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Barriers to payment reform: Experiences from nine Dutch population health management sites

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ABSTRACT

Population health management (PHM) initiatives aim for better population health, quality of care and reduction of expenditure growth by integrating and optimizing services across domains. Reforms shifting payment of providers from traditional fee-for-service towards value-based payment models may support PHM. We aimed to gain insight into payment reform in nine Dutch PHM sites. Specifically, we investigated 1) the type of payment models implemented, and 2) the experienced barriers towards payment reform. Between October 2016 and February 2017, we conducted 36 (semi-)structured interviews with program managers, hospitals, insurers and primary care representatives of the sites. We addressed the structure of payment models and barriers to payment reform in general. After three years of PHM, we found that four shared savings models for pharmaceutical care and five extensions of existing (bundled) payment models adding providers into the model were implemented. Interviewees stated that reluctance to shift financial accountability to providers was partly due to information asymmetry, a lack of trust and conflicting incentives between providers and insurers, and last but not least a lack of a sense of urgency. Small steps to payment reform have been taken in the Dutch PHM sites, which is in line with other international PHM initiatives. While acknowledging the autonomy of PHM sites, governmental stewardship (e.g. long-term vision, supporting knowledge development) can further stimulate value-based payment reforms.

1. Introduction

Increasingly, population health management (PHM) initiatives are being implemented across Western countries [1] striving for better population health, better quality of care and a reduction of the cost growth (i.e. Triple Aim). The essence of PHM is to integrate and optimize services across prevention, care, cure and social care for a pre-specified population within the region [2]. In regional networks of healthcare providers, insurers, local governments (municipalities) and other health organizations, several interventions, such as setting up integrated elderly care, substituting low-complex medical activities to a primary care setting and others, for improved collaboration and coordination of services, are implemented in PHM.

Theoretically, a key precondition for successful PHM is to shift away from the traditional fee-for-service (FFS) payment models to more value-based payment models [3,4]. FFS models are known to incentivize each provider to increase the amount of services produced (as long as price is above marginal cost). As FFS models are designed for acute care specifically, they do not automatically align with the Triple Aim [5]. Payment models such as bundled payments or global payments are more aligned with the Triple Aim. They increase financial accountability for (groups of) providers and, in that manner, incentivize better coordination of care and support the integration of services over domains within the bundle or budget. At the same time, they reduce incentives for overtreatment and low-value care [6].

Nevertheless, there is uncertainty regarding how to successfully develop and implement value-based payment reform. Currently, several PHM initiatives are experimenting with payment reform

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[7], yet studies on their impact are few. Well-known examples are Gesundes Kinzigtal in Germany [8] and the Alternative Quality Contract (AQC) in the U.S. [9]. Gesundes Kinzigtal implemented a long-term shared savings contract [8], while in the AQC providers are being paid a risk-adjusted global budget [10]. Also in the Netherlands, PHM initiatives have been initiated [11,12], which currently explore more value-based payment schemes as part of their efforts in moving toward the Triple Aim [12]. Few empirical studies evaluating payment reform have been conducted, showing some promising effects. For example, two studies [8,13] showed beneficial outcomes of Gesundes Kinzigtal; savings and a lower mortality rate compared to the control group. In addition, AQC enrollees had lower spending growth and generally greater quality improvements after four years, as compared with similar populations in other states [10]. The authors conclude that payment reform in AQC's, i.e. global budget contracts with quality incentives, contributed to these results, even though other factors also played a role [10].

