

# Valuing Quality

Patient-Focused Funding in British Columbia



A Policy Paper by BC's Physicians | September 2010





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The BCMA Council on Health Economics and Policy (CHEP) reviews and formulates policy through the use of project-oriented groups of practising physicians and professional staff.

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# Executive Summary

Canadian provincial governments continue to find ways to address the growing demands on their health care systems. Increased demand brings with it growing health care costs that are largely seen to be unsustainable. BC's Minister of Health Services has a robust agenda to look for new ways in which to contain costs while maintaining quality patient care.

The April 2010 BC government announcement of \$250 million for patient-focused funding (PFF) marks an important development. The BC government has signalled that it will embark on significant changes to better manage health care costs. The PFF initiative will shift away from providing global budgets to hospitals and move toward a system that provides incentives to manage health care expenditures.

The BCMA supports the BC government's interest in having greater financial accountability in the current global budget management. In principle, it also supports the use of financial incentives to manage health care costs better. But, the BCMA firmly believes that a great deal of work needs to be done to ensure that there is a shared understanding of how new funding models will function, and that patient safety and quality of care must be included as a key measurement criteria in any incentive program.

Considerable confusion exists around the various funding models that are surfacing in the quest to contain health care costs. Patient-focused funding, pay-for-performance and activity-based funding are often seen as interchangeable terms for incentive-based payment models.

For purposes of this paper, PFF is defined as any method of compensating providers (e.g., individual providers, hospitals) that uses incentives and supports to improve the appropriateness, quality, and efficiency of care for patients. This definition – broader than that used by the provincial government and the Canadian Medical Association (CMA) – allows us to examine in depth the academic and policy literatures on this topic.

The BCMA believes it is timely to examine the opportunities and limitations that these funding models present. This paper reviews the international and Canadian experience with PFF models and provides an assessment of what British Columbia can learn from these situations.

What seems clear is that there is no universal PFF model that will work in every setting. The application of the PFF models appears to be highly customized. As such, it is not possible to provide broad endorsements or rejections of any specific model.

While the provincial government's policy represents a potentially major shift in health care funding, the specifics of what PFF ultimately will look like in BC remain to be seen. Although the move towards PFF is supported in principle by the BCMA, we believe physicians must be engaged in the development of the principles and specifics of any PFF initiative.

The BCMA offers 10 recommendations on the design, implementation, and evaluation of PFF. These recommendations were developed after a thorough review of the best available research and a consultative process with health care stakeholders, including representatives of health authorities, patients, and the provincial government (see Appendices A and B). Among the most significant are:

- PFF programs must be designed to improve the timeliness, safety, and health outcomes of patient care within a cost-certain environment. Cost reduction in isolation is unacceptable.
- Physicians and other health care providers must be involved in the development of BC's PFF program. This can best be facilitated by the creation of a working group by the BC Health Services Purchasing Organization to ensure the design, implementation, and evaluation of PFF programs. Membership must include representatives from the Ministry of Health Services, the health authorities, the BCMA, and appropriate allied health professionals.
- PFF programs must be rigorously evaluated and monitored for their impact on patient care, access, and costs through an ongoing and transparent process.
- A phased, flexible approach should be used to design and implement PFF that responds to providers' performance and the evolution of a program's scope and goals.

Ultimately, the implementation of PFF requires system-wide collaboration, commitment, and leadership to achieve the highest level of quality. The importance of involving physicians, as early and directly as possible, in the development and ongoing implementation and evaluation of PFF cannot be overstated. Without a strong empirical foundation to guide policy, PFF programs must be built upon a learning culture and fine-tuning to ensure that incentives remain effective, relevant, and appropriate. With buy-in from practising physicians, who have considerable influence on utilization and resource consumption, PFF programs can succeed, to the ultimate benefit of patients.

# Recommendations

## **Recommendation 1**

Patient-focused funding programs must be designed primarily to support and improve the timeliness, safety, and health outcomes of patient-focused care within a cost-certain environment.

## **Recommendation 2**

The BC Health Services Purchasing Organization should establish a working group to ensure the design, implementation, and evaluation of patient-focused funding programs. The Patient-Focused Funding Working Group must:

- include representatives from the Ministry of Health Services, the health authorities, the BCMA, and appropriate allied health professionals;
- consider the simultaneous use of strategic non-financial incentives in patient-focused funding programs; and
- rigorously evaluate and monitor the impact of patient-focused funding programs on the timeliness, safety, health outcomes, and costs through an ongoing and transparent process. The emergence and development of perverse incentives, quality of care distortions, and other unintended consequences must be identified and mitigated.

## **Recommendation 3**

The measures used in patient-focused funding programs must be evidence-based, risk-adjusted, and developed in collaboration with patient representatives.

## **Recommendation 4**

Patient-focused funding programs should reflect differences in providers' locations, size, population demographics, case-complexity (e.g., rural/urban providers, tertiary/academic hospitals), and other relevant factors.

## **Recommendation 5**

Patient-focused funding programs must provide fair and equitable financial incentives to recognize, reward, and support continuous performance improvement.

## **Recommendation 6**

Patient-focused funding should be designed and implemented in a phased, flexible approach that responds to providers' performance and the evolution of a program's scope and goals.



**Recommendation 7**

The data used for patient-focused funding programs must be scientifically valid, accurate, and publicly available. The BCMA will collaborate with the provincial government and health authorities in the identification, collection, and reporting of meaningful data, which must be integrated, supported, and funded for providers, while protecting patient privacy.

**Recommendation 8**

The initial development and ongoing costs to implement and manage a quality improvement infrastructure for patient-focused funding programs should be appropriately funded.

**Recommendation 9**

Patient-focused funding should be implemented and aligned in conjunction with other payment methods.

**Recommendation 10**

Funding for patient-focused funding initiatives must be sustainable, and financial incentives must be sufficient to warrant providers' implementation of organizational and process changes.

# Introduction

*“Valuing quality” means different things to different people in health care.*

Like other providers, physicians have always placed a high value on quality. Their satisfaction with the practice of medicine stems, more often than not, from their ability to provide their patients with quality health services, and their greatest frustrations come when policies run counter to their ability to provide quality care. For them, “valuing quality” brings to mind the care that they provide.

But for those responsible for the funding and management of the health care system, “valuing quality” has an additional meaning. Charged with the difficult task of meeting the growing demand for services with finite means, health system administrators must both value quality and place a financial value on it.

Patient-focused funding (PFF) attempts to reconcile this tension, by compensating providers (e.g., individual providers, hospitals) and using incentives and supports to improve the appropriateness, quality, and efficiency of care for patients.

The concept of PFF is not new. Financial incentives have long been used to influence provider behaviour – for example, to increase productivity, control costs, and improve efficiency. However, there is growing interest in using financial incentives – placing a financial value on quality – among funders to achieve multiple health system goals.

Despite the growth of PFF, few studies on its impacts have been undertaken. The limited available evidence makes it difficult to assess the effect of these kinds of financial incentives on quality. However, many jurisdictions, including British Columbia, are examining PFF as a way to achieve new standards for quality and productivity in health care.

While the existing literature does not support a particular PFF strategy that will work for all settings, it does suggest that any PFF strategy must be tailored to the goals and context of each setting. This policy paper begins with a review of the main approaches used for paying institutional providers and physicians, and then defines PFF and explores two common types of PFF: pay-for-performance and activity-based funding. Next, the paper provides an overview of PFF experiences, both within and outside Canada, and the existing evidence, and offers three key lessons for BC based on the evidence. Finally, the paper recommends principles for the design, implementation, and evaluation of PFF programs in BC.

# I. Existing Funding Models

*Mechanisms for paying health care institutions and providers have evolved over time in British Columbia to meet changing needs. This section reviews the advantages and disadvantages of the main approaches currently used for paying institutional providers (e.g., hospitals, health authorities) and physicians.*

## Institutional Funding

### ***Population needs-based funding***

Population needs-based funding was introduced in British Columbia in 2002 and is used to allocate funding from the Ministry of Health Services to the health authorities for acute, home, and residential care. It is a variation of global budgeting (i.e., block grants).

In global budgeting, institutions pay for all the services they offer (“global”) from a fixed, predetermined amount (“budget”). A key advantage of global budgeting is that governments can control spending while allowing discretion at the regional and administrative level to allocate funding among and within institutions. Disadvantages of global budgeting include its lack of objectivity and its potential failure to accommodate changes in population demographics and size.

Population needs-based funding attempts to address some of the disadvantages of global budgeting by using a series of “adjusters,” such as changes in population size and age, variations in the location of service provision, and costs associated with remote location, teaching, and so on to estimate the population’s demand to seek health services (McKillop 2001). (Pure global budgeting adjusts a previous total spending figure by a multiplier such as inflation.) However, population needs-based funding shares some of the shortcomings of global budgeting, including a lack of incentives for improved performance, increased efficiency, and more appropriate use of services, and seeing patients as a source of costs as opposed to revenue.

Population needs-based funding models can be easier to devise in theory than in practice. The adjusters and resulting formulas used to calculate the budget are complex and may be difficult for users to understand. The adjusters themselves may not adequately explain variations in health status across geographic areas, differences between the health needs of a population and service use by sick people, and the fact that the lowest-spending 50% of the population often accounts for less than 5% of health expenditures (Deber 2008).

### ***Line-by-line budgeting***

Health authorities allocate funding to individual hospitals primarily through line-by-line budgeting, a variation of global budgeting in which budgets for line items in a hospital budget are predetermined on the basis of previous costs multiplied by a factor such as inflation. Funders can make line items fixed or flexible, allowing hospitals and health authorities more or less freedom to move funds across budget lines.

Like global budgeting, line-by-line budgeting has the advantage of being generally simple and easy to implement, and provides a degree of budget predictability for hospitals and a level of cost control for government. In contrast to global

budgeting, line-by-line budgeting gives government more control in promoting focused policy initiatives through targeted funding.

