Briefing Note

Performance Based Contracting for Hospitals in Lebanon

K2P Briefing Notes quickly and effectively advise policymakers and stakeholders about a pressing public issue by bringing together global research evidence and local evidence. K2P Briefing Notes are prepared to aid policymakers and other stakeholders in managing urgent public health issues. K2P Briefing Notes describe priority issues, synthesize context-specific evidence, and offer recommendations for action.

Briefing Note

+ Included

Description of a priority issue

Synthesis of contextualized evidence

Recommendations for addressing the issue

× Not Included

Does not conduct a **comprehensive review of the literature** but relies on a quick assessment of databases

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K2P Briefing Note

Performance Based Contracting for Hospitals in Lebanon

Knowledge to Policy Center K2P

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Contents

Speaking Notes

Speaking Notes

- Around 87% of the Ministry of Public Health (MOPH) budget is allocated for curative care, of which 79% is used to reimburse contracted hospitals. Such figures highlight the necessity to enhance the efficiency of MOPH spending. There has been significant investment in quality of healthcare in Lebanon, while limited information is available about health outcomes. Thus, reforming payment mechanisms is needed to ensure cost containment while improving quality of care and patient safety.
- Hospitals contracting system with MOPH has undergone several reforms including the shift from alpha/star rating system to the inclusion of accreditation scheme in 2000 and reliance on quality and performance indicators in 2014.
- Pay for Performance (P4P), previously implemented in various healthcare contexts and countries, aims at incentivizing desired processes of care and health outcomes by providing rewards for improved care. The design of the scheme and the context in which it is implemented were shown to impact the effectiveness of P4P programs.
- The implementation of P4P could improve the quality of care. Several systematic reviews reported benefits of P4P programs including decreased inequalities, overall health care expenditures and lengths of stay. Moreover, P4P schemes resulted in enhanced processes, access to care and aggregated rates of risk-adjusted surgical complications.
- P4P was shown to have several potential harms including neglect of un-incentivized aspects, rise of health inequalities, improvement of documentation rather than actual services and upsurge of gaming behaviors comprising up-coding and manipulating data. Moreover, sustainability of P4P programs must be considered since bonus payments might necessitate a large financial investment.
- Several strategies were identified to overcome potential barriers to P4P programs. Such approaches include the use of a combination of process and outcome indicators, regular involvement of stakeholders throughout different stages, selection of targets based on baseline room for improvement and use of absolute targets.

- Successful implementation of a P4P scheme aiming at improving outcomes of care at hospitals in Lebanon requires the following recommendations:
  - Development of a hybrid contractual arrangement between MOPH and hospitals whereby the hospital reimbursement formula includes: 1) A proportion based on improved accreditation standards; 2) A proportion based on additional indicators retrieved from the hospitalization database of MOPH, including the Case Mix Index, readmission rate and patient satisfaction.
  - Involvement of major stakeholders and communication of the program thoroughly and directly throughout its development, implementation, and evaluation phases.
  - Provision of trainings for healthcare personnel at hospitals to lead and implement quality improvement initiatives since building their capacity is critical for successful implementation of P4P.