Moreover, studies on the barriers and enablers to payment reform are scarce and are generally more theory-focused (e.g. [14,15]). The few studies which have discussed experiences from the field highlighted that there is a need for a neutral convening party that maintains the commitment of providers and payers, a need of flexible, stable leadership, pressure from public and private payers, and an increased investment to support infrastructure, care management and human resources [16]. These findings were solely based on U.S. experiences. Since the organization of health systems differs, PHM initiatives in other countries may face different challenges. Therefore, it is important to broaden the scope of the literature including initiatives in other healthcare systems. The Netherlands has a system of regulated competition and includes mandatory health insurance and the expectation of competition between private insurers [17]. We aimed to gain insight into the process to payment reform in the Dutch PHM sites. More specifically, we aimed to 1) provide insight into the type of payment models that were introduced, and to 2) provide an overview of barriers during the implementation of payment reform based on the experiences of relevant stakeholders. This study is part of the National Monitor Pioneer sites (NMP) which monitors the progress of nine Dutch PHM sites from 2013 until 2018 [18].

2. Materials and methods

2.1. Study setting

Dutch PHM sites are regionally oriented network organizations varying in population size, participating organizations and interventions. Table 1 shows the general characteristics of the Dutch PHM sites. The population size ranged between 42,000 and 646,200 residents. Participating organizations included insurers, primary care providers, hospitals, municipalities, citizen representative organizations and employers [19]. All networks aim to integrate and optimize services across domains by implementing two types of interventions. First, PHM sites implement interventions to improve the organization of care through e.g. better data infrastructure. Second, PHM sites implement interventions to improve the delivery of care through substitution and integration of care and better self-management. Examples are substituting brand with generic medication, substituting secondary care with primary care, improving existent chronic care bundles, integrating care for elderly and prevention activities [19].

The PHM sites operate within the context of the Dutch health system where providers are predominantly being paid by FFS (for each visit or for each service) or diagnosis-related group (DRG). GPs are being paid through capitation augmented with FFS per visit and/or service. Basic mental health care, physical therapy, postpartum care and home care is being paid for through FFS. Additionally, services such as lab-testing and medication are being paid for through FFS. Hospitals are being paid through a type of DRGs which are episode-based bundles defined by the combination of diagnosis and treatment. As from 2007, bundled payments for integrated chronic care (diabetes, chronic obstructive pulmonary disease (COPD) and cardiac vascular risk management (CVRM)) have been introduced in the primary care setting [20]. Bundled payments for birth care, including primary and secondary care organizations, were introduced as from January 2017. These bundled payments are not mandatory; providers and health insurers can still choose to use the traditional FFS model. The decision to implement these bundled payments is left to the PHM sites. Furthermore, within the Dutch system there is room to experiment temporarily with new, locally defined, payment models. Also, providers and health insurers in PHM sites can make contractual agreements on e.g. shared savings or pay-for-performance.

2.2. Definitions – payment reform

We defined payment reform as PHM interventions that 1) made changes to the type of payment (i.e. moving away from traditional FFS) and/or 2) made changes in the number of participating providers in existent payment models.

Combining elements of previous work of the Health Care Payment Learning Action Network [21], Stokes, Struckmann [22] and Struijs JN [23], we distinguished between several types of payment models and the level of integration of the payment model. We distinguished between three base payment models: FFS, bundled payments and global payments. Under FFS providers are paid a fee for each services delivered and therefore incentivizes increasing the volume of care [24]. On top of the FFS structure, pay-for-performance, shared savings or retrospective bundles may be added to incorporate additional incentives. In pay-for-performance, on top of FFS, a bonus or a malus is paid for attaining some quality threshold. The additional payments can be employed for improving coordination, efficiency of care delivery or quality of care [25]. In a shared savings model, individual providers are each paid on a FFS bases and then there is reconciliation between the target episode price and the actual episode average price that is attributed to a provider (HCPLAN 2016), which is shared with the payer. Shared saving models that share in gains only are called one-sided. In two-sided models, also risks are shared. In our definition, shared savings models differ from bundled payments as in bundled payments bonuses are not shared with the payer. In retrospective bundled payment, there is a virtual budget negotiated upfront, providers are being paid by FFS and retrospectively, the target prices is reconciled fully [23].

Prospective bundled payment is not based on the FFS base structure, as it pays a prospectively defined price that is paid as one payment with no reconciliation [21,23].