However, there are several disadvantages to line-by-line budgeting. As with global budgeting, there is little incentive to encourage efficiency or the more appropriate use of services, information on the cost or quality of outputs is unavailable, and there is a perverse incentive for hospitals to raise costs to increase reimbursements (Deber 2008). Moreover, it is difficult to determine whether past base allocations or spending for line items represent appropriate or efficient spending patterns (McKillop 2001). Line-by-line budgeting may also reduce flexibility for hospitals, especially if funds cannot be moved across budget items.

As funders continue to consider strategies to use resources more efficiently and effectively, line-by-line budgeting will increasingly be scrutinized in its ability to achieve these goals.

## Physician Payments

### *Fee-for-service*

Over 70% of BC physicians are paid through a fee-for-service approach (BCMA 2004), in which physicians bill for each item of service that they provide. Supporters argue that fee-for-service improves access to care and encourages greater service provision and productivity than other forms of payment, because the more services physicians provide, the more they get paid. However, critics argue that fee-for-service may lead to shorter visit times, provision of too much care, or fragmented care (Wranik and Durier-Copp 2008).

### *Time-based payment*

BC physicians may also be paid for the time they spend in delivering services. Over 20% of physicians in BC are paid, at least in part, through time-based payment methods (BCMA 2004). Time-based payments are simple to administer but lack incentives to ensure that time is well spent or that it is spent on truly needed services. Time-based payment encourages physicians to spend more time per client; whether the additional time is beneficial depends on the nature of the visit, the needs of the patient, and the costs of the other services that might have been provided instead (Deber 2008).

## Disadvantages of Current Funding Models

Every funding system brings its own set of desired and perverse incentives (Robinson 2001). The situation is further complicated when multiple funding models are used at the same time and when financial incentives between sectors are not aligned. An example is when hospitals are funded through line-by-line budgets and physicians are paid through fee-for-service: generally speaking, line-by-line budgets give hospitals the incentive to limit the volume of cases, while fee-for-service gives physicians an incentive to increase volumes.

The results of this conflict are of more than just academic interest. A number of US and Canadian studies suggest that health care systems do not routinely provide safe and high-quality care, which in turn harms patients and drives up costs (Institute of Medicine 2001; Baker, Norton et al. 2004). This may be due, in part, to the fact that payment policies for physicians, hospitals, and other providers do not reward high-quality care.

BC has implemented patient safety and quality improvement initiatives for specific settings, such as the Integrated Health Networks, and the focus on measurement required for accreditation processes (BC Patient Safety and Quality Council 2008). However, publicly reported standardized patient safety and quality indicators are lacking, making it difficult to assess the success of these initiatives.

BC has also explored the use of financial incentives to achieve improvements in processes and access. Incentives for GPs to follow chronic disease management protocols were generally found to be successful, and while the Emergency Department Decongestion Pay-for-Performance Program received mixed reviews, it was generally thought to be an acceptable way to engage providers (BC Patient Safety and Quality Council 2008).

# II. Patient-Focused Funding Models

*As financial incentives in health care evolve, so does the language used to describe them, and confusion has arisen around terms like “patient-focused funding,” “pay-for-performance,” and “activity-based funding.” This section defines these three terms and describes their strengths and weaknesses.*

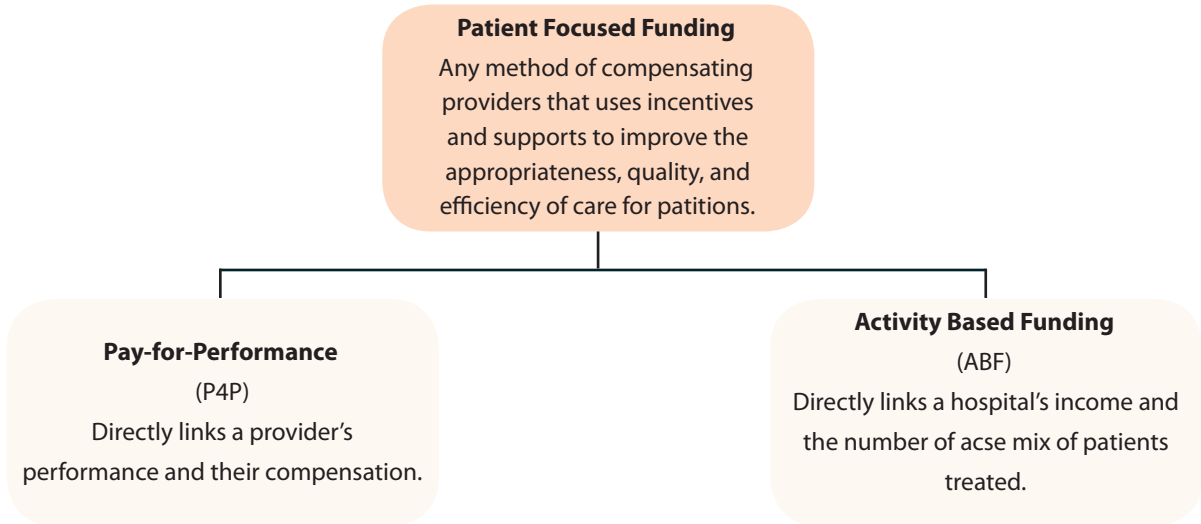
## Patient-Focused Funding

The Canadian Medical Association (CMA) first coined the term “patient-focused funding” to describe hospital funding that is activity-based and built on a predetermined set of fees linked to case complexity (Canadian Medical Association 2007). The CMA argues that this approach allows the funding to follow the patient. The BC government recently launched a province-wide PFF initiative, and has specified that under PFF, hospitals receive financial incentives for delivering acute-care services for a competitive, set price (BC Ministry of Health Services 2010). However, advocates of nearly all of the financial and non-financial incentives presented in the academic and policy literatures over the past decade have attempted to link the incentive more explicitly to improvements in patient outcomes or experiences.

To acknowledge the appropriately broader applications of the term, this paper defines “patient-focused funding” as any method of funding providers that uses incentives and supports to improve the appropriateness, quality, and efficiency of care for patients. The term “provider” refers to a care delivery entity at an individual, group, institutional, or regional level (e.g., physicians, hospitals, health authorities).

Pay-for-performance and activity-based funding are best understood as types of PFF that affect providers. Because these two funding policies overlap in several ways (e.g., service level measurement, public reporting, data standardization and collection), the terms describing them are often confused with one another. However, pay-for-performance and activity-based funding are distinct, and their differences are described below.

**Exhibit 1: Definitions of patient-focused funding, pay-for-performance, and activity-based funding**



## Pay-for-Performance

Pay-for-performance (P4P; also referred to as pay-for-value or pay-for-quality) directly links provider performance and compensation. Arguments in support of pay-for-performance are straightforward: health care quality that is not at a desired level can be attributed, in part, to provider behaviour, and provider behaviour can be changed by modifying financial incentives.

Pay-for-performance compensates or “rewards” providers on the basis of their performance against quality and/or efficiency benchmarks. Quality can be assessed in five areas: access, structure, process, outcomes, and patient experience<sup>a</sup> (Peterson, Woodward et al. 2006). Although few performance measures address the overuse of services, and measures of resource use that identify inefficient providers are only beginning to be tested and applied (Rand Health 2009; Rand Health 2009), funders have recently signalled a growing desire to use resource use and efficiency measures to address cost pressures in the health system.

Pay-for-performance programs vary according to funders’ and providers’ objectives. For example, some programs reward providers for meeting quality benchmarks, while others focus on payments for non-clinical tasks that are normally uncompensated but still benefit the patient. Pay-for-performance programs may also vary by payment strategy. For example, incentives may be limited to a small number of providers (e.g., the top 10%) or expanded to any provider that meets performance targets. Exhibits 2 and 3 describe five types of pay-for-performance programs and common payment strategies (Wranik and Durier-Copp 2008; Werner and Dudley 2009).

### Exhibit 2: Types of pay-for-performance programs

<b>Quality bonuses</b>	Providers are rewarded bonuses contingent on meeting quality benchmarks.
<b>Compensation at risk</b>	A portion of the provider’s compensation is placed “at risk,” based on performance against quality measures.
<b>Performance fee schedules</b>	Provider fee schedules are linked to performance (e.g., providers attaining the highest level may be paid 115% of the fee schedule, while those attaining the average level are paid 100% and those attaining the lowest level receive 85%).
<b>Additional payments</b>	Tasks that are beneficial to patients and are not otherwise remunerated via the existing payment mechanism are reimbursed (e.g., new billing codes in a fee-for-service system for chronic disease management/planning).
<b>Shared savings</b>	The savings from quality improvements are calculated and shared between providers and funders.

<sup>a</sup> Access to care is the patient’s attainment of timely and appropriate health care. Structure of care is a feature of a health care organization or clinician relevant to the provision of health care. Process of care is a health care service provided to or on behalf of a patient. Outcome of care is the health state of a patient resulting from health care. Experience of care is the individual’s or population’s report concerning health care.

**Exhibit 3: Common pay-for-performance payment strategies**

<b>Relative rank</b>	A predetermined number of providers receive compensation based on their performance ranking in relation to other providers (e.g., rewarding providers whose performance is in the top 10%).
<b>Relative rank with penalties</b>	Compensation is based on rank, and providers that have not performed above a defined threshold pay penalties.
<b>Target attainment</b>	All providers that attain a target level of performance receive compensation.
<b>Target attainment plus improvement</b>	Compensation is based on a combination of target attainment and improvement in performance from the previous period.
<b>Percentage of patients receiving recommended care</b>	All providers receive compensation based on the percentage of patients receiving recommended care (e.g., a hospital whose overall performance is 87% will receive 87% of the total bonus for which it is eligible).