نبذة موجزة

- حوالي 87 % من ميزانية وزارة الصحة العامة في لبنان مُخصصة للرعاية العلاجية، 79 % منها يستخدم لتسديد تكاليف المستشفيات المتعاقدة مع الوزارة. وتسلط هذه الأرقام الضوء على ضرورة تعزيز وترشيد الإنفاق لدى وزارة الصحة العامة. بالرغم من الاستثمارات الكثيرة في جودة الرعاية الصحية في لبنان، لا تزال المعلومات المتاحة حول مؤشرات النتائج الصحية محدودة. وبالتالي، هناك حاجة إلى تنظيم آليات الدفع المعتمدة للتعاقد مع المستشفيات لضمان ترشيد الإنفاق مع تحسين نوعية الرعاية الصحية وسلامة المرضى.
- خضع نظام التعاقد بين المستشفيات ووزارة الصحة العامة لعدة إصلاحات من بينها الانتقال من نظام التصنيف ألفا / ستار "alpha/star" إلى إدراج نظام الاعتماد عام 2000 ومن ثم الاعتماد على مؤشرات الجودة والأداء في العام 2014.
- يتم اعتماد برامج الدفع مقابل الأداء (Pay for Performance -P4P) في عدة بلدان ومجالات صحية. وتهدف هذه البرامج إلى تحفيز تحقيق النتائج المرجوّة من الرعاية الصحية حيث يتم تقديم المكافآت مقابل تحسين الرعاية. وقد أثبتت الدراسات أن شروط تصميم وتنفيذ برامج الدفع مقابل الأداء تؤثر على فعاليتها ونجاحها.
- إعتماد وتنفيذ برامج الدفع مقابل الأداء يمكن أن يؤديا إلى تحسين نوعية الرعاية الصحية. وظهر في عدّة نتائج لمراجعات منهجية، أن تلك البرامج تعود بفوائد عدة على الأنظمة الصحية، مثل: إنخفاض نسبة عدم المساواة في الحصول على الرعاية الصحية، نفقات الرعاية الصحية الإجمالية، مدة إقامة المريض في المستشفى والمضاعفات الجراحية. وبالإضافة، أدت تلك البرامج إلى تحسين منهجية الخدمات، والحصول على الخدمات الصحية.
- تبين أن برامج الدفع مقابل الأداء لها العديد من الأضرار المحتملة، بما في ذلك إهمال الجوانب او المؤشرات غير المحفزة، وزيادة التفاوتات الصحية، وتحسين الوثائق بدلا من الخدمات الفعلية والتلاعب في البيانات. من ناحية أخرى، تم وضع عامل إستدامة تلك البرامج قيد الدراسة، بما أن تقديم المكافآت قد يتطلب استثمارا ماليا كبيرا.
- تم تحديد عدة استراتيجيات للتغلب على العوائق المحتملة لبرامج الدفع مقابل الأداء، منها استخدام عدة مؤشرات متعلقة بمنهجية الخدمات ونتائجها، المشاركة المنتظمة لأصحاب المصلحة في مختلف مراحل التنفيذ، تحديد الأهداف التي يمكن تحسينها والعمل على الأهداف المطلقة.

- إن النجاح في تنفيذ برامج الدفع مقابل الاداء بهدف تحسين نتائج الرعاية الإستشفائية في لبنان يتطلب التوصيات التالية:
- وضع ترتيبات تعاقدية بين وزارة الصحة العامة والمستشفيات، تستند إلى معايير الاعتماد المحسنة، بالإضافة الى نسبة مؤشرات الجودة التي يتم استرخراجها من بيانات المستشفيات في وزارة الصحة العامة.
- إشراك أصحاب المصلحة الرئيسيين في البرنامج بشكل كامل ومباشر خلال مراحل التطوير والتنفيذ والتقييم.
- توفير التدريب للعاملين في مجال الرعاية الصحية في المستشفيات لقيادة وتنفيذ مبادرات تحسين الجودة بما ان بناء قدراتهم عامل أساسي لنجاح تنفيذ برنامج الدفع مقابل الاداء.

Content

Purpose

The purpose of this briefing note is to shed light on the contractual system between private and public hospitals and the Lebanese Ministry of Public Health. It also highlights the implementation of Performance based Contracting as a tool to improve the quality of care provided at hospitals.

Issue

The Lebanese Ministry of Public Health (MOPH) plays the role of a payer which contracts with public and private hospitals to provide hospitalization services to around 250,000 cases per year (Khalife et al., 2017). Around 87% of MOPH budget is allocated for curative care, of which 79% is used to reimburse contracted hospitals (Ammar, 2009). With such substantial figures, there is a dire need to improve the efficiency of the MOPH spending. Additionally, there has been significant investment in quality of healthcare in Lebanon, while limited information is available about health outcomes. Thus, reforming payment mechanisms is needed to ensure cost containment in Lebanon while improving quality of care and patient safety, particularly where the financing and service provision functions of healthcare are separated without effective cost controls.

Background to Briefing Note

A K2P Briefing Note quickly and effectively advises policymakers and stakeholders about a pressing public issue by bringing together global research evidence and local evidence.
A K2P Briefing Note is prepared to aid policymakers and other stakeholders in managing urgent public health issues.