In global payments, the entire population and the entire continuum of care is included. The accountable providers is paid a fixed fee per head of the population. Moving away from FFS (i.e. adding additional payment components (pay-for-performance or shared savings) or implementing another base payment structure (prospective bundled payment or global budget)) indicates increased financial provider risk.

The level of integration refers to the type and the scope of providers that are involved in the payment model. We distinguished between payments that are horizontally integrated (e.g. only covers providers within primary care) and payments that are vertically integrated (e.g. includes multiple types of providers – primary care and secondary care or over multiple domains, e.g. care

Table 1
Population health management site characteristics.

Name	Population size	Participating organizations	Interventions
A	170.000	Citizen representative organization, GP, hospital, insurer, pharmacy	Self-management, integrated care (mental health), substitution (pharmacy, hospital care to primary care)
B	646.200	Citizen representatives organization, municipality, health promotion, home care facilities, GP, hospital, insurer	Integrated care (elderly, birth care), substitution (hospital care to primary care), data-infrastructure
C	106.500	Citizen representatives organization, municipality, health promotion, health promotion, home care facilities, youth care, mental care, GP, long-term care, hospital, pharmacy	Prevention, self-management, substitution (pharmacy)
D	270.000	Citizen representatives organization, municipality, health promotion, health promotion, home care facilities, GP, long-term care, hospital, pharmacy	Prevention, self-management, integrated care (elderly, diabetes), substitution (pharmacy, hospital care to primary care)
E	55.000	Citizen representative organization, GP, hospital, insurer, pharmacy	Integrated care (elderly, diabetes, COPD, CVRM), substitution (pharmacy), data-infrastructure
F	42.000	Citizen representative organization, GP, insurer	Integrated care (elderly), substitution (hospital care to primary care)
G	270.600	Citizen representative organization, mental care, GP, hospital, insurer, pharmacy	Integrated care (elderly, birth care, mental health, diabetes, COPD, CVRM), substitution (pharmacy, hospital care to primary care)
H	300.000	Citizen representative organization, GP, hospital, insurer, pharmacy	Self-management, integrated care (diabetes, COPD, CVRM), substitution (pharmacy, hospital care to primary care)
I	113.000	Citizen representatives organization, municipality, health promotion, long term care, home care facilities, GP, hospital, insurer, pharmacy	Prevention, self-management, integrated care (elderly), substitution (pharmacy)

GP: General Practicioner; COPD: Chronic Obstructive Pulmonary Disease; CVRM: Cardiac Vascular Risk Management.

and cure) in the payment model [22]. The latter refers to a higher level of integration.

2.3. Study design and sample

This qualitative study consisted of two parts. In the first part (October 2016), we conducted exploratory interviews with program managers (n = 9) in order to identify and gain insight into the type of payment reforms within the PHM sites.

In the second part (November 2016 through February 2017), 27 relevant stakeholders concerning the identified payment reforms were interviewed to explore the experiences with payment reform in general (i.e. the interviews were not restricted to the payment reforms that we identified during the first part).

We used purposive sampling [26] in order to ensure that experiences of key stakeholders within the PHM regions were sufficiently reflected within the sample. Therefore, per site, we interviewed professionals who were involved in payment reform from varying sectors and organisations (program manager (8), health insurer representative (9) from six different insurer companies, care group or primary care organization representative (8), municipality civil servant (1) and hospital board member (1). The professionals were recruited through the network of the NMP. Whenever participants showed interest, they were emailed to schedule an appointment.

2.4. Data collection

In the first part, the interviews (by phone) were based on a topic list (see Appendix A) that included, among others, a description of the PHM interventions, funding and payment model. The answers were written down in a fixed format containing all interview topics. All program managers checked, adapted if needed and approved the content of the forms.

In the second part, participants were asked to sign a consent form. A semi-structured interview guide was used during the interviews (of +/- 1 h) to identify different barriers to payment reform (see Appendix B). For the development of the guide, the authors build on issues raised in previous research (refs rapport). Interviews took place face-to-face (n = 21) at the professionals work space or in a restaurant or by telephone (n = 6).