**Activity-Based Funding**

Activity-based funding (ABF; also referred to as volume-based funding, service-based funding, case-mix funding, or payment-by-results in the UK) directly links a hospital’s income to the number and case mix of patients treated. Implementing activity-based funding requires that the hospital and funder first divide the hospital services delivered to individual patients into comparable groups (e.g., all heart attack patients), and then assign a price for each of these groups (e.g., a fixed sum paid to hospitals for a set of heart attack patients, regardless of actual costs to the hospital). In most cases, the grouping is based on diagnosis-related groups (DRGs), which identify a number of case types that are expected to draw on a similar amount of hospital services (Canadian Health Services Research Foundation 2009).

Activity-based funding primarily aims to increase efficiency and activity volumes, shifting away from hospital global budgets toward a model where hospitals are reimbursed based on patient diagnoses and the type of services or procedures performed. The goal is to overcome some of the shortcomings of the global budget system – in particular, seeing patients as a cost rather than a source of revenue.

When offered a fixed payment for a patient with a particular condition, the hospital has an incentive to identify the total costs of treating that patient and then to reduce those costs to below the fixed payment. If the hospital can do this, it realizes the savings; if not, it bears the additional costs.

Not all activity-based funding programs are the same, and they may differ in strategy. For example, in a “pure” activity-based funding program, hospital revenue is determined by multiplying activity in each DRG by the fixed price; mixed activity-based funding programs and contract-and-volume contracts vary the payments by accounting for non-clinical activities or by defining target levels of activity. Exhibit 4 describes the main types of activity-based funding programs (Street 2007).



**Exhibit 4: Types of activity-based funding programs**

<b>“Pure” activity-based funding</b>	Hospital revenue is determined by multiplying activity in each DRG by the fixed price.
<b>“Mixed” activity-based funding</b>	Hospitals receive both activity-related and non-activity related payments. Non-activity-related payments may cover teaching, research, and fixed costs.
<b>Cost and volume contracts</b>	Cost-and-volume contracts are specified by DRG rather than by specialty. A target level of activity is defined, and a different price is set for additional activity beyond the target level.

One of the strongest calls for activity-based funding in Canada came from the 2002 Kirby report (Standing Senate Committee on Social Affairs Science and Technology 2002). The report suggested that activity-based funding would provide better information with which to cost services and measure performance, and therefore greater transparency and accountability. The report also argued that activity-based funding would result in a more equitable distribution of funds, increased efficiency and performance, competition between hospitals to provide the best services, increased responsiveness to patients’ needs by providers, and flexibility in changing priorities.

Critics point to several disadvantages of activity-based funding, including the complexity of developing costing data and appropriate fees. Under global budgeting and its variants, hospitals had no incentive to measure case-related costs. These data are currently limited in Canada, and in order for activity-based funding to be implemented across the country, they would have to be developed.

Other disadvantages include the potential to focus on procedure-driven health care rather than comprehensive integrated care; quality of care compromised by “gaming” behaviour (e.g., fraudulently placing patients in more lucrative payment categories, early discharge, patient selection); uncontrolled global expenditures; and the difficulty of implementing the model for rural/remote and teaching hospitals (Association of Canadian Academic Healthcare Organizations 2002; Canadian Healthcare Association 2002; Collier 2008). However, advocates believe many of these shortcomings can be addressed through careful and more nuanced development of activity-based funding programs.

## III. Experiences with Patient-Focused Funding

*In the last decade, many jurisdictions have used patient-focused funding to address the goals of improving quality and achieving value for money. PFF is often introduced as part of a range of broader quality improvement initiatives; parallel strategies may include public reporting, implementation of information technology, and targeted initiatives to reduce wait times. Canadian jurisdictions, including BC, have recently been implementing PFF as a strategy to reduce wait times and improve efficiency and quality. This section provides an overview of Canadian and international PFF experiences and summarizes the findings from the academic literature.*

### International Experiences

#### ***United Kingdom***

The UK has both activity-based funding and pay-for-performance programs. Activity-based funding was introduced in 2003 as the “Payment by Results” program for National Health Service hospitals, covering all elective care, non-elective and outpatient care, and accident/emergency and minor injuries units (King’s Fund 2007). The Quality and Outcomes Framework was implemented in 2004 as a voluntary pay-for-performance scheme for GPs, and includes 134 indicators on evidence-based clinical care and practice organization and management (Reeves, Doran et al. 2010). The Commissioning for Quality and Innovation Payment Framework, a pay-for-performance program for hospitals and other healthcare settings, was introduced in 2008, offering rewards to hospital trusts for meeting targets based on process measures and clinical and patient-reported outcomes.

#### ***United States***

Public and private insurers have implemented over 140 pay-for-performance programs in the US [24]. The majority target primary care physicians, but programs targeting hospitals and other institutions are increasing [3]. The diagnosis-related groups (DRG) system has been used to pay for Medicare patients in hospitals since 1983 [9]. More recently, the Centers for Medicare and Medicaid Services have experimented with various pay-for-performance programs targeted to physicians’ offices, ambulatory care facilities, hospitals, nursing homes, home health care agencies, and dialysis facilities [4], and in 2008 stopped reimbursement for preventable complications incurred to Medicare hospital patients after admission [25].

#### ***Australia and Europe***

Australia and several European countries have introduced PFF programs with the aim of improving quality and access. Exhibit 5 summarizes some of these experiences.

## Exhibit 5: Australian and European experiences with PFF

<b>Australia</b>	Activity-based funding was introduced in the state of Victoria in 1992 as a budget measure and a strategy to reduce waiting times (Street 2007). A pay-for-performance scheme for GP remuneration in chronic disease management was introduced in 1999 (Scott 2009).
<b>Denmark</b>	A national system incorporating global funding, activity-based funding, and performance targets was introduced in 2000 (Street 2007).
<b>France</b>	In public hospitals, the share of all activities paid by activity-based funding has increased each year from 10% in 2004 to 100% in 2008. Private for-profit hospitals have been paid entirely through activity-based funding since 2005 (Or 2009).
<b>Norway</b>	Activity-based funding is part of an arrangement between the national government and regional health authorities to fund health care. Since 2006, activity-based funding for hospitals has accounted for 40% of funding, with global budgeting accounting for the rest (Street 2007).
<b>Sweden</b>	During the 1990s, activity-based funding was introduced as part of a broader strategy that included national treatment guarantees to reduce patient wait times in selected counties (Street 2007).

## Canadian Experiences

### *Alberta*

Activity-based funding for nursing homes began in April 2010, with the Resident Assessment Instrument being used to determine clinically meaningful patient groups in terms of their expected resource consumption. The Alberta government also plans to implement activity-based funding for designated assisted living facilities, hospitals, and emergency medical services by April 2011 (Alberta Health Services 2010).

### *Ontario*

A funding formula based on case-mix groups and resource intensity weights has been used to distribute nearly \$1 billion in incremental funding to Ontario hospitals since 2001 [31]. A version of activity-based funding is used by the Ontario government to increase hospital activity in the priority areas defined by the 2004 First Ministers' Accord [9]. Legislation introduced in May 2010 strengthens hospital accountability through several measures, including linking hospital executive compensation to performance [34]. The Ontario government plans to implement activity-based funding for larger hospitals in April 2011 [32].

Community-based physicians are eligible for a bonus incentive for caring for diabetic and psychiatric patients, and a separate bonus will be paid to physicians who enrol their diabetic patients in the Diabetes Registry [33]. In addition, physicians receive Cumulative Preventive Care Bonuses for achieving specified thresholds of preventive care for their patients in five areas: influenza vaccine, Pap smear, mammography, childhood immunization, and colorectal cancer screening [9].

### ***British Columbia***

A province-wide PFF model coupled with an additional funding of \$250 million over two years was launched in April 2010. The objective of the PFF model is to reduce wait times and increase same-day surgical procedures. The model will pay 23 hospitals a set, competitive price for acute care services, with case-mix groups and resource intensity weights used to determine case fees for hospital services [28]. Overseen by the newly established BC Health Services Purchasing Organization, PFF will be expanded gradually, with approximately 20% of eligible acute-care spending funded through PFF by 2012/13.

A pay-for-performance program has been piloted, and is also expected to be implemented in 12 hospitals across BC, to decongest emergency departments. Hospitals could receive an extra \$100 to \$600 per patient if they are treated or admitted within set time limits.

Under the Full Service Family Practice Incentive Program, GPs are eligible to receive bonuses for providing care in accordance with the BC Clinical Guidelines for patients with diabetes, hypertension, congestive heart failure, and chronic obstructive pulmonary disease [24, 29, 30]. Other incentives have been made available for maternity care, cardiovascular prevention, complex care management, and mental health planning.

## **Research Findings**

### ***Pay-for-performance***

Despite the growth of pay-for-performance programs, there is agreement in both academic and policy circles that empirical evidence is limited (Peterson, Woodward et al. 2006; Trude, Au et al. 2006; Scott 2008; Glazier, Klein-Geltink et al. 2009). In addition, the literature that does exist is generally limited by its focus on a few countries (e.g., US, UK), narrow scope, and evaluation methodologies that do not necessarily account for the effects of other factors on the outcomes that may be correlated with payment reform. The result is that findings are rarely generalizable to other settings.

Almost all of the evaluations of pay-for-performance initiatives use either a quasi-experimental or a before-after study design (see Appendix C). In quasi-experimental designs, the evaluator uses a non-randomized contemporaneous comparison group that has characteristics that mirror, as closely as possible, the characteristics of providers receiving pay-for-performance payments. In quasi-experimental designs, any performance differences observed could reflect underlying differences in the groups rather than the impact of the pay-for-performance initiative. Before-after studies are weaker than quasi-experimental designs because they

lack control groups. Changes in performance are tracked before and after implementation of the pay-for-performance initiative, but only for the providers affected by pay-for-performance. Without proper control groups, the contribution of financial incentives to quality improvements is unclear, especially when pay-for-performance payments are coupled with other quality improvement efforts (e.g., patient outreach activities, registry development, physician profiling, public reporting).