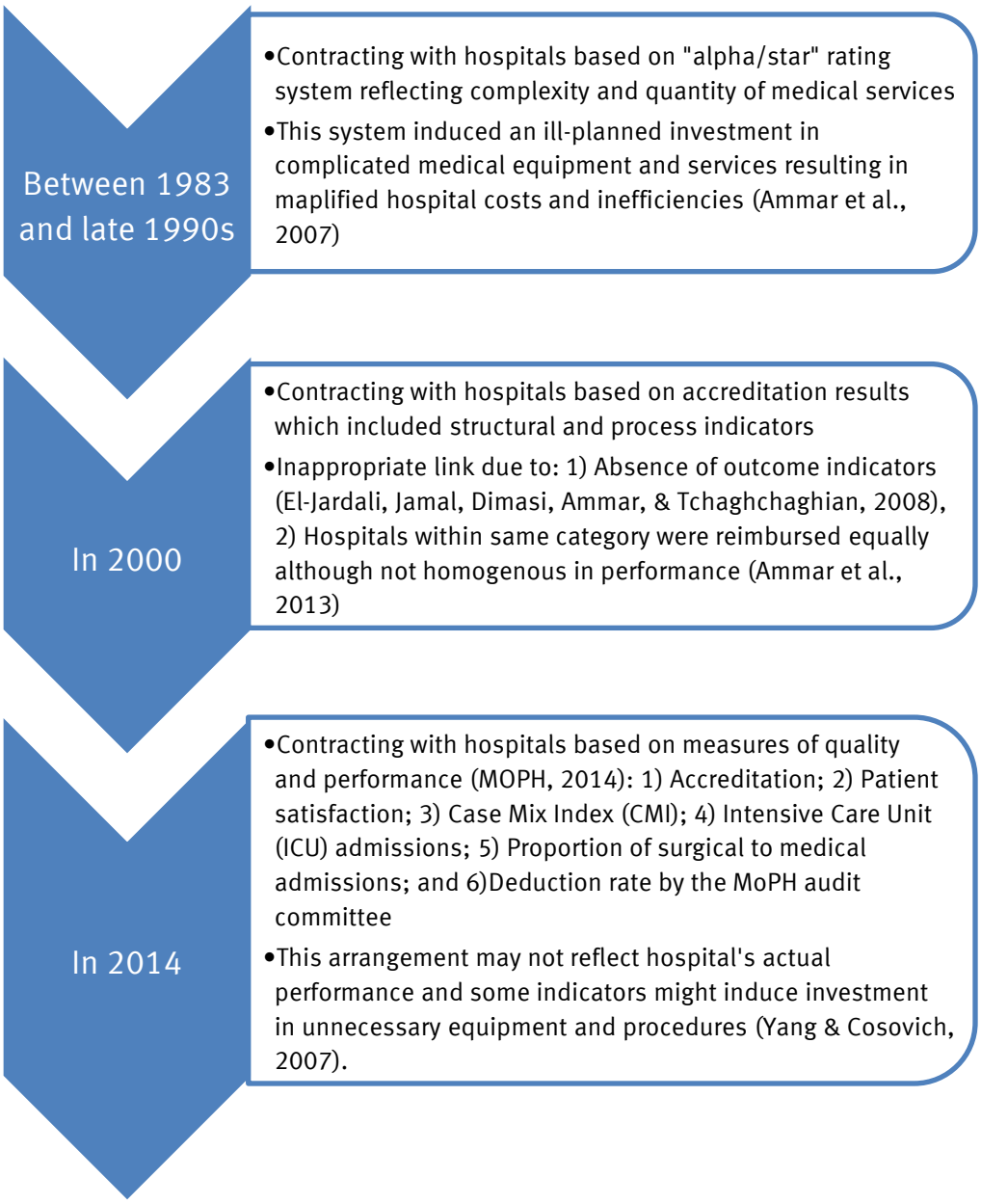
A K2P Briefing Note describes priority issues, synthesizes context-specific evidence, and offers recommendations for action.

The preparation of the briefing note involved six steps:

1) *Identifying and selecting a relevant topic according to K2P criteria*
2) *Appraising and synthesizing relevant research evidence*
3) *Drafting the Briefing Note in such a way as to present concisely and in accessible language the global and local research evidence;*
4) *Undergoing merit review*
5) *Finalizing the Briefing Note based on the input of merit reviewers.*
6) *Submitting finalized Briefing Note for translation into Arabic, validating translation and disseminating through policy dialogues and other mechanisms.*

Current Situation

The MOPH has undertaken several healthcare reforms to address the increasing hospitalization expenses and inefficiencies. Various mechanisms for reimbursing hospitals were adopted by the MOPH over the years while continuously aiming at improving the quality of care provided.