2.5. Data analysis

In the first part, we selected payment reforms (see definition in conceptual framework) that had to be in effect before, or at the time of, the interviews. Following, we described the targeted condition, the participating providers and the type of payment model that was implemented. For definitions, see 'conceptual framework'.

In the second part, the 27 interviews were audio recorded, transcribed verbatim and approved by the interviewee. The interviews were coded inductively using MAXqda software. Based on the first two interviews, EdV coded the interviews inductively per interview guide topic. Next, the coding scheme was discussed with HD and adapted to focus on themes that were brought up by the interviewees. Following, the remaining interviews were coded by EdV and the coding was checked by HD. Finally, drafts of the summary results were discussed with all authors and approved by all authors.

3. Results

3.1. Type of payment reform

Table 2 describes the nine PHM payment reforms by their type of payment model, the aim of interventions, the targeted conditions, the level of integration (i.e. the included providers) and the payment flow. We identified FFS (n = 3), prospective bundled payment (n = 2) and one-sided shared saving models (n = 4). Generally, the aim of the payment reforms was to substitute secondary with primary care or substitute brand with generic medication. Targeted patients were chronic conditions such as diabetes, CVRM or mental health problems. One payment reform targeted musculoskeletal patients. The level of integration was mostly (n = 8) vertical, as the payment reform general practitioners and medical specialists (n = 4) and in four reforms also pharmacists were included. One reform was only horizontally integrated, it included mental health professionals, all in primary care.

Table 2
Payment reforms in the nine Dutch PHM sites.

Intervention no.	Payment model	Intervention aim	Targeted conditions	Level of integration - Involved providers	Payment flow
1	FFS[a]	To substitute secondary care to primary care when possible.	Musceloskeletal conditions	Vertically: GPs using the consultation of medical specialists in a primary care setting	The medical specialist has a freelance contract for 1 day a week in the GP-practice and is paid by FFS for a maximum of two consultations using GP-funds.
2	FFS[a]	To substitute non-complex care from hospital to primary care.	Non-acute patients.	Vertically: GPs using the consultation of medical specialists (internists, orthopedists, neurologists, dermatologists, cardiologists) in a primary care setting	The joint venture (GPs and hospital) gets paid by FFS of which GPs and the medical specialists receive a fixed ratio.
3	FFS[a]	To substitute and integrate mental health care.	Patients with non-complex, non-acute mental or social problems	Horizontally: GP, GP nurse and primary care psychologists in a primary care setting through an umbrella organization where GP-practices (with specialized mental health nurses) and primary care psychologists are part of.	The umbrella organization gets paid by FFS, for the mental health nurse and the psychologists separately. The GP and the psychologists, in turn, are getting paid per amount of time spend with the patient (which may include a number of visits).
4	Bundled payment (prospective)	To substitute non-complex care from hospital to primary care.	Diabetes, asthma and COPD	Vertically: GP using the consultation of medical specialists (by phone, or sent the patient in).	. The medical specialists are paid by GP-funds. The out-of-pocket payments for patients using secondary care are not addressed.
5	Bundled payment (prospective)	To substitute non-complex care from hospital to primary care.	Diabetes, COPD and CVRM	Vertically: GP using the consultation of medical specialists	The medical specialists are paid by GP-funds.
6	Shared savings (one sided)	To substitute brand medication with generic medication.	Diabetes and CVRM patients (cholesterol medication, ATII-blockers). Also patients using proton pump inhibitors.	Vertically: GP, medical specialists and pharmacists	The existing payment structures were not adjusted.
7	Shared savings (one sided)	To substitute brand medication with generic medication.	Diabetes and CVRM patients (cholesterol medication, ATII-blockers). Also patients using proton pump inhibitors.	Vertically: GP, medical specialists and pharmacists	The existing payment structures were not adjusted. Savings will be used to invest in new projects.
8	Shared savings (one sided)	To substitute brand medication with generic medication.	Diabetes and CVRM (cholesterol medication)	Vertically: GP, medical specialists and pharmacists	The existing payment structures were not adjusted.Savings are shared between insurer and the PHM site.
9	Shared savings (one sided)	To substitute brand medication with generic medication.	Diabetes and CVRM patients (cholesterol medication and ATII-blockers).	Vertically: GP, medical specialists and pharmacists	The existing formal payment structures were not adjusted. Part of the savings will be invested in new projects.