Evaluations of pay-for-performance programs have reported mixed results (Peterson, Woodward et al. 2006; Rosenthal and Frank 2006). Physician pay-for-performance programs showed either modest gains or no additional gains in at least one quality metric (e.g., cervical cancer screening, asthma care, diabetes care) (Rosenthal, Frank et al. 2005; Peterson, Woodward et al. 2006; Christianson, Leatherman et al. 2008; Campbell, Reeves et al. 2009). Evaluations that reported improvement in a larger number of metrics typically used before-after research designs, from which generalizable conclusions cannot be drawn (Christianson, Leatherman et al. 2008). Evidence linking physician pay-for-performance programs to improved health outcomes is extremely limited. Hospital pay-for-performance programs payments showed effects ranging from no effect to modest significant improvements in composite performance measures (e.g., process of care, emergency department waiting times, patient satisfaction, length of stay) (Grossbart 2006; Glickman, Ou et al. 2007; Lindenauer, Remus et al. 2007; Coleman, Sutherland-Boal et al. 2009; Premier Inc 2009). Rewards tend to be for process improvement, not outcomes, and further studies have found no evidence of effect on mortality or on costs, although there is some controversy about the relationship between performance on process indicators and mortality (Werner and Bradlow 2006; Ryan 2009). In addition, assessments of pay-for-performance programs that used threshold performance targets showed that most of the bonus dollars went to providers with the highest performance at baseline, even if those with the lowest baseline performance had improved the most (Rosenthal, Frank et al. 2005; Lindenauer, Remus et al. 2007); in other words, the program only rewarded those that were already high performers and did little to encourage improvement at the bottom.

Few studies have assessed the impact of financial disincentives to improve patient safety (e.g., the Centers for Medicare and Medicaid Services decision to not reimburse hospitals for the additional costs attributed to “never events”). One Minnesota study has shown that the number of wrong-site surgeries and retention of foreign bodies in Minnesota hospitals actually increased substantially after a policy of not paying for “never events” was established (Leape 2010).

### ***Activity-based funding***

The research literature on the impacts of activity-based funding on hospital resource use and quality of care is likewise limited (Moreno-Serra 2009). Moreover, the existing literature faces limitations similar to those found in the pay-for-performance literature, with studies tending to focus solely on the US and to consider only the effects on hospital costs (see Appendix C). The impact of activity-based funding in other countries and on health outcomes is much less frequently evaluated.

Nevertheless, international experience suggests that the introduction of activity-based funding can lead to an increase in hospital activity (Kjerstad 2003; Miraldo 2006; Street 2007). The Organisation for Economic Co-

operation and Development (OECD) has found that countries without serious wait times more often had activity-based funding for hospitals than did countries with serious wait times (Hurst 2003). The OECD noted that activity-based funding can increase the supply of services, but it cautioned about the need to mitigate against perverse incentives and budget over-runs. Productivity gains incurred by activity-based funding can also be temporary, as was experienced in Sweden (Mikkola, Keskimäki et al. 2002).

Cost and efficiency studies have found that the introduction of activity-based funding reduced average length of hospital stay and lowered total input costs per case (Gerdtham, Rehnberg et al. 1999; Biorn, Hagen et al. 2003; Farrar, Yi et al. 2009; Scheller-Kreinsen 2009). However, the overall number of cases performed increased, which allowed hospital expenditures to grow (albeit at a slower rate). Recent international evidence scrutinizing the impact of activity-based funding in Central and Eastern Europe and Central Asia found that activity-based funding systems and fee-for-service reimbursement regimes similarly affected overall health spending between 1990 and 2004 (Moreno-Serra 2009).

Evidence on the effects of activity-based funding on health outcomes and quality of care is extremely limited. Early studies from the US have found that activity-based funding did not increase mortality rates and re-admission rates (Davis and Rhodes 1988). More recent studies have found modest or no effects on medical outcomes or quality of care (e.g., mortality rates, re-admission rates) (Cutler 1995; Cutler 1995; Dafny 2005; Farrar, Yi et al. 2009; Moreno-Serra 2009). One reason for the lack of well-grounded empirical studies is that health outcomes are hard to measure via routine data, especially if meaningful comparisons are to be made across payment methods.

## IV. Lessons for British Columbia

*While research findings on the impact of patient-focused funding programs on quality measures, efficiency, and costs are inconclusive and may be difficult to interpret, international experience does provide guidance for British Columbia as it embarks on a province-wide PFF initiative. This section outlines three lessons applicable to BC.*

### 1. PFF is not a panacea.

Despite proponents' assertions, the limited knowledge base and the limitations of existing PFF studies caution against making definitive conclusions about PFF's potential to improve quality of care, especially with respect to health outcomes. The question of whether paying for quality is cost-effective in comparison to other quality improvement interventions (e.g., direct subsidies for infrastructure improvements, education programs, targeted initiatives to reduce wait times) also needs to be explored. Funders have highlighted the importance of considering the "business case" (i.e., whether there is a return on investment) for quality improvements. This has been hard to establish, but a few studies have assessed pay-for-performance programs and found positive returns (Curtin 2006; Nahra, Reiter et al. 2006). In BC, Hollander et al. found that under the Full Service Practice Incentive Program, the more that higher-care-needs patients were attached to a primary care practice, the lower the costs were for the overall health care system (e.g., medical services, hospital services, drugs) (Hollander 2009).

Critics of PFF point to possible unintended consequences, including "gaming," where participants maximize measured results and reimbursement (e.g., through patient selection, artificially reduced wait times, miscoding diagnoses or services) without actually accomplishing the desired objective. However, research on the impacts of gaming from PFF schemes has had mixed results, and the problem of measuring health outcomes indirectly remains (Carter 1990; Cutler 1995; Doran, Fullwood et al. 2006; Gravelle 2008). Another concern is the multitasking problem: if the goal of the funder is multidimensional and not all dimensions of quality lend themselves to measurement, compensation based on available measures can divert effort away from unmeasured objectives. The multitasking problem has not been studied extensively, but UK researchers have found no differences in trends between quality indicators that were not covered under pay-for-performance and the pay-for-performance measures (Campbell, Reeves et al. 2007). Concerns have also been raised about the impact of paying for quality on providers' intrinsic motivation, cooperation, and professionalism (Rosenthal and Frank 2006).

### 2. The structure and design of PFF incentives will influence its effectiveness.

The design of PFF programs varies across jurisdictions. Incentives depend largely on funders' goals, the distribution of performance among providers, and the overall level of performance. Poorly designed incentives will limit the effect of PFF on quality improvement and may create perverse incentives and unintended consequences.

With the pay-for-performance approach, funders need to decide whether the goal is to improve performance among low-performing providers, maintain best performance, or both, as this will influence how the reward should flow to providers (Peterson, Woodward et al. 2006). They also need to consider what the incentives should target – individuals (e.g., physicians, administrators), organizational units (e.g., departments), or institutions (e.g., hospitals) – because the entity receiving payment will affect the power of the incentives to change behaviour. For example, when the “provider” is the hospital and the reward for improvements in hospital procedures goes to administrators, it may be challenging for administrators to negotiate change with and achieve compliance among clinicians, whose influence on resource use often dominates. Similarly, when physicians are rewarded for improvement in chronic care management, the impact of the reward could depend on whether the physician practises in a solo setting or as part of a group (Christianson, Leatherman et al. 2008).

The production of quality care is largely an exercise of teamwork, therefore, funders may need to consider financial incentives targeted at all levels. Furthermore, the size of pay-for-performance payments relative to providers’ revenues will affect performance. The payment size required to change behaviour will be related to the costs incurred by providers in raising their performance, and this in turn will be influenced by provider characteristics and the nature of pay-for-performance performance measures (Christianson, Leatherman et al. 2008). Therefore, there is no single “ideal” payment level needed to bring about the desired results by funders. In some instances, pay-for-performance will be ineffective because the reward is too small, while in other cases the size of the reward will be more than necessary to bring about change.

Determining how activity-based funding prices are set will affect the extent to which efficient service delivery is achieved. For instance, prices reflecting the average costs of existing practice would encourage hospitals to ensure that their costs were at least below average, but may not stimulate effort to reduce costs further. Alternatively, activity-based funding prices may be altered to encourage the most efficient practice in a particular area of care. Activity-based funding prices may also be regulated to change provider behaviour so that good practice is rewarded and emulated (e.g., emergency admissions above a certain volume level are paid at only 50% of the diagnosis-related groups (DRG) value to reduce the growth of emergency admissions) (Street 2007).

Financial incentives to improve care coordination and cost-effectiveness may not be used enough. Few pay-for-performance initiatives reward care coordination or increased efficiency over time in the treatment of a particular condition (Rosenthal, Landon et al. 2006). Activity-based funding has been criticized for focusing on procedure-driven health care at the expense of community-based care. In response, funders are considering “unbundling” individual activity-based funding case rates into separate components so that different parts of the treatment can be delivered by different providers in more cost-effective settings (e.g., postoperative care delivered in community facilities rather than in the hospital), and rewarding providers for care coordination that meets specified standards (King’s Fund 2007).



### **3. PFF is best viewed as an extension of the movement toward more performance information and greater accountability in health care.**

Governments are demanding greater accountability for health care expenditures through quality councils, accountability agreements, public reporting, and performance measurement systems (Pink, Brown et al. 2006). Some jurisdictions see pay-for-performance as the next logical step after years of implementing performance measurement and reporting systems, data infrastructure, and financial management systems. By providing information on the types and costs of services performed, DRG systems can increase the transparency and accountability of hospital performance and resource consumption in an area where beforehand it was difficult to understand and make meaningful comparisons.