Indicators

Table 1 **Indicators used for Performance Based Contracting (PBC)**

Proportion of ICU out of total admissions	Might provide an inappropriate incentive for hospitals to invest in ICU equipment that may not be needed (Yang & Cosovich, 2007). Higher utilization often reflects a delivery system in which services are driven not by patient need, but by relative availability of resources, hence the risk of supply-induced demand (Yang & Cosovich, 2007).
Proportion of surgical to medical admissions	May encourage hospitals to perform unnecessary surgical procedures, hence the risk of increased inefficiency and imposed health risks on patients.
Case-Mix Index (CMI)	A hospital's CMI measures the complexity of cases treated at that hospital relative to the average complexity in a peer group of hospitals (France, 2003; Jian, Huang, Hu, & Zhang, 2009; Lee & Roh, 2007; Yang & Reinke, 2006). It is crucial to account for hospital's CMI when designing a P4P program since the Diagnosis-Related Group (DRG) in which the patient is classified explains a large proportion of the observed costs and quality of care (Lovaglio, 2012). It has been recognized that achieving equitable hospitals reimbursement and enhancing the management of hospitals can be attained through measuring the heterogeneous severity of illness of hospitals (Young, Swinkola, & Zorn, 1982).
Accreditation	A number of systematic reviews have found benefits for accreditation programs; promoting change and professional development was the most consistently reported benefit. Other benefits include increased staff engagement and communication, multidisciplinary team building, positive changes in organizational culture and enhanced leadership and staff awareness of continuous quality improvement (Greenfield & Braithwaite, 2008; Ng, Leung, Johnston, & Cowling, 2013). Uncertainty of reported advantages was raised since systematic reviews shed light on the insufficiency of high quality evidence to ensure the effectiveness of accreditation in improving quality and outcome indicators (Flodgren, Pomey, Taber, & Eccles, 2011; Greenfield & Braithwaite, 2008; Scott, 2009)

Readmission	Patient readmission is related to quality of care provided since it may reflect post-operative or post-treatment complications. While readmissions differ extensively across centers, regions and countries, part of them might be avoidable. Consequently, there is a high interest in the readmission rate as an indicator of quality of hospital care (Fischer et al., 2014).
Patient Satisfaction	Plays a crucial role in determining the quality of care provided (Shirley & Sanders, 2013). Healthcare institutions rely on patient satisfaction surveys as a process improvement tool to enhance services provision (Deitrick et al., 2007). Patient satisfaction data can be used as a policy indicator to improve processes and efficiency by identifying quality defects in services provision.
Mortality rate	Evaluation of P4P program implemented in hospitals at the United States found no evidence regarding its effectiveness in decreasing 30-day mortality or enhancing outcomes at both 3 and 6 years of implementation (Jha, Joynt, Orav, & Epstein, 2012; Shih, Nicholas, Thumma, Birkmeyer, & Dimick, 2014). P4P implemented in one region in England resulted in decreased 30-day mortality rate during first 18 months of implementation, however, positive results were not maintained at 3.5 years post implementation (Kristensen et al., 2014; Sutton et al., 2012).

What we know from Evidence

How was P4P implemented in different settings?

Pay for Performance (P4P), also known as Performance Based Contracting, aims at incentivizing desired processes of care and health outcomes by providing rewards for improved care (Casale et al., 2007; Hollander & Kadlec, 2015). P4P programs were implemented in high, middle and low income countries such as the United States, United Kingdom, Canada, Taiwan, Germany, Philippines, Tanzania and Zambia (Eijkenaar, Emmert, Scheppach, & Schöffski, 2013; Witter, Fretheim, Kessy, & Lindahl, 2012). P4P implemented in different contexts differ in terms of performance dimensions, targeted healthcare providers and type of incentives provided (Eijkenaar, 2012; Van Herck et al., 2010). A systematic review comparing the implementation of 13 P4P programs in nine countries found (Eijkenaar, 2012):

- Clinical quality is the most frequently incentivized factor and generally possesses the highest weight, followed by the use of resources and efficiency, the adoption of information technology and patient experience or satisfaction.
- Performance score usually consists of a limited set of indicators.
- Outcome indicators are gradually adopted, however, process and structural measures are more commonly used.
- Reimbursement is typically provided at the organizational level such as hospitals, multispecialty organizations or primary healthcare centers. Payments provision to individuals (i.e. physicians) or a group of individuals is less commonly used.
- Positive incentives are used in most of the programs and payment is provided on annual basis.

