, MO)
	Dissatisfaction with the evaluation results and the SSAH's explanations	'SSAH follows the diagnosis from the hospital, like diabetes, if the hospital writes E11, we will get [the bad mark]. Whereas [according to us] E11 accompanied by complication. E11 is pure diabetes' (P25, SHP, MO)
Relationship with patients	Satisfaction with relationship with patient	'Yes, they do [respect the physician]. People who live in the village, well, like that…sometimes they give shallot, sometimes fruits. They do it not to exchange tool or payment, but because they feel glad to do it' (P33, SHP, MO)
	Dissatisfaction due to referral request from patient	'They sometimes treat us like a clerk and request for referral without conducting any check-up, or they [patient's family] request the referral, but the patient didn't come…However, since they do not know the procedures, we try to explain them, but they often get angry' (P9, HCI)
		'…They said, "I will take you to court if something happens to my child". Rather than wreaking havoc, I gave the referral. It was only a cold; actually, we should have treated it first…' (P24, SHP, MO)
	Opinion of triangulation source about referral request from patient	'Yes, actually it is our [IDI] hard task because this [condition] involves the physician… The community must realize that the referral is the physicians' right, not the patient's right. Education to NHIS members is still lacking. This should be the government's task and NHIS. However, the SSAH for Health must run both…This sector have not worked yet, seriously…This condition would be a boomerang, and it blames the physicians' (TS 3, IDI)
Workload	Satisfaction with workload because the PCPs were able to cope with the workload	I: 'If there are many NHIS patients, how do you deal with it?' P: 'Well, because I am the single medical doctor here, I am making my paramedics help me. If there is nothing complicated, if it is mediocre, there are no complications whatsoever, according to the nurse's competence. But I monitored it. Delegation of authority'…. (P26, HC)
	Dissatisfaction due to the high number of patients with low number of physicians	'If there were 200 patients. Sometimes there are 200 patients and I am in a meeting. In this practice, there are only two physicians, so one physician would have 100 patients' (P6, HC, M)
	Opinion of triangulation source about the high number of patients with low number of physicians	'… If we talk about the shortage, it is not only by this [NHIS policy], since there were shortages for a long time, the number of physicians is very insufficient. Ideally, like I said before [1 physician for 5000 NHIS member]'…. (TS 15, HO)
National Health Insurance System programmes	Satisfaction with Chronic diseases management programme (Program pengelolaan penyakit kronis/Prolanis)	'Satisfied for only the Prolanis' (P18, PHCC, MO)
	Dissatisfaction with home visit programme	P: 'Like home visit, that is asked, something [the indicator which must be assessed] irrelevant to us, general practitioner' I: 'the environment [assessment]?' P: 'This should be an environmental health officer.... health centre, many health care jobs are charged to us. Yes, but we, yes it's okay…'

Table 3. Continued

Aspects of job satisfaction	Reason of satisfaction/dissatisfaction	Quotation of physicians and triangulation sources
		(P18, PHCC, MO)
	Opinion of triangulation source about home visit	'The home visit, in the past, only post-hospitalization Prolanis patients were visited, and the patient who did not come for education for three consecutive times. This is only a few. We touch only [the NHIS member] who are sick but getting sick again after hospitalization, and do not come for three months because of their illness. For example, I expect to touch these untouched 800 people [of 1,000 JKN members in the PHC facilities]. Considering counselling, we cannot ensure that these 800 people will come only for counselling. I expect the home visit program reach them' (TS 19, SSAH)
	Dissatisfaction with medical history screening	I: 'Mm…medical history screening, you mean?' P: 'It should be done before they join with SSAH, actually. It is just like joining an insurance scheme. Instead, it is done afterwards. It seems to be useless' (P23, SHP, MO)
	Opinion of triangulation source about medical history screening	'… Everything is there [jobs are in SSAH] and then will be bestowed to PHC facilities. Actually, not like that. I think, as long as my colleagues [physicians] could do it simultaneously, it is okay…You have to remember the history. When the SSAH is opened, many people registered, for days, there is scalper, extraordinary. So, they [SSAH] felt difficulty, but it should be changed for the next' (TS 3, IDI)
Income	Satisfaction with additional income in NHIS	'…If it is about the system, it is better before the NHIS but considering the compensation, it is better after it...It increases the income, we are all aware of that, but, we still get confused with the system'… (P31, HCI, M)
	Dissatisfaction regarding income for managing inpatient care facilities	P: '… There is a local regulation about the renting room; we give it back to the regional government… It has been increased. It used to be 100…' I: 'Is 120 covered all services?' P: 'It can be said that this is the value. The food, the beverage. Can you imagine when the patient asks for the total cover is 100, including the medicine and laboratory?' (P31, HCI, M)
	Dissatisfaction with imbalance between workload and income	'…health centres with no hospitalization facilities will automatically have less workload, but they receive greater fees than us. Their capitation [in health centre without inpatient care] is higher even though we receive the same amount of capitation income. There are more employees here because of the hospitalization facilities, which means that the funds must be divided among more people. I am dissatisfied with that discrepancy…' (P9, HCI)
Capitation system	Satisfaction because the capitation generated additional income and more funding for operational activities	'I am satisfied with the NHIS, there is more funding for operating activities.…Capitation is not fully distributed to employees, only 60% is distributed, and 40% for operating activities. We may automatically buy better medicines and necessary equipment. We may freely allocate it for operating activities... Before, we have been relying only on the regional budget'....(P9, HCI)
	Dissatisfaction due to the unclear and invalid data on the number of NHIS members in PHC facilities	'…KIS (the name of NHIS card) is given at the end of this year, which data is verified. A week later, after usage, it becomes inactive.. Around 8,000, We were told to give socialization, but I refused. I did not cut it; I have to treat 8,000, I refused. I can provide the service when the patients are active, but if they are not…' (P31, HCI, M)