Despite the paucity of empirical evidence, some are implementing PFF as a means to help address the policy goals of improving quality and achieving value. As a result, other jurisdictions may find it increasingly difficult to stay with current funding models as the international community sets new standards for both quality and productivity in health care.

# V. The Way Forward: Opportunities and Challenges for British Columbia

*Patient-focused funding programs that are designed primarily to improve the effectiveness, efficiency, and safety of patient care can serve as a positive force in our health care system. However, policymakers must give proper consideration to how best to design, implement, and evaluate PFF programs. Many factors will influence the effectiveness of PFF programs, including systems and organization support, alignment of incentives, infrastructure, and stakeholder collaboration.*

A one-size-fits-all proposition for PFF will stand in the way of meaningful quality improvement. The research literature does not support the implementation of any one particular PFF strategy, much less one that will work for all settings. Instead, PFF strategies must be tailored to meet the policy goals and contextual factors specific to the setting. Rather than advocate for any particular form of PFF, the BCMA recommends that policymakers adopt the following principles in the design, implementation, and evaluation of all PFF programs in British Columbia.

## Objectives of Patient-Focused Funding

Any PFF program must be designed and implemented primarily to improve the timeliness, safety, and health outcomes of patient-focused care within a cost-certain environment. As BC's health system continues to face fiscal pressures and rising demand for services, innovative approaches will be needed. Past efforts to address these pressures have focused on identifying problem areas and relying on providers to make process, organizational, and behavioural changes based on existing knowledge. In contrast, PFF programs should encourage innovative approaches that are adaptable to new knowledge and can address the multiple policy goals accepted by funders, patients, and providers. Minimizing the inherent tradeoffs associated with multiple objectives and competing demands requires examination of the combined impacts on costs and outcomes across the health system.

Because PFF programs have, by and large, not conclusively demonstrated an ability to reduce total costs, PFF programs must be designed to operate in a cost-certain environment. Although a key feature of PFF programs is to stimulate activity growth in targeted areas, increases need to be affordable and appropriate. For example, inefficiencies in service delivery will remain despite a reduction in total costs if unit costs are not lowered, which will inevitably lead to unsustainable system costs in the long term, especially as demand continues to exceed supply. Expenditure control needs to be exercised at both the macro and micro levels of the health system, which implies controlling demand, careful management of capacity with providers, and the refinement of incentive structures and prices.

### Recommendation 1

Patient-focused funding programs must be designed primarily to support and improve the timeliness, safety, and health outcomes of patient-focused care within a cost-certain environment.

## Design, Implementation, and Evaluation of Patient-Focused Funding

Provider engagement is a critical success factor for PFF programs, but it can be challenged by a lack of a collaborative and consultative development process with providers, communication barriers, under-developed administrative and physician leadership, and the absence of non-financial incentives (Young, Burgess et al. 2007; Young, Meterko et al. 2007).

Government must ensure that the development of PFF programs is achieved through a transparent, collaborative process that includes meaningful consultation with the BCMA. Such collaboration will lend itself to greater buy-in from the medical community, increased power of incentives, and greater leverage with current collaborative work between the Ministry of Health Services and BCMA on such committees as the General Practice Services Committee, the Specialist Services Committee, and the Shared Care Committee. The BCMA therefore recommends that the BC Health Services Purchasing Organization (which has already been established by the provincial government to implement PFF) create a new multi-stakeholder working group to ensure the design, implementation, and evaluation of PFF, especially for those initiatives that are targeted to institutions. The membership of the Patient-Focused Funding Working Group should be broad and include representatives from the Ministry of Health Services, the health authorities, practising physicians appointed by the BCMA, and appropriate allied health professionals. The working group would be ideally positioned to facilitate ongoing face-to-face contact with front-line providers on PFF program details and administrative and physician leadership. Ultimately, increasing the awareness and understanding of PFF programs among front-line providers will enhance the legitimacy of the working group.

The working group should also consider the simultaneous use of non-financial incentives to address the limitations of financial incentives to improve quality of care. Physician surveys and interviews have indicated mixed views about whether financial incentives can motivate physicians to invest in quality of care improvements (Anderson, Sebaldt et al. 2006; Casalino, Alexander et al. 2007; Christianson, Leatherman et al. 2008). Trust and duty, together with financial incentives, are the primary determinants of physician behaviour and have to be carefully balanced. Non-financial incentives, such as public reporting, peer reviews, continuing medical education accreditation, and practice support programs, may be used in concert with the overall payment design. For example, public reporting of all US Veterans Administration hospitals' risk-adjusted complication and mortality rates since the 1990s has proved to be a successful method for reducing preventable injuries (Leape 2010). BC's Practice Support Program provides GPs and their medical office assistants with focused training sessions in areas including Advanced Access, Group Medical Visits, and Patient Self Management. In its first two years, more than 1,400 physicians and medical office assistants participated, with large majorities reporting enhancements to patient care and increased practice efficiency (General Practice Services Committee 2010).

Any PFF program implemented in BC must be rigorously evaluated and monitored by the working group for its impact on timeliness, safety, health outcomes, and costs through an ongoing and transparent process. Feedback from stakeholders such as providers, administrators, and patients should be incorporated into the ongoing evaluation process. If PFF moves forward as a central strategy to improve efficiency and quality, the ability of funders to monitor the attitudes of stakeholders and effectively respond to their legitimate concerns and problems will be an important determinant of the future success of these programs.

Furthermore, the working group must foresee and implement strategies (e.g., monitoring of care processes, patient satisfaction, and health outcomes; regulation; financial incentive for accreditation) to identify and mitigate the emergence and development of perverse incentives, and other unintended consequences. Intense competition for patients and strong financial rewards for cost control may induce perverse behaviour by providers. Examples of perverse behaviour include decreasing quality investment and responsiveness to non-profitable patients while increasing quality investment that attracts profitable patients; minimizing costs within treatment groups without consideration of quality; shifting costs to third parties; and more intensive treatment of patients that leads to an increased reimbursement (Scheller-Kreinsen 2009). Unintended consequences may include more coding of procedures or secondary diagnoses if this leads to an increased reimbursement.

### Recommendation 2

The BC Health Services Purchasing Organization should establish a working group to ensure the design, implementation, and evaluation of patient-focused funding programs. The Patient-Focused Funding Working Group must:

- include representatives from the Ministry of Health Services, the health authorities, the BCMA, and appropriate allied health professionals;
- consider the simultaneous use of strategic non-financial incentives in patient-focused funding programs; and
- rigorously evaluate and monitor the impact of patient-focused funding programs on timeliness, safety, health outcomes, and costs through an ongoing and transparent process. The emergence and development of perverse incentives, quality of care distortions, and other unintended consequences must be identified and mitigated.

Ensuring that quality measures are evidence-based and risk-adjusted will increase their validity and reliability, and thus increase the likelihood that providers will accept PFF. Standards for PFF programs should be based on best practices or the best available scientific evidence. Where possible, incentives should be linked to quality indicators from standardized measurement sets, which have been vetted through the clinical community and have wide acceptance among providers (Young, Meterko et al. 2007). Risk-adjustment for case mix and severity will provide a fair comparison across providers and reduce the likelihood of “cherry-picking” of healthier patients. Quality measures should also be regularly evaluated to ensure that they remain relevant, are producing the anticipated consequences, and are satisfying all of the technical requirements, including producing high quality data and verifying performance.

A participative process with appropriate stakeholders including government, patients, and providers should be used to select quality measures that are specific, measurable, achievable, relevant, and timely. Although providers have the technical expertise to evaluate the selection of quality measures, the selection of quality measures should also reflect performance that is valued by patients and government. This may include measures beyond clinical performance, such as administrative/organizational performance, IT investment and adoption, communication with patients, access, and resource use.

### Recommendation 3

The measures used in patient-focused funding programs must be evidence-based, risk-adjusted, and developed in collaboration with patient representatives.

As governments shift more public funding through PFF programs, the issues regarding the fairness of allocation across regions and different providers will become important. PFF payments must not reinforce or create funding inequities or perpetuate poor performance by inappropriately reducing resources. Patient access to improved care must not be limited under PFF programs: patients cannot be directly or indirectly disadvantaged based on the setting where care is delivered (e.g., urban vs. rural).

Ultimately, providers need to be reimbursed fairly for the work they undertake, and confounding factors that affect both cost and outcome measures (e.g., acuity, co-morbidities, environmental variables) must be considered. Doing so requires that PFF payments be compatible with the cost structures of the services being delivered and be adjusted for factors beyond the control of providers. For example, extra or alternative funding arrangements for teaching hospitals and rural/remote hospitals may be necessary under activity-based funding because the high unit costs associated with treating complex patients or providing services in rural areas make it difficult to establish a competitive market for many of the services they provide.

### Recommendation 4

Patient-focused funding programs should reflect differences in providers' locations, size, population demographics, case complexity (e.g., rural/urban providers, tertiary/academic hospitals), and other relevant factors.

PFF incentives should reward different levels of performance in order to value both continuous performance improvement and sustained high levels of performance. For example, low- and high-performing institutions might consider the implementation of pay-for-performance strategies such as "target-attainment-plus-improvement" and "percentage recommended" (see Exhibit 3) (Werner and Dudley 2009). The measure of quality improvement should be based on year-to-year change within a practice, not on comparisons among providers. It is also important that payment-for-performance programs be based on rewards and not penalties. Providers may be wary of programs funded by reduced annual base payments or explicit penalties for poor performance.

### Recommendation 5

Patient-focused funding programs must provide fair and equitable financial incentives to recognize, reward, and support continuous performance improvement.