Effectiveness of P4P

The effectiveness of P4P programs was shown to be highly dependent on the design of the scheme and the context in which it is implemented (Witter et al., 2012). P4P seems to have been more effective when (Eijkenaar et al., 2013; So & Wright, 2012; Van Herck et al., 2010)

- Measures used have more room for improvement and are easy to track
- Incentives directed at individual physicians or small groups rather than hospitals

- Rewards were based on providers' absolute performance
- Delay between care delivery and payment provision was minimized
- The program designed collaboratively with providers while ensuring their active engagement and obtaining their ongoing input
- Larger payments were used
- Incentives were purely positive rather than competitive

The implementation of P4P could improve the quality of care, specifically the process and to a lesser extent the outcome of care(So & Wright, 2012). Several systematic reviews evaluated the impact of financial incentives provided in various schemes, results were as follows:

Table 2 **PBC implementation and effectiveness among different healthcare settings**

Setting	Type of incentive	Findings	Reference
A systematic review examining the effect of financial incentives of P4P programs in the United States implemented on several levels (system, physician and provider-group)	System level financial incentives through the provision of bonus payments for attaining access and outcome indicators	2 out of 2 studies found improved health outcomes and decreased overall health care expenditures	Petersen, Woodard, Urech, Daw, & Sookanan, 2006
	Physician-level financial incentives through the provision of bonus payments	5 out of 6 studies found positive effect on patients' experience and process of care	
	Provider group-level financial incentives through the provision of bonus payments, enhanced fee for service or better contracts with health plans	7 out of 9 studies found positive effect on process of care and access	
Program implemented in 21 public emergency departments in Australia	Bonus payments were provided at the beginning of each year and departments were required to return varying portions of the bonus if they did not achieve performance targets related to: Ambulance bypass	Significant improvement in two of the three measures, with improvements sustained for 3 years	Christianson et al., 2008

Setting	Type of incentive	Findings	Reference
	Waiting time for patients at different levels of emergency Patients waiting more than 12 hours for hospital admission		
Program implemented in 17 hospitals in Hawaii by a health plan	Payments were based on points accumulated in: ⇢ Process measures of care ⇢ Outcomes measures ⇢ Service satisfaction ⇢ Business operations measures	Performance measures tracked over a 4-year period showed: ⇢ Improvement in aggregated rates of risk-adjusted surgical complications ⇢ Reduced lengths of stay for several surgical procedures ⇢ Mixed results for patient satisfaction	Christianson et al., 2008
207 hospitals participated in the Centers for Medicare and Medicaid Services P4P Premier Hospital Quality Initiative in the United States	Payment was based on performance on 33 quality indicators concerning five clinical conditions. Additional 2% and 1% bonus payment were added to the reimbursement of the hospital if the institution fell into the first or second quintile respectively.	Significant improvements from 2.6% to 4.1% in composite performance measures over 2 years	Christianson et al., 2008
UK Quality and Outcomes Framework, which is the national primary care P4P program	Provision of financial incentive upon achieving goals related to several domains: ⇢ Clinical ⇢ Organizational ⇢ Patient experience ⇢ Additional services	Improved quality of care for chronic diseases Improved quality of care for incentivized conditions during the first year of the framework at a faster rate than the pre-intervention trend but subsequently returned to prior rates of improvement.	Alshamsan, Majeed, Ashworth, Car, & Millett, 2010; Gillam, Siriwardena, & Steel, 2012

Setting	Type of incentive	Findings	Reference
		Improved equity through narrowed differences in performance in deprived areas compared with non-deprived areas. Enhanced data recording and teamwork, and improved nurses' specialist skills. Reduced inequalities in chronic disease management between affluent and deprived areas. However, inequalities between age, sex and ethnic groups persisted after the use of the financial incentives.	

