Health Policy xxx (2015) xxx–xxx

Contents lists available at ScienceDirect

Health Policy

journal homepage: www.elsevier.com/locate/healthpol

Review

Leaders' experiences and perceptions implementing activity-based funding and pay-for-performance hospital funding models: A systematic review

Pamela E. Baxter[a,*], Sarah J. Hewko[b], Kathryn A. Pfaff[c], Laura Cleghorn[a], Barbara J. Cunningham[d], Dawn Elston[a], Greta G. Cummings[b]

[a] School of Nursing, McMaster University, 1280 Main Street West, Hamilton, ON, Canada L8S 4K1
[b] Faculty of Nursing, University of Alberta, 3rd floor, Edmonton Clinic Health Academy, 11405 87 Avenue, Edmonton, AB, Canada T6G 1C9
[c] Faculty of Nursing, University of Windsor, Rm. 324, Anthony P. Toldo Health Education Centre, 401 Sunset Avenue, Windsor, ON, Canada N9B 3P4
[d] School of Rehabilitation Science, McMaster University, 1280 Main St. W., Hamilton, ON, Canada L8S 4K1

ARTICLE INFO

Article history:
Received 20 January 2014
Received in revised form 10 April 2015
Accepted 4 May 2015

Keywords:
Funding
Health facility administrators
Health care reform
Funding model
Review
Systematic
Financial management
Hospital
Activity-based funding
Pay-for-performance

ABSTRACT

Introduction: Providing cost-effective, accessible, high quality patient care is a challenge to governments and health care delivery systems across the globe. In response to this challenge, two types of hospital funding models have been widely implemented: (1) activity-based funding (ABF) and (2) pay-for-performance (P4P). Although health care leaders play a critical role in the implementation of these funding models, to date their perspectives have not been systematically examined.
Purpose: The purpose of this systematic review was to gain a better understanding of the experiences of health care leaders implementing hospital funding reforms within Organisation for Economic Cooperation and Development countries.
Methods: We searched literature from 1982 to 2013 using: Medline, EMBASE, CINAHL, Academic Search Complete, Academic Search Elite, and Business Source Complete. Two independent reviewers screened titles, abstracts and full texts using predefined criteria. We included 2 mixed methods and 12 qualitative studies. Thematic analysis was used in synthesizing results.
Results: Five common themes and multiple subthemes emerged. Themes include: prerequisites for success, perceived benefits, barriers/challenges, unintended consequences, and leader recommendations.
Conclusions: Irrespective of which type of hospital funding reform was implemented, health care leaders described a complex process requiring the following: organizational commitment; adequate infrastructure; human, financial and information technology resources; change champions and a personal commitment to quality care.

* Corresponding author. Tel.: +1 905 525 9140x22290; fax: +1 905 521 8834.
E-mail addresses: baxterp@mcmaster.ca (P.E. Baxter), skielly@ualberta.ca (S.J. Hewko), kpfaff@uwindsor.ca (K.A. Pfaff), cleghol@mcmaster.ca (L. Cleghorn), bjcollins00@hotmail.com (B.J. Cunningham), elstond@mcmaster.ca (D. Elston), gretac@ualberta.ca (G.G. Cummings).

http://dx.doi.org/10.1016/j.healthpol.2015.05.003
0168-8510/

1. Introduction

Across the globe, policy-makers are faced with the relentless task of maintaining high quality, accessible, cost-effective health care. The World Health Report emphasizes how rising health care costs, dwindling resources, an aging population, and the escalating prevalence of chronic diseases complicate this task [1]. Over the past thirty years, hospital funding policies have been used as levers to improve health care delivery efficiency [2], effectiveness [2] and quality [3]. These funding policies operate under two assumptions: first, money motivates individuals to change their behavior [4,5]; second, behavioral change will result in improvements in quality [5,6]. These assumptions are based on economic theory, which posits that money influences behavior. How money can exert such power over human behavior is widely discussed through the lens of the economic theory of personal motivation [7,8]. Whether or not financial incentives, as an extrinsic motivator [9], are responsible for the achievement of intended goals and objectives is debated in the literature [8,10–14]. These policies have led to the introduction of two of the most widely adopted funding models: activity-based funding (ABF) and pay-for-performance (P4P). A brief discussion of each model follows.