GP: General Practicioner; FFS: fee-for-service; COPD: Chronic Obstructive Pulmonary Disease; CVRM: Cardio Vasculair Risk Management; AT: Angiotensine; PHM: Population Health Management.

[a] In FFS the reform consisted only of including more providers in the payment model.

3.2. Experienced barriers to payment reform

Table 3 presents a summary of the experiences of the participants (program managers, health insurer representatives, care group or primary care organization representatives, municipality civil servants and hospital board members) with the barriers to implement payment reform in general. Multiple barriers were mentioned per site and per participant. The following section discusses the experiences by theme.

Table 3
Experienced barriers to payment reform in nine Dutch PHM sites.

	Experienced barrier
1	Information asymmetry.
2	Worsening reputation of insurers.
3	Lack of trust as a result of failed reform attempts.
4	Misaligned incentives in the hospital setting.
5	Hesitation to accept financial accountability.
6	Lack of start-up funding.

3.2.1. Information asymmetry

Health insurer, program manager and primary care organization participants mentioned *information asymmetry* as barrier towards payment reform. Insurers and program managers indicated information asymmetry at the favor of providers. Accordingly, some insurers stated that they need the transparency to be improved in future negotiations, as they are of the opinion that the prices are too high. They indicated that shifting accountability to providers would increase the information asymmetry at the benefit of providers.

> "We need to remove information asymmetries. And make agreements with each other. It is not going to work without proper agreements. Providers need to realize that; they have freedom to organize care between provider and patient. But that doesn't mean that they don't have to justify themselves. So, as you get more freedom to act, your accountability also increases. That is, exactly, well, that is exactly what it's about in the pioneer site, in this contract. You get a standard contract. And you are allowed to deviate, but then you have to accept that you increase your accountability. And that means that you need to provide data more often." (program manager)

At the same time, participants from primary care organizations expressed the need to limit the information asymmetry at the favor of insurers. As such, a couple of physician provider organizations said to use their knowledge on the prices in the negotiations with insurers, trying to incorporate some playing room for overhead and efficiency improvements by revealing the true costs at a certain point in time.

All interviewees agree on that the lack of data infrastructure and privacy issues are important barriers to reduce the information asymmetry. In one pioneer site, the respondents state that they are experimenting with innovative data sharing mechanisms, to provide real time data to insurers and providers as part of the contract. According to a program manager from another site, another solution would be to create an independent party who collects and analyses patient data to get around privacy issues.

3.2.2. Worsening reputation of insurers

Insurer interviewees also described the *worsening reputation of insurers* as a barrier towards payment reform. Some insurers stated that payment reform would be perceived as a 'cost cutting' measure and therefore will worsen their reputation.

> "Yes, absolutely. That is one of the issues. [. . .] The reputation that we have, that is another issue. We say: "It is not up to us to perfom a certain surgery 90 times, as opposed to 80 times, thats the minimum. Who are we to say?" Well, then you can picture the headlines in the papers already." (insurer)

Instead, insurers say they offer long-term contracts with the possibility to slowly decrease hospital production using a virtual budget, which aims to let professionals take the lead:

> "It says, the medical personnel, well, most often it are doctors.. We have formulated it more broadly. Well, they actually initiate interventions. When we start them, they think it is not good." (insurer)

3.2.3. Lack of trust as a result of failed reform attempts

Another theme was a *lack of trust as a result of failed reform attempts*, that was mentioned by participating insurers, primary care providers and hospitals after failed attempts to implement shared savings programs.