P: Participant; TS: Triangulation Source; I: Interviewer; HC: health centre; HCI: health centre with inpatient care; PHCC: PHC clinic; SHP: single-handed practice; M: manager; MO: manager and owner; MT: having managerial task; SSAH: SSAH officer; HO: health officer, IDI: Ikatan Dokter Indonesia/Indonesian Medical Association.

Half of the participants felt dissatisfied with the lack of drug types in national medicine formulary. The government-owned facilities could not provide other medicines outside the formulary. However, four PHC clinics and single-handed physicians were satisfied for able to provide medicines outside the formulary. PCPs who were facility owners felt dissatisfied since they were obligated to pay medicines and diagnostic examinations that were not covered by SSAH.

Performance evaluation and P4P

Twelve PCPs were satisfied with the P4P evaluation, indicators and results. However, 18 participants criticized the evaluation. Nine PCPs disagreed with some indicators, e.g. contact rates because unifying illness and preventive visits target contradicted the preventive and promotion concept. This encouraged to increase not only preventive but also illness visits. However, a triangulation source debated that the PHC facilities had to decrease their illness visit by improving their preventive visit numbers.

In line with their dissatisfaction with previous aspects, they did not agree with the non-specialist referral ratio indicator. If they had a patient with a non-specialist diagnosis who should be referred, they sometimes had to choose to refer the patient even if would receive a poor assessment and reduce their nominal capitation (for PHC facilities which implemented P4P). Moreover, participants were dissatisfied with the evaluation results and the SSAH's explanations, such as using the diagnosis from the hospital as the non-specialist referral. Furthermore, the SSAH invited the PHC facilities to clarify the results every month.

Relationship with patients

Twenty-two PCPs agreed that they had good relationships and received great appreciation from most patients/their families/society. However, there were also patient–physicians' conflicts (26 participants). The lack of patients' information and misunderstanding regarding NHIS procedures were the main reasons. Patients often asked diagnostic examination, medicine, therapy and referral that were not appropriate and necessary for them.

Workload

Twenty-two participants reported their dissatisfaction regarding high workload (e.g. treating 50–150 patients/day after the NHIS implementation, especially in government-owned PHC facilities). Further, the PCPs had more administrative tasks, had to perform the NHIS socialization and conducted new health programmes in NHIS. The complaint was caused by the PCPs limited number. Even though, nine PCPs could handle their workload by prolonging their work hours and/or delegation health services to nurses and midwives, especially in health centres.

Health programmes in NHIS

The participants appreciated the new programmes in NHIS, especially Prolanis. However, they felt difficulties with the home visits and medical history screening programmes.

Almost two-thirds of the participants complained of the home visit programme. They criticized that the SSAH's programme definition differed from that of the Ministry of Health (MOH). The latter stated that the PHC facilities should only visit post-hospitalization and postpartum patients, while the SSAH main branch office stated that they should visit all NHIS members (included those who never come to the PHC facilities). Additionally, there were no additional funds to cover transportation and employees' fees regarding home visits.

Income

Nine participants were satisfied with the income because they had higher incomes with the NHIS introduction. However, one health centre with inpatient care physician reported that the income was not enough for managing inpatient care facilities. The daily claim for inpatient care was 120 000 Indonesian rupiah (Rp; US$ 8.41; the percentage of total health expenditure of gross domestic product was 3.1%, in 2018 (25)), with a maximum of 3 days stay. It was supposed to cover all care services (patients' room, medicine, laboratory, food, etc.). There was dissatisfaction with the removal of the fee for labour and visiting of hospitalized patients. A triangulation source explained that the inpatient care claim from SSAH must be submitted to the government, mixed with the regional income and returned to the health centre through the health programmes funding.

Twenty participants reported an imbalance between workload and income. While, eight participants believed that there was an fair income calculation system, e.g. capitation funding between health centres with and without inpatient care.

Capitation system

Nineteen PCPs were satisfied with the capitation system (easier administration, more income certainty, etc). For health centre, this system generated additional income (60%) and operational activities funding (40%). It was difficult, however, to use these 40%, which should be divided into 30% for medicine, medical equipment and consumables (in reality, the fund creates a surplus due to sufficient funding from other funds) and 10% for operational activities, i.e. office stationery and home visits with a specific distance.