Internationally, ABF is the most commonly implemented funding model in acute care [15]. The term ABF is used synonymously in the literature with such terms as volume-based funding, patient-based funding, service-based funding, case-mix funding, and payment by results (PbR) [16]. ABF systems vary, but typically offer hospitals a fixed amount per bundle of care ordinarily delivered to clinically similar patients (based on diagnosis) [17]. In order to quantify each unit of care and its associated costs, hospitals rely on classification systems, the most common being diagnostic related groups (DRGs). Under ABF, hospitals are motivated to increase profits (or margins) by increasing efficiency, decreasing expenditures and maximizing the difference between their unit costs and the equivalent ABF payment amount [18].

ABF represents an alternative to more traditional funding systems such as global funding, cost-based (e.g., fee-for-service, per case or per diem) or cost-plus reimbursement systems [19]. ABF systems have been implemented in various jurisdictions with the intent of achieving a variety of different policy objectives, the most common being to increase productivity, enhance transparency [20,21], and increase efficiency while decreasing costs [22,23]. Nevertheless, the evidence reveals inconsistent findings that vary from significant benefits to negative consequences, and importantly, decision makers should be aware of these inconsistencies prior to ABF implementation [17].

O'Reilly et al. [24] examined the experience with implementing ABF in five European countries. In this study, the policy objectives of the countries included: to increase efficiency (England, France, Germany Ireland); to expand activity (England); to facilitate patient choice (England); to improve quality (England, France, Germany); to ensure the fair allocation of resources (Finland, France, Germany, Ireland); to cover costs of production (Finland); to create a level playing field for payments (England, France); and to establish a clear link between activity and funding (England, Finland, Ireland). These authors also noted that achieving many of these objectives would not be possible using ABF alone, but would require implementation of ABF in combination with other policy instruments such as performance measurement and organizational reforms [24]. The literature reveals that ABF has also led to decreased hospital wait times and reduced lengths of stay [19,24–29]. Duckett [30] reported a 5% increase in care volume with a 5% reduction in cost two years after ABF was introduced into Victoria, Australia. Increases in volume have also been reported in England [27,31].

Notwithstanding these intended effects, some unintended consequences have also been associated with ABF. Challenges associated with shorter lengths of stay [20,32] have been reported in literature from Australia and the United States of America. Patients have reportedly been discharged from hospital before it was clinically appropriate [20,32] resulting in a hidden transfer of costs to other sectors of the health care system [25]. ABF has also been reported to lead to risk selection, wherein health care providers choose to treat patients believed to be low-risk or low-cost and avoid high-risk or high-cost patients [20]. In other situations, ABF methods, such as use of DRGs in classifying patients, may encourage "upcoding" of patients to recoup costs [25]. Overall, ABF has been criticized for its emphasis on volumes and reducing costs rather than the provision of high quality hospital care [15].

P4P differs from ABF by focusing less on quantity and more on achieving outcomes based on 'performance metrics' [15]. P4P can be associated with both quality and non-quality performance measures (e.g. cost measures). However, for the purposes of this review we have focused on pay-for-quality. Weibel et al. [6] report that, "Two-thirds of the member countries of the Organisation for Economic Co-operation and Development (OECD) and a number of developing countries have adopted performance-related pay practices two-thirds of all Organization for Economic Cooperation and Development (OECD) member countries have adopted performance-related pay practices" (p. 387). P4P ties financial incentives to quality and/or safety measures [19,33]. Sutherland et al. [15] note that, "there is no accepted international definition of pay-for-performance" (p. 24) which may explain the degree of heterogeneity seen in P4P programs in terms of the types of incentives offered, the types of providers targeted and the quality measures [19,34,35]. Quality measures tend to fall into two main categories: (1) process and (2) outcome [19,36]. Process measures assess the medical treatment provided by physicians and other health care providers (e.g. timing of pre-surgery antibiotic administration). Outcome measures assess such things as morbidity, mortality, quality of life, and patient satisfaction [37]. For the purposes of this review we focus on process and outcome measures of quality.

The evidence supporting the benefits of P4P is inconclusive [38–41] and at times extremely disparate [5]. In a systematic review, Van Herck et al. [35] examined the effects, design choices and context of P4P in health care

Please cite this article in press as: Baxter PE, et al. Leaders' experiences and perceptions implementing activity-based funding and pay-for-performance hospital funding models: A systematic review. Health Policy (2015), http://dx.doi.org/10.1016/j.healthpol.2015.05.003