> "Because, at first, the idea was that the savings would go to the providers, as an individual bonus. That is something I was against, from the start. I always say, we are not going to refer patients over their heads. Or, realizing certain things, because it will come back at us, in such way, that we gain from it financially. So, we want to profit from it, but then to invest collectively in this new innovation [. . .]. Well, the deep fear of insurers, they thought they couldn't get it from the hospitals. So, that they have to pay us savings, because we showed that we had savings, but they, they would lose even more." (physician organization)

Participating insurers, primary and secondary care providers disagreed on how to spend the potential savings, which negatively impacted levels of trust between stakeholders.

3.2.4. Misaligned incentives in the hospital setting

All interviewees mentioned *misaligned incentives*, especially in the *hospital setting*. These misaligned incentives were experienced between insurer and hospital boards and between hospital boards and medical specialists:

> "[. . .] Payment systems need to be based on value, and not volume. [. . .] But we have volume caps negotiated with the insurer. [. . .] So it is vital for me to maximize revenues within the cap. [. . .] The problem is that I have to work on World Peace, but I'm financed like I'm in truce. When I go out there, I know I'm in war with my specialists, because they will say: 'You are not taking good care of me'." (hospital board member)

All respondents stated that the volume-based payments do not stimulate to reduce production in hospitals in order to substitute care towards the primary care setting, as medical specialists and medical specialist parterships are incentivized by the FFS-structure to provide more services. The respondents agreed that volume caps between insurer and hospital increases the interest of hospital board members to maximize production within the cap, because future caps are generally determined by historical production.

Additionally, an insurer stated that the FFS incentive at the level of the medical specialists and the parternships in the hospital is barely limited by the cap. Insurer respondents state that they try to create comfort for hospitals by slowly reducing production using long-term contracts with virtual budgets.

> "And then you have to think about it in this way, that, well, that they at the moment their volume declines, they implement flanking policies. That means that, at least for the fixed costs, that they do not disappear in it one by one. Because, at the moment you do not see any patients anymore, you cannot claim the tariffs, so there is less revenue. [. . .] While the fixed costs do not decline. [. . .] So, well. So we try to make arrangements in order to reduce it more slowly." (insurer)

An insurer added that this is also influenced by the pressure of the cost growth reduction of the budgetary framework from the Dutch government that exerts similar incentives as the cap.

The combined threat of a reduction of the hospital budgets by the volume caps and the budgetary framework from the Dutch government hinders hospital boards to accept payment reform, as hospital boards employing medical specialist partnerships already experience difficulties to act on the volume caps in the current FFS structure.

3.2.5. Hesitation to accept greater financial accountability

Some providers stated to feel *hesitant to accept greater financial accountability*. Primary care representatives expressed worries that they are too small and have too little financial reserves to carry these risks. Additionally, a primary care representative worries that they are becoming accountable for outcomes they cannot control.

> "[. . .] but, then you have to select those indicators of which you know you can influence as a provider, that is directly linked to the achievements providers can make, and then you could say, well, if you meet this and that threshold, you can get a

bonus, this could work. The only thing is, that in these types of things, they say, we don't have any influence on what patients do. So it's very hard to select these things, I guess." (primary care representative)

At the same time, primary care representatives stated that they fear that budget from secondary care will not follow the substitution of care sufficiently towards primary care; while they do feel that more time or budget is necessary for the additional tasks they perform. This was confirmed by an insurer who stated that he feels reluctant to promise structural additional revenues to primary care, as long as secondary care payments have not reduced.

3.2.6. Lack of start-up funding

Most respondents of provider representatives stated that insurers should invest more in payment reform, while bearing in mind that experimenting with payment reform requires risk capital. Some insurers stated that they are reluctant to invest in those programs, since the financial benefits are often generated after several years only.