Potential harms

- Providers may focus disproportionately on incentivized performance ("teaching to the test") and un-incentivized aspects may be neglected (Eijkenaar, 2012).
- Health inequality might arise with an incentive to select healthier and less complex cases and avoid sicker patients (Baxter et al., 2015; Petersen, Woodard, Urech, Daw, & Sookanan, 2006; So & Wright, 2012).
- Documentation, rather than actual use of the preventive service, may improve with a financial incentive (Petersen et al., 2006).
- Gaming behaviors may arise with the practices of up coding, concealing and manipulating discharge and length of stay data, and discharging patients prematurely (Baxter et al., 2015).
- Sustainability of P4P programs must be considered because the interventions based on bonus payments might necessitate a large financial investment (Allen, Mason, & Whittaker, 2014; Custers,

Hurley, Klazinga, & Brown, 2008; Kahn III, Ault, Isenstein, Potetz, & Van Gelder, 2006).

- The ability of programs to continuously incentivize performance is debated since some rates of improvements were shown to slow down (Campbell, Reeves, Kontopantelis, Sibbald, & Roland, 2009). This may be due to various reasons (Oliver):
- Achieving near-maximal performance score
- Obtaining initial rewards limits subsequent improvements
- Limiting motivation to strive further since programs might not reward improvement exceeding initial targets

Barriers and counterstrategies

A list of potential challenges and counterstrategies identified by 9 systematic reviews for implementing P4P programs is provided in the table below (Baxter et al., 2015; Christianson, Leatherman, & Sutherland, 2008; Eijkenaar, 2012; Eijkenaar et al., 2013; Emmert, Eijkenaar, Kemter, Esslinger, & Schöffski, 2012; Kwon et al., 2013; Mehrotra, Damberg, Sorbero, & Teleki, 2009; Petersen et al., 2006; Van Herck et al., 2010; Werner, Kolstad, Stuart, & Polsky, 2011)

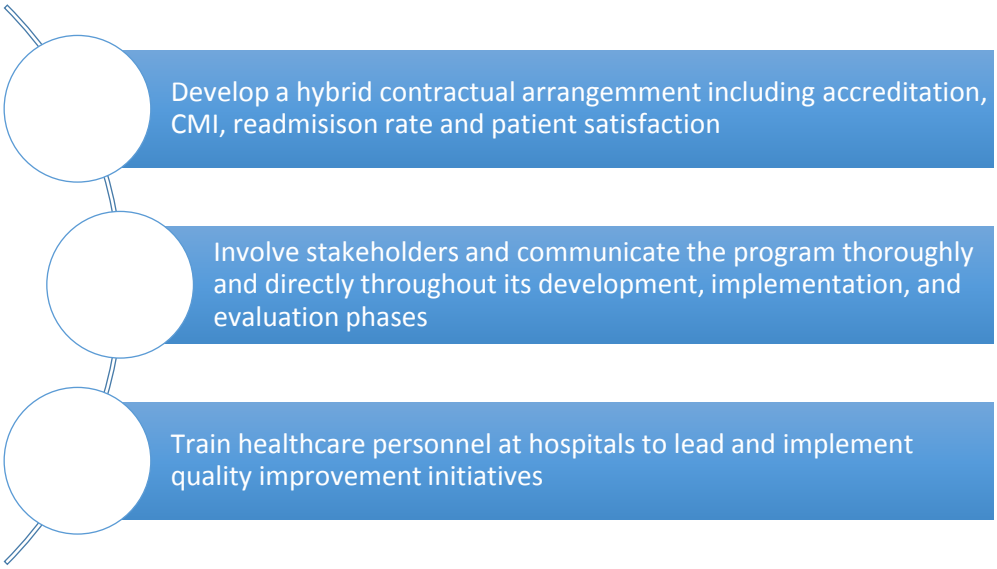
Table 3 **Barriers and counterstrategies for PBC implementation**

Level	Barrier	Counterstrategies
Professional	**Cherry-picking**: selecting healthier cases to achieve better outcomes **Dependency on financial incentives**: Provider may stop improving performance when the incentives end **Demoralization**: occurs if short-term professionals receive more financial incentives than those who have established long-term practices	Use of a combination of process and outcome measures. Align design of the program and measures professional norms and values to keep providers' intrinsic motivation. Involve stakeholders, particularly providers, in designing the program Provide a relatively high incentive Provide incentives of a purely positive nature Select and define targets based on baseline room for improvement