The extent to which financial incentives encourage (or discourage) service provision depends on government's policy goals, service delivery, and organizational models. Funders need to decide whether they are concerned with the over-use, under-use, or misuse of health care services, and the extent to which they are willing to leave decision-making authority with providers (Deber 2008). In turn, this will relate to the production characteristics of services, the ease of identifying appropriate care, the types of problems in the existing service system, and the extent of system resources and management capacity.

Strategies tying incentives to the local process of quality improvement should also be examined. Measurement should remain a key part of such an initiative in order to identify areas with quality deficits, but additional local measures must be tailored to each setting to reflect the local causes for poor outcomes (Werner and McNutt 2009). Although such flexibility might make interpractice comparisons difficult, it would initiate providers into the process of measuring performance and striving to improve it. Incentives for local participation in quality improvement efforts creates an environment that takes the emphasis away from error rates and places it on solution-building and continuous learning.

There is no perfect PFF strategy that will address the multiple policy goals of government in every setting. Although evidence supporting one payment strategy over another is lacking, fully recognizing and appropriately using the incentive differences among PFF payment strategies offers funders and providers the opportunity to tailor PFF programs to meet their goals. For example, developing a positive relationship between a performance indicator and activity-based funding (i.e., incremental adjustment to a prospective payment price for quality), or performance thresholds for access to incentives (i.e., a particular level of performance is required before the reward applies), can address multiple goals (Duckett 2008). PFF programs should be designed and implemented through a phased, flexible approach that responds to providers' performance and the evolution of a program's scope and goals. Any PFF program will require ongoing evaluation and fine-tuning to ensure that incentives remain effective, relevant, and appropriate.

### Recommendation 6

Patient-focused funding should be designed and implemented in a phased, flexible approach that responds to providers' performance and the evolution of a program's scope and goals.

The success of PFF programs will depend largely on the quality and accuracy of data collection and analysis. The government, health authorities, and the BCMA should collaboratively identify what and how performance data is collected and integrated, while protecting patient privacy. The development of valid, affordable, comprehensible information management systems for performance reporting and tracking is also essential for improving clinical performance (Young, Burgess et al. 2007). The start-up and ongoing costs of IT infrastructure should be minimized by building on existing information systems, data collections, measures, and feedback tools, where possible. For example, the joint Ministry of Health Services and BCMA Physician Information Technology Office is working collaboratively to coordinate, facilitate, and support IT planning and implementation for physicians, including the development and implementation of electronic medical records. Ideally, performance data should

be culled from electronic medical records connected to networks that can coordinate uniform and consistent data collection. An integrated electronic medical records system can be an effective decision-support tool for improving quality; however, there is still a long way to go before British Columbians fully realize the benefits of having an electronic health record (Auditor General of BC 2010).

Activity-based funding relies on the quality of diagnostic and treatment data, and accurate accounting of the costs of providing services. Most countries have developed their own inpatient classification systems, including Canada, which uses the Canadian Institute for Health Information's CMG+ system (Canadian Institute of Health Information 2009). The case-mix groups are validated using data from approximately 2 million patients discharged from Canadian hospitals each year. Resource intensity weights are assigned to each case-mix group to determine the expected use of resources and are calculated using patient-level cost data (0.5 million patients) from large hospitals located in Ontario, Alberta, and, recently, BC. Because most of the costing data are not BC-based, efforts should be accelerated to collect cost data from most BC hospitals in order to ensure that BC's activity-based funding payments accurately reflect local practice patterns. A defined methodology for cost accounting must incorporate data assurance audits and clear, transparent clinical costing standards. A methodologically sound system and carefully balanced incentives will be required if the case-mix group system is to be used to encourage efficient resource use and changes in the mix of service provision.

### Recommendation 7

The data used for patient-focused funding programs must be scientifically valid, accurate, and publicly available. The BCMA will collaborate with the provincial government and health authorities in the identification, collection, and reporting of meaningful data, which must be integrated, supported, and funded for providers, while protecting patient privacy.

A quality improvement infrastructure is needed for providers to make substantial and sustainable improvements in quality and efficiency under PFF programs. Given the current fiscal environment and austerity measures that health authorities have had to implement, the initial and ongoing costs to develop, implement, and manage system supports (e.g., staff, training, IT, capital equipment, performance monitoring) for quality care should be appropriately funded for providers.

The process and organizational changes required for quality and efficiency improvements is resource-intensive. Considerable evidence from US-based pay-for-performance programs has shown that resource availability can influence how well providers perform on quality-related measures. For example, in Michigan, a hospital's ability to respond to the quality-related incentives depended on existing quality infrastructure, including staff availability, planning capacity, and IT. In Rochester, initial incremental improvements in quality appeared unsustainable over time because the participating physicians, who were largely organized as solo practitioners and members of small groups, lacked the means to invest in IT infrastructure (Young, Burgess et al. 2007).

### Recommendation 8

The initial development and ongoing costs to implement and manage a quality improvement infrastructure for patient-focused funding programs should be appropriately funded.

It is unlikely that a single payment system will meet all the objectives of government and providers. Two arguments support the use of mixed payment systems. First, under mixed payment, the funder and provider share risk, with portions of costs covered by prospective payment and other portions covered by retrospective payments. Mixed payment can combat risk selection and quality stinting while maintaining some incentive to control cost. For example, there is a risk that activity under activity-based funding without the “rate-limiting step” of global budgets will increase at such a pace that it exceeds the capacity of governments to pay. Second, the problem of multitasking will, to a certain extent, always plague provider performance measurement, because some dimensions of quality are not contractible or are costly to provide. Therefore, mixed payment has the advantage of balancing incentives for quality effort across all services (Duckett 2008).

PFF incentives should be aligned with other financial incentives in order to improve care coordination, continuity, and patient flow through the health care system while avoiding adverse outcomes and consequences. For example, tensions may arise between hospitals with activity-based funding and residential care facilities with a budget-based, or standard cost-per-bed, model. On one hand, activity-based funded hospitals are encouraged to discharge people more quickly so that they can increase the turnover rate. On the other hand, residential care facilities with standard cost funding would have an incentive to admit clients with lower levels of care needs, particularly where the cost of caring for these clients would be lower than the reimbursement received.

The structure of PFF incentives must be sustainable and large enough for providers to believe that introducing new processes and policies is warranted. The implementation of organizational and process changes to achieve the reward may be time-consuming, resource-intensive, and disruptive to established organizational routines. If the incentive structure changes on an annual basis (or even more frequently), then institutions and providers may feel that there is insufficient stability of policy to warrant the internal costs of restructuring.

### Recommendation 9

Patient-focused funding should be implemented and aligned in conjunction with other payment methods.

### Recommendation 10

Funding for patient-focused funding initiatives must be sustainable, and financial incentives must be sufficient to warrant providers’ implementation of organizational and process changes.



## VI. Conclusion

*Conceptually, patient-focused funding makes sense. In practice, however, the devil is in the details. There remain important questions that must be addressed to ensure that the goal of improved quality and health outcomes is achieved through PFF. To that end, the BCMA has offered in this paper 10 recommendations to serve as guiding principles for the design, implementation, and evaluation of PFF.*

The recommendations were developed after a thorough review of the best available research and a consultative process with health care stakeholders, including patient representatives and representatives from health authorities and the provincial government. A predominant theme among the recommendations is the need to develop a transparent, collaborative process for PFF development in British Columbia in order to ensure that PFF programs primarily support and improve the timeliness, safety, and health outcomes of patient care in a cost-certain environment. The creation of a multi-stakeholder Patient-Focused Funding Working Group by the BC Health Services Purchasing Organization would be a step toward implementing PFF in a phased, flexible approach that responds to providers' performance and the evolution of a program's scope and goals. PFF programs must be rigorously evaluated and monitored for its impacts on patient care, access, and costs through an ongoing and transparent process.

PFF is in its early stages in BC, and it remains to be seen what its impacts will be. Nevertheless, the implementation of PFF requires system-wide collaboration, commitment, and leadership to ensure that it achieves the highest level of quality. Without strong evidence to guide policy, PFF programs must be built upon a learning culture with ongoing evaluation and fine-tuning to ensure that incentives remain effective, relevant, and appropriate. As BC moves towards PFF and greater performance accountability, practising physicians look forward to working with policymakers and other stakeholders to develop PFF strategies that support the cost-effective delivery of better quality care. Our current health system necessitates that we do, and our patients deserve no less.

# Glossary

**Activity-based funding:** Activity-based funding is a type of prospective hospital payment system with fixed rates of payment based on the hospital admission, and not on the number and types of services or number of days of care provided. Implementing ABF requires two steps: first, the basket of hospital services delivered to individual patients needs to be assigned to comparable groups (i.e., defining the product categories of hospitals); and second, a weight or price for each of these groups of products needs to be assigned. Activity-based funding is also referred as volume-based funding, service-based funding, case-mix funding, or payment-by-results in the UK.

**Diagnosis-related groups (DRGs):** A type of patient classification system that relates the types of cases a hospital treats to the resources used by the hospital. DRGs identify a number of homogenous case types that are clinically coherent and use a similar amount of hospital services. DRG development requires coding systems for diagnoses and procedures and defined methodologies for cost accounting.

**Case mix:** The relative frequency of admissions of various types of patients, reflecting different needs for hospital resources. There are many ways of measuring case mix, some based on patients' diagnoses or the severity of their illnesses, some on the use of services, and some on the characteristics of the hospital or area in which it is located.

**Case-mix groups (CMGs):** An inpatient classification system that is maintained by the Canadian Institute for Health Information. Each inpatient is classified into a single CMG based on discharge abstract data (e.g., diagnoses, surgical procedures, complications), and expected lengths of stay are calculated. A relative resource-intensity weight (RIW) is associated with each CMG so that a total case-weighted activity can be calculated for all inpatients in each hospital. CMG+ was released in 2007 and provides additional differentiation on resource consumption.