"[..] if they talk about shared savings, thats fine, but in 2017, we get 1/3 of it.. They make their business case that the benefits will flow to them first. But we say, you have to reimburse for the costs first! And when there are actually savings, ofcourse, we will share them. Otherwise we are waiting for 5, 6, 7 years on our money. So you see, to define what it is and understand each others point of views and under which conditions, it is quite new ground." (insurer)

The same insurers said that if they would invest in payment reform, they would first want their investments back, before they pay out savings to the participants.

3.2.7. Lack of leadership and intrinsic motivation

In general, primary care representatives and some insurer representatives expect the government to stimulate payment reform and to provide with funding and knowledge to facilitate the reform. Conversely, (three) other insurer representatives and one primary care representative feel that risk appetite and providers' intrinsic motivation need to be stimulated directly, by giving providers more freedom to reorganize care delivery. Other insurer representatives feel that the intrinsic motivation to reform should stem from higher levels of trust between stakeholders, leadership and through quick wins in (e.g.) pharmacy-related shared savings programs, which were implemented as a reaction to the failed shared savings programs:

"Even more, if you can show that you can do something and it results in a small fund.. I have seen what the project, how it got people enthusiastic. Anyway, in two sites, people worked together for the first time, because of that project!" (Insurer)

Shifting a part of the financial accountability to providers, by tying quality performances to bonuses, is not perceived as a solution by both insurers and providers. They fear that focusing on a defined set of quality indicators will destroy the intrinsic motivation of professionals to deliver high quality care, and that it may result in avoiding complex patients.

4. Discussion

In this study, we aimed to provide insight into the process towards payment reform in nine Dutch PHM sites by investigating to what extent payment reforms were implemented and the experienced barriers to payment reform. This study showed that payment reforms currently include expanding the number of providers in existing fee-for-service or bundled payment models and implementing pharmacy-related shared savings programs in pharmaceutical care in the cure sector. Bundled payments or global payments including providers over the domains (cure, prevention or social care) have not (yet) been launched. The shared savings programs in pharmaceutical care mainly aimed to create trust to encourage motivation to reform. Previous shared savings attempts, that tried to include multiple providers, failed and negatively affected mutual trust. The interviews revealed reluctance to shift financial accountability to providers from both an insurer as well as a provider perspective. This was mainly due to a lack of trust and information asymmetry at the favour of providers. Furthermore, conflicting incentives at organization level and physician or specialist partnership level, a worsening reputation of insurers and a lack of funding and leadership hindered further reform. Above all, a lack of a sense of urgency hinders the payment reform in the Dutch PHM sites.

Small steps are taken in the progression towards payment reform in the Dutch PHM sites. This is in line with other PHM initiatives such as Accountable Health Communities in the U.S. [27] and the Vanguards in the UK, as they similarly focus on care redesign instead of payment reform. Examples of more disruptive payment reforms are few. The AQC in the U.S. and Gesundes Kinzigtal in Germany implemented global payments or shared saving programs including multiple providers, but those reforms are limited to the cure sector. Therefore, it seems in place to acknowledge that payment reform takes time, especially in PHM that aims to connect efforts over the domains of cure, care and prevention, as it is challenging to change within the complex and fragmented health system.

Although at the time of this study, the Dutch PHM sites were just three years in effect; it is interesting to explain the experienced barriers towards payment reform, because it helps to understand the problems PHM initiatives all over the world are currently facing. Our study corresponds with findings from earlier U.S. studies by showing that there is a need of stable leadership and increased funding to support infrastructure [16,28]. Our findings extend to the existing literature by showing that there is a vacuum where various stakeholders expect others to take action. Especially, insurers and large providers are being accused of a lack of a sense of urgency to pursue the reform. This is illustrated by insurers' fear for an increased information asymmetry that will lead to an increased power imbalance between insurers and large provider organizations at the favour of providers (in accordance with Schut and Varkevisser [29]). The mechanisms at play are complicated and relate to factors such as leadership, alignment of goals and incentives, shared norms and values as well as the relations between the actors [30].