Level	Barrier	Counterstrategies
		Communicate incentives to providers
Organizational	**Free-riding**: in group settings performance payments may not be effectively distributed to group members, and it may be tempting for members to free ride, especially in large groups **Bureaucratization**: administrative costs associated with monitoring performance and managing disbursement of the financial incentives **Limited Resources**: Hospitals with limited resources might not be able to invest in quality improvements	Minimize delay between care delivery and pay- out Use absolute targets
System	**Gaming the system:** improving on reporting/documentation rather than improving performance	Use risk adjustment to even the playing field across providers with respect to severity of patient mix. Supply data via an online tool enabling auditing and checks to control "gaming" behaviour Impose penalties on hospitals failing to meet data accuracy targets

Recommendations

Recommendations



Recommendation 1: Develop a hybrid contractual arrangement including accreditation, CMI, readmission rate and patient satisfaction

Develop a hybrid contractual arrangement with hospitals whereby the hospital reimbursement formula includes

- A proportion based on improved accreditation standards
- A proportion based on additional indicators retrieved from the hospitalization database of MOPH, including the Case Mix Index, readmission rate and patient satisfaction.

Findings related to the previously adopted contractual systems have shown that adopting a P4P program on its own as a reimbursement mechanism has its risks and unintended consequences, and the same applies for accreditation which has already proved to be an insufficient criterion for contracting with hospitals. A hybrid model that strikes a balance between the two approaches is proposed. Allocating a proportion of the reimbursement formula towards accreditation (which should be improved to include outcome measures) being one of the most influential mechanisms for assessing performance of healthcare organizations and improving quality and safety of services (Hirose, Imanaka, Ishizaki, & Evans, 2003; Jovanovic, 2005). Another proportion must be allocated to performance indicators retrieved from MOPH database.

Recommendation 2: Involve stakeholders and communicate the program thoroughly and directly throughout its development, implementation, and evaluation phases

Involve stakeholders and communicate the program thoroughly and directly throughout its development, implementation, and evaluation phases. Challenges previously encountered during the design and implementation of various projects must be accounted. For instance, the development of a balanced scorecard for hospitals in Lebanon was challenged by stakeholders' concerns about the possible implications of the development and measurement of standardized performance indicators (El-Jardali, Saleh, Ataya, & Jamal, 2011). Accordingly, it is crucial to clarify the non-punitive nature of the initiative for stakeholders to accept and participate in the process. Additionally, all participants must be aware that the major objective of P4P is to motivate and support quality improvements in hospitals in order to reach better health outcomes. Engaging and partnering with various stakeholders at different stages of the project is important to create a conducive environment to the implementation of a P4P initiative. Listening and responding to hospitals' needs and concerns is essential in maintaining their trust (El-Jardali et al., 2011).

Recommendation 3: Train healthcare personnel at hospitals to lead and implement quality improvement initiatives

Train healthcare personnel at hospitals to lead and implement quality improvement initiatives. Building their capacity is critical for successful implementation of P4P. Several hospitals in Lebanon are investing in quality improvement projects. However, they are still facing difficulties with measuring indicators and using results for performance improvement and informed decision making (El-Jardali et al., 2011). Team-training can significantly improve providers' knowledge and attitudes, teamwork processes, clinical care processes and patient outcomes, including adverse events, mortality and morbidity (Buljac-Samardzic, Dekker-van Doorn, van Wijngaarden, & van Wijk, 2010; Schmutz & Manser, 2013; Weaver, Dy, & Rosen, 2014; Weaver et al., 2010). Educational resources can be shared with hospitals along with training healthcare personnel regarding the program. This may include medical records staff in order to improve the frequency and quality of documentation.

Next Steps

Next Steps

The aim of this K2P Briefing Note is to gather the best available evidence related to Pay-for- Performance. Further actions will follow from the deliberations that the briefing note is intended to inform. Following the development, implementation and evaluation of a contextualized Pay-for-Performance scheme, this briefing note will be updated by:

- Refining recommendations,
- Incorporating, removing or modifying some components
- Accounting for additional data or context specific evidence.

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