**Fee-for-service (FFS):** A method of paying for medical care on a retrospective basis by which each service actually received by an individual bears a related charge.

**Global budgeting:** Global budgeting applies a factor (e.g., inflation, additive/reductive factor) to a previous spending figure to derive a predicted spending level for an upcoming period.

**Line-by-line budgeting:** Line-by-line is a disaggregated variation of global budgeting whereby line items in a hospital budget (e.g., housekeeping, inpatient nursing) are predetermined based on previous cost experiences multiplied by a factor such as inflation. Line items can be aggregated and/or capped, with hospitals given varying ability to move funds across budget lines

**Patient-focused funding (PFF):** Any method of compensating providers that uses incentives and supports to improve the appropriateness, quality, and efficiency of care for patients.

**Pay-for-performance (P4P):** P4P compensates or "rewards" the provider based on their performance against quality and/or efficiency benchmarks. Quality can be assessed in five areas: access, structure, process, outcomes, and patient experience. Resource use and efficiency measures (e.g., unnecessary hospitalizations) are used to address cost pressures in the health system. P4P is also referred as pay-for-value and pay-for-quality.

**Population needs-based funding:** Population needs-based funding uses a series of “adjusters” such as changes in population size and age, variations in the location of service provision (e.g., within regions or between regions), and adjusted costs (e.g., costs associated with remote location, teaching) to estimate the population’s demand to seek health services. The spending profile of a region or organization is estimated by linking the cost of providing specific health services with the propensity of certain populations to seek these services.

**Prospective payment:** Provider payment programs where rates are set prior to the period during which they apply and where the provider incurs at least some financial risk.

**Provider:** The term is used in reference to a care delivery entity either at an individual, group, institutional or regional level (e.g., physicians, hospitals, health authorities).

**Retrospective reimbursement:** A payment method in which providers are paid their incurred costs of treating patients after the treatment has occurred.

**Salary:** A salary is payment per unit of time, not related to the costs of production, activities performed, or time spent with patients. Salaries are often used as part of an employer/employee relationship.

**Sessional payments:** Sessional payment is a time-based method of payment often used to pay physicians for “sessions” of work related to specific tasks. A session is 3.5 hours of work.

# Appendix A — BCMA Patient-Focused Funding Forum

## **Objectives and Process**

On March 29, 2010, a Patient-Focused Funding Forum was held at UBC Robson Square in Vancouver, BC, under the guidance of the BCMA Council on Health Economics and Policy (CHEP)'s Patient-Focused Funding Project Group. The forum brought together 28 participants from physician groups, the Patient Voices Network, health authorities, the Ministry of Health Services, the business community, and the BCMA/CMA (see Appendix B for participant list). The forum was led by a facilitator who used an interactive, consultative approach to generate ideas and identify common themes.

The objective of the forum was to engage in collaborative brainstorming with stakeholders on the issue of patient-focused funding in order to assist in the development of the BCMA's patient-focused funding policy paper. The focus question for the dialogue session was:

*What considerations should we keep in mind if we are to move toward patient-focused funding in BC hospitals?*

The specific forum objectives were:

- a) To identify the pros and cons of existing hospital funding models in BC (e.g., line-by-line budgets, population needs-based funding, pilot funding) in the areas of quality of care, provider consultation, evidence and administration.
- b) To identify the benefits, challenges/disadvantages, "must-have" policy areas, and "no-go" policy areas of patient-focused funding.

The forum began with an overview of patient-focused funding as defined by the BCMA, and its evidence. This was followed by a group exercise to identify the pros and cons of existing hospital funding models in BC. Participants then worked in small groups to identify the benefits, challenges/disadvantages, and "must-have" and "no-go" policy areas if BC were to move toward patient-focused funding for hospitals. This was followed by a report-out and discussion by all participants. The day concluded with closing comments by Dr. David Attwell, Chair of BCMA's Patient-Focused Funding Project Group, who reinforced that the forum was an important step in the BCMA's policy development process. Further analysis of the ideas generated by the forum will help the BCMA develop a set of principles for PFF implementation in BC.

## ***"What We Know": Pros and Cons of Existing Hospital Funding Models in BC***

Participants identified the following pros and cons of existing hospital funding models in BC:

The most supported advantages of Population Needs-Based Funding (PNBF) were:

- Attempting to recognize socio-economic and other demographic attributes/differences of health authorities where majority needs are addressed. (This received the most support from physicians and government.)
- Having budget predictability where government has a known budget to start from.
- Allowing local control over spending mix.

The most supported disadvantages of PNB were:

- No incentives to improve efficiency, to change, or to promote preventive rather than reactive care. (This received the most support from physicians, government, and patients.)
- Patients are dynamic and can migrate/seek care in different health authorities.
- Patients are seen as a cost and not a revenue source.

The most supported advantages of line-by-line budgeting were:

- Predictable labour costs.
- Financial accountability.

The most supported disadvantages of line-by-line budgeting were:

- Perverse financial incentives where over-expenditure and inefficiencies are “encouraged”, and stove-piping can happen (i.e., protecting my budget at the expense of yours). (This received the most support from physicians and government.)
- Maintains the status quo.
- Lack of planning for capital investments.

The most supported advantages of pilot project funding models<sup>1</sup> were:

- Getting real results quickly such as increased efficiency and improved patient access by looking at system solutions. (This received the most support from physicians, government, and patients.)
- Promotes teamwork and facilitates medical staff buy-in.
- Risk-taking is encouraged.

The most supported disadvantages of pilot project funding models were:

- Cherry-picking of services/cannibalization of non-funded services. (This received the most support from government.)
- Perverse incentives such as unnecessary utilization.
- Used to put out “political” fires.

### ***“Where We Might Go”: Patient-Focused Funding (PFF)***

Participants identified the following benefits, challenges/disadvantages, “no-go” and “must-have” policy areas of patient-focused funding:

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<sup>1</sup> A secondary approach to funding hospitals has recently been explored in pilot projects. In April 2008, BC’s largest health authorities, Vancouver Coastal Health and Fraser Health, partnered in a \$75 million government-funded initiative to encourage new patient-focused funding models that supported patient access and improved efficiency and effectiveness. Pilot projects included decongestion of emergency departments, rapid-access breast cancer diagnosis clinics, and expansion of distal extremity surgeries, cataract surgeries, and hip and knee surgeries.

The most supported benefits of PFF were:

- Incentivizing quality, access, and efficiency improvements.
- Improving provider morale and work satisfaction through improved efficiencies.
  
- Creating opportunities for change and innovation.
- Increased accountability.
- Increased knowledge on service costs.

The most supported challenges/disadvantages of PFF were:

- Implementation issues such as change management, scaling up the prototype, and receiving buy-in from all stakeholders.
- Priority setting for PFF funds.
- Integration of acute/institutional care with community-based care.
- Alignment of health authority/MD funding with outcomes.

The most supported must-haves of PFF were:

- Using a collaborative process between government, providers (e.g., physicians) and patients early-in to ensure buy-in from all stakeholders.
- Benchmarking best/evidence-based practices with measureable goals that are collectively agreed upon.
- Good data that is appropriate, timely, complete, and accurate.

The most supported no-goes of PFF were related to budgeting and funding allocation including:

- Unrealistic budgets and uncapped/excessive spending.
- Inequitable funding to regions.
- Cherry-picking of services.
- PFF as total funding.

## ***Evaluations***

Twenty-five out of 28 participants completed an evaluation that asked what they liked about the forum, what they disliked about the forum, and what they would tell their colleagues and stakeholders about the forum. Below is a summary of the responses.

### Format

Participants generally found the forum well-structured and organized and thought it allowed for input and collaboration from all attendees. Attendees found the facilitator very effective. There were some comments regarding the length and repetition of ideas during discussion, with a participant stating that shorter and more focused discussions could have “yielded more tangible results.”

### Participant Mix

Many attendees noted they were happy with the size and diversity of the group present. Many participants stated that involving representatives from different areas of health care brought a wider range of perspectives to the discussion. A few respondents noted that the involvement of patient representatives was particularly beneficial.

### Quality of Discussion

Many participants found the discussion highly productive and informative, with large consensus on identifying issues and potential solutions. There were many responses stating that the range of opinions and ideas were very beneficial in the brainstorming process. Participants generally found that the discussion allowed for a better understanding of different groups' views on the health care system as well as on potential changes to funding.

While a few participants commented that there was not enough MOHS and health authority input and that their intentions remain unclear, there was an overall sense that the discussion generated some good ideas and the feeling that common ground could be reached. Some attendees appreciated the apparent willingness from the BCMA, MOHS, and health authorities to explore the issue in more depth and to work more collaboratively on the subject.

### Usefulness

Regarding the information provided, many participants found the forum to be worthwhile and useful. Attendees responded that they felt well educated on pay-for-performance and activity-based funding models and benefited from explanations of the current funding systems. Interest in and awareness of PFF options was raised among participants.

Some participants suggested, however, that they could have benefited from more pre-circulated information or more discussion on the current hospital funding models in addition to what was sent by the BCMA in advance of the forum. There also were participants who felt that some presentation and discussion of existing pay-for-performance or activity-based funding programs would have contributed to a more thorough understanding of the topic.

### Application for BCMA's Patient-Focused Funding Paper

A number of participants stated that the forum was a good start to the BCMA's PFF policy paper and that it was a "strong indication that medical practitioners are prepared to design and implement changes to the current model of health care delivery." The inclusion of stakeholder opinions before writing the paper represented an "important change in BCMA policy development." Attendees were given the impression that, while opinions on pay-for-performance and activity-based models are varied and finding an effective funding model will be a difficult task, there was a consensus that a "transformational change" to the health care system is needed, and collaboration in determining the necessary changes can be achieved.