This might – in part, be explained by differences in the US and Dutch health systems. In the US, the Affordable Care Act (ACA) explicitly dictated to establish the Medicare Shared Savings Program that encourages various regional stakeholders to form ACOs and several types of bundled payment models [31]. In that way, the US government exerts pressure to payment reform of the public health system, to start the care delivery reform specifically. In the Netherlands, the role of the government is less clear. And even though it is the responsibility of the Dutch government to regulate the preconditions within the system of regulated competition with private payers [32], it is the question to what extent the government should interfere to increase the sense of urgency to payment reform. Inherently, PHM initiatives require decentralization to a certain extent. Specifically in the Dutch context, payment reform is seen as a part of the move towards PHM, instead of being the start of the reform. Yet, our study showed that some interviewees expect the government to provide more guidance or assistance on payment reform by creating a platform for knowledge. This platform could provide a long-term vision with information on

the implementation and potential impact of different types of payment reform. Such governmental stewardship might resolve a part of the hesitance in moving towards value-based payment models. An example where the Dutch government exerted more pressure is in bundled payments for birth care. Here, the Ministry of Health strongly recommended the (voluntary) uptake of bundled payments [33] and provided subsidies to develop knowledge and tools and made available specific payment (infra)structures. It seems to have created a sense of urgency for implementing payment reform. However, as PHM sites need autonomy to operate, finding the optimal balance between top-down efforts from the government and bottom-up efforts from providers, insurers and sites seems essential for successful PHM [34]. Therefore, strong leaders who are aware of the need for change, with experiences in the health care market and who are able to create a new impulse in the insurer-provider relationship are required to align goals and incentives.

Aligning incentives with the Triple Aim seems to require a shift towards more value-based payment models. However, as internationally implemented payment reforms are scarce and do not (yet) stretch further than the cure sector, it is unknown how to align incentives for multi-stakeholder initiatives that services several patient groups over the domains of care. Payment models for chronic care demand other incentives than payment models for screening activities. Therefore, successful PHM probably requires a combination of value-based payment models adjusted to the complex and dynamic PHM setting.

This study has several limitations. First, not all Dutch payment reforms were included as they were not part of the PHM pioneer sites. For instance, the previously mentioned bundled payments for birth care were not included. Second, as only one researcher coded the interviews, the results may have been influenced by the researchers' subjective interpretation. To minimize the bias, another researcher checked the coding work and the summary results were discussed until consensus was reached with all authors. Third, as we inductively gathered experienced barriers, we might have missed insights from the PHM sites that were not monitored in this study, as for example the view of municipalities. Nevertheless, based on efforts to study other PHM initiatives [11] we are confident that we have shown a fair representation of the situation in Dutch PHM sites. We suggest future research to follow efforts to payment reform closely, to qualitatively investigate what works and what does not, to investigate potential solutions for barriers encountered and to quantitatively support those finding on the Triple Aim goals.

5. Conclusions

During the first three years of the Dutch PHM sites, payment reforms included paying for consultation of medical specialists in a primary care setting through traditional fee-for-service models, adding secondary care in existent bundled payment models for chronic care and shared savings programs in pharmaceutical care. Bundled payments or global budgets including providers over the domains (cure and prevention or social care) have not (yet) been launched as PHM intervention. PHM representatives stated that reluctance to shift financial accountability to providers was partly due to information asymmetry, a lack of trust between providers and insurers and conflicting incentives, but all the same to a lack of sense of urgency. Small steps to payment reform have been taken in the Dutch PHM sites, which is in line with other international PHM initiatives. While acknowledging the autonomy of PHM sites, governmental stewardship (i.e. long-term vision and supporting knowledge development) can further stimulate value-based payment reform.

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Ethics

Ethics approval from the Ethical Review Committee (ETC) at Tilburg University (EC-2016.28) was received in October 2015.

Declaration of Competing Interest

None.

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Appendix A. Supplementary data

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