Additionally, the number of NHIS members in Demak Regency was not exactly clear. A health centre physician and a triangulation source said that in 2016, about 43 000 people (contribution assistance beneficiary) were removed from the NHIS by the Social District Office, without notification. This caused confusion for the individuals and the health centre. In addition, some PCPs complained about the low nominal capitation and the unfairness of the nominal capitation amounts between different types of PHC facilities.

Discussion

All participants were dissatisfied with the referral system. The tiered referral system regulation was launched and inappropriately implemented before the NHIS (9) due to patients' behaviour, payment system, physicians' competences, inadequate infrastructure and referral administration (13,26–28).

In line with our study, previous studies stated that many patients are not confident about the PCP's ability and prefer directly meeting a specialist (26,29). This behaviour may owe to the FFS payment system before the NHIS reform and the patients chose the health care facilities' level freely. Similarly, free choice to consult to specialist was a first barrier for introducing a family medicine concept in Hong Kong (30). However, 3 years later, there was a higher score of first contact-utilization in Hong Kong than in Shanghai (without referral system) (31).

During the reform, patients often ask for a referral letter from PHC facilities. About 10% of the referral reasons were the patients' request, which is a significant factor for inappropriate referral (27). This situation increases referral ratios and results in patient–PCPs'

conflicts. Moreover, about 25% of the non-specialist diagnoses were ultimately referred to hospitals (27), and Indonesian PCPs felt confident to treat only one-third of these diagnoses (28). The regulation comprised an additional criterion to refer patients with non-specialist diagnoses, namely the Time–Age–Complication–Comorbidity and inadequate facility conditions (13,32). In our study, PCPs complained that some of these diagnoses could not be handled in the PHC facilities due to the lack of facilities. This to be particularly true regarding PHC facilities without inpatient care (8,13,28). Further, dissatisfaction with the non-specialist diagnoses list owed to performance evaluation and P4P, specifically the target of outpatient non-specialist referral ratio indicator (14).

The P4P was a relatively new system in Indonesia, except for a small number of discontinued pilot projects (10). After 2 years, a research showed that the P4P within health centres increased the contact rate, number of visits, Prolanis patient's visit ratio and reduced the referral ratio, even if not for non-specialist referral (33). However, China, which launched the health care reform in 2009 and achieved universal coverage in 2020, reduced antibiotic prescription by applying capitation with P4P system (34). Furthermore, dissatisfaction regarding the integrated calculation of the number of illness and preventive visits in contact rate indicator because that was not consistent with the gatekeeper function of PHC for promoting and preventing illnesses (14,35).

The NHIS increased the probability and mean number of inpatient and outpatient admission (8,36). PCP's felt overloaded with the increased number of patients, then they delegated services to nurses/midwives, especially in health centres (26) and our study corroborated this finding. Moreover, this could be due to the low ratio of physicians/1000 population in the province (0.13). Therefore, based on data from the SSAH Semarang Main Branch Office and health office, the ratio of PCPs serving NHIS members/1000 NHIS members in Semarang city was 0.218 in 2016 (20). The ratio was much lower than the World Health Organization recommendation, 1 physician/1000 population (37).

Many PCPs stated in our study that the nominal capitation was low. The nominal capitation in PHC clinics and single-handed practices were lower than the values from a study which used real fare and utilization. However, vice versa for the health centres (14,38). Moreover, the nominal capitation included home visit costs (i.e. for transportation) (14), while the previous study did not include the costs (38).

Strength and limitation

This study focuses mainly on PCPs' satisfaction after NHIS implementation. The study limitation was the exclusion of patient and hospital's physicians as triangulation sources. While, some of the PCPs' dissatisfactions were due to their relationships with patient hospital coordination, especially regarding referrals. Moreover, the results of this study were not representative of the population outside the study area. Additionally, this study's participants were PCPs with different roles, which could differ in how they felt towards their job satisfaction.

Conclusion

The most dissatisfied aspects in NHIS era were the referral system, NHIS standards implementation (especially the non-specialist diagnoses list), NHIS programmes, the performance evaluation and P4P, patient–physician relationship and workloads. However, they were satisfied with the Prolanis programme and patients' appreciation.

Our results led to the following recommendations: further discussions need to be held about the non-specialist diagnoses list, performance evaluation and P4P between physician and PHC organizations, MOH and SSAH. Non-specialist diagnoses should be differentiated between PHC facilities types and applied in P4P calculation. Moreover, the illness and preventive visits number in evaluation indicator should be separated, giving minimum value for the preventive visits number. The NHIS procedures/regulations socialization also needs to be improved by the government and SSAH for minimizing the conflict (PHC facilities, patients and hospitals). Therefore, human resources planning for increasing the ratio of physicians/1000 populations are necessary, e.g. by adding a number of medical faculties. Finally, further research is needed, e.g. about nominal capitation calculation (including home visit cost) and PCPs' confidence with the medical facilities.

Supplementary material

Supplementary material is available at *Family Practice* online.

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Declarations

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