# Appendix B — BCMA Patient-Focused Funding Forum Participant List

## Invited Participants

**John Andruschak**, Vice President of Clinical and Support Services, Provincial Health Services Authority  
**Dr. David Attwell**, Chair, BCMA Patient-Focused Funding Project Group  
**Dr. Sam Bugis**, Member, BCMA Council on Health Economics and Policy  
**Dr. Robert Burns**, Acting Executive Medical Director, Vancouver Island Health Authority  
**Dr. Ian Courtice**, Member, BCMA Patient-Focused Funding Project Group  
**Dr. William Cunningham**, Chair, BCMA Alternate Payments Physicians Issues Committee  
**Heather Davidson**, Assistant Deputy Minister, Health Authorities Division, BC Ministry of Health  
**Jeevyn Dhaliwal**, Patient Representative  
**Dr. Robert Halpenny**, Chief Executive Officer, Interior Health  
**Dr. Bruce Horne**, Member, BCMA Patient-Focused Funding Project Group  
**Dr. Ken Hughes**, Member, BCMA Patient-Focused Funding Project Group  
**Bernard (Bernie) Magnan**, Assistant Managing Director and Chief Economist, The Vancouver Board of Trade  
**Nick Neuheimer**, Associate Director of Research, Canadian Medical Association  
**Dr. Patrick O'Connor**, VP Medicine, Quality and Safety, Vancouver Coastal Health  
**Rachelle Rebman**, Network Coordinator, Patient Voices Network/Healthy Heart Society  
**Ian Rongve**, Executive Director, Health System Planning and Analysis Branch, BC Ministry of Health Services  
**Dr. Shelley Ross**, Chair, BCMA Council on Health Economics and Policy  
**Dr. Alan Ruddiman**, Member, BCMA Patient-Focused Funding Project Group  
**Terri Sabo**, Patient Representative  
**Dr. Harvey Strecker**, President, Society of Specialist Physicians and Surgeons of BC  
**Valerie Tregillus**, Executive Director, Primary Health Care, BC Ministry of Health Services  
**Johanna Trimble**, Patient Representative  
**Dr. Les Vertesi**, Member, Health Council of Canada  
**John R. Winter**, President and Chief Executive Officer, BC Chamber of Commerce  
**Dr. Joanne Young**, President, Society of General Practitioners of BC

## Facilitator

**Ian Curtin**, President, IC Possibilities Consulting Inc.

## BCMA Staff

**Dr. Jonathan Agnew**, Assistant Director of Policy, BCMA  
**Jim Aikman**, Director, Economics and Policy Analysis, BCMA  
**Karyn Fritz**, Policy Researcher, BCMA  
**Linda Grime**, Administrative Assistant, BCMA  
**Dr. Dan MacCarthy**, Director of Professional Relations, BCMA  
**Cindy Myles**, Policy Analyst, BCMA  
**Dr. Mark Schonfeld**, Chief Executive Officer, BCMA



## Regrets

**Stephen Brown**, Chief Administrative Officer, Ministry of Health Services

**Dr. David Butcher**, VP Medicine, Northern Health Authority

**Dr. Bill Cavers**, Co-Chair, General Practice Services Committee

**Jock Finlayson**, Executive VP Policy, Business Council of BC

**Dr. Nigel Murray**, President and CEO, Fraser Health Authority

**Dr. Heidi Oetter**, Registrar, College of Physicians and Surgeons of BC

**Dr. Ken Seethram**, Co-Chair, Specialist Services Committee

**Cathy Ulrich**, President and CEO, Northern Health Authority

**Dr. Andrew Webb**, VP Medicine, Fraser Health Authority

**Chris Windle**, Director of Health Services, Fraser Health Authority

## Appendix C — Summary of Retrieved Research Articles on Patient-Focused Funding Programs

### Articles on Pay-for-Performance (P4P)

Source	P4P program	Assesses Change in Performance	Uses Control Group
Fairbrother G. 2001	P4P program targeted to increase paediatric immunization rates by GPs in New York City	Yes (statistically significant from control)	Yes (random)
Kouides 1998	P4P program targeted to GPs to increase influenza immunization rates among elderly patients in Rochester, New York	Yes (statistically significant from control)	Yes (random)
Hillman 1999	P4P program targeted to increase paediatric preventive care by GPs in a US Medicaid Health Maintenance Organization	Yes (not statistically significant from control)	Yes (random)
Hillman 1998	P4P programs targeted to increase GP compliance with cancer screening guidelines in a US Medicaid Health Organization	Yes (not statistically significant from control)	Yes (random)
Lindenauer, Remus et al. 2007	US Centers for Medicare and Medicaid Services (CMS) Hospital Quality Incentive Demonstration	Yes (statistically significant from control on composite measures)	Yes (non-random)
Grossbart 2006	US CMS Hospital Quality Incentive Demonstration	Yes (statistically significant from control on composite measures)	Yes (non-random)
Scott 2009	Practice Incentive Program targeted to GPs in Australia for diabetes care	Yes (statistically significant from control)	Yes (non-random)
Rosenthal, Frank et al. 2005	PacifiCare P4P targeted to contracted physician groups in California	Yes (statistically significant from control for 1 out of 3 clinical areas)	Yes (non-random)
Glickman, Ou et al. 2007	US CMS Hospital Quality Incentive Demonstration	Yes (not statistically significant from control on composite measures)	Yes (non-random)
Pearson, Schneider et al. 2008	P4P programs targeted to contracted physician groups by five major private health plans in Massachusetts	Yes (not statistically significant from control)	Yes (non-random)
Berthiaume JT 2006	Hawaii Medical Service Association Hospital Quality Service and Recognition P4P Program	Yes	No
Cameron PA 1999	Emergency Service Enhancement Program in Victoria, Australia	Yes	No
Nahra, Reiter et al. 2006	Blue Cross Blue Shield of Michigan Participating Hospital Agreement Incentive Program	Yes	No
Campbell, Reeves et al. 2009	Quality Outcomes Framework targeted to GPs in UK	Yes	No

Source	P4P program	Assesses Change in Performance	Uses Control Group
Greene 2004	Large-scale multi-faceted intervention consisting of physician education, profiling, and a financial incentive, to improve treatment quality for acute sinusitis in Rochester, New York	Yes	No
Young, Meterko et al. 2007	P4P program for diabetes care targeted to contracted primary care physicians in a Health Maintenance Organization in Rochester, New York	No	No

### Articles on Activity-Based Funding (ABF)

Source	ABF program	Key Findings	Uses Control Group
Farrar, Yi et al. 2009	Payment by Results targeted to UK hospitals	<ul style="list-style-type: none"> <li>▪ Reduction of unit costs associated with ABF</li> <li>▪ Some association between ABF and growth in hospital activity</li> <li>▪ Little measurable change in in-hospital mortality, 30 day post-surgical mortality, and emergency readmission after treatment for hip fracture</li> </ul>	Yes
Moreno-Serra 2009	Variants of hospital ABF in 28 Central and Eastern European and Central Asian countries	<ul style="list-style-type: none"> <li>▪ FFS and ABF both increased national health spending</li> <li>▪ ABF had no effect on inpatient admissions, while FFS increased them</li> <li>▪ ABF reduced average length of stay, while FFS had no effect</li> </ul>	Yes
Cutler 1995	DRG reimbursement for US Medicare services in hospitals	<ul style="list-style-type: none"> <li>▪ A change in timing of deaths was associated with changes in average hospital reimbursement prices: a greater share of deaths occurred in hospitals or shortly after discharge in hospitals with price declines, but by one year post-discharge, mortality is no higher.</li> <li>▪ Elimination of marginal reimbursement increased hospital re-admissions, but this appears to be due to accounting changes on the part of hospitals rather than true changes in morbidity.</li> </ul>	Yes
Kjerstad 2003	Hospital ABF in Norway	<ul style="list-style-type: none"> <li>▪ ABF increased the number of patients treated and DRG points produced</li> </ul>	Yes
Davis and Rhodes 1988	DRG reimbursement for US Medicare services in hospitals	<ul style="list-style-type: none"> <li>▪ ABF was associated with decreased hospital utilization, decreased average length of stay, and a shift from inpatient to outpatient settings for locus of care</li> <li>▪ No increase in mortality rates or re-admission rates for Medicare beneficiaries</li> </ul>	No
Biorn, Hagen et al. 2003	Hospital ABF in Norway	<ul style="list-style-type: none"> <li>▪ ABF improved technical efficiency while the effect on cost efficiency was less uniform</li> </ul>	No

Source	ABF program	Key Findings	Uses Control Group
Street 2007	Hospital ABF in the Victoria state of Australia	<ul style="list-style-type: none"> <li>▪ ABF reduced waiting lists for patients waiting longer than 30 days or 90 days for elective surgery</li> </ul>	No
Mikkola, Keskimäki et al. 2002	Hospital ABF in Stockholm, Sweden	<ul style="list-style-type: none"> <li>▪ Productivity in hospitals increased by about 20% in first 2 years of reform, but declined in the following years</li> </ul>	No
Gerdtham, Rehnberg et al. 1999	Hospital ABF in Stockholm, Sweden	<ul style="list-style-type: none"> <li>▪ ABF, along with FFS, improved technical efficiency</li> </ul>	No
Dafny 2005	DRG reimbursement for US Medicare services in hospitals	<ul style="list-style-type: none"> <li>▪ In response to large price changes for 43% of Medical admissions, hospitals primarily “upcoded” patients to diagnosis codes with the largest price increases.</li> <li>▪ There was little evidence hospitals increased the volume of admissions differentially for diagnoses subject to the largest price increases or increased the intensity of quality of care in these diagnoses.</li> </ul>	N/A

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