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Why and how did Israel adopt activity-based hospital payment? The Procedure-Related Group incremental reform☆

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ABSTRACT

Historically, Israel paid its non-profit hospitals on a perdiem (PD) basis. Recently, like other OECD countries, Israel has moved to activity-based payments. While most countries have adopted a diagnostic related group (DRG) payment system, Israel has chosen a Procedure-Related Group (PRG) system. This differs from the DRG system because it classifies patients by procedure rather than diagnosis. In Israel, the PRG system was found to be more feasible given the lack of data and information needed in the DRG classification system. The Ministry of Health (MoH) chose a payment scheme that depends only on inhouse creation of PRG codes and costing, thus avoiding dependence on hospital data. The PRG tariffs are priced by a joint Health and Finance Ministry commission and updated periodically. Moreover, PRGs are believed to achieve the same main efficiency objectives as DRGs: increasing the volume of activity, shortening unnecessary hospitalization days, and reducing the gaps between the costs and prices of activities. The PRG system is being adopted through an incremental reform that started in 2002 and was accelerated in 2010. The Israeli MoH involved the main players in the hospital market in the consolidation of this potentially controversial reform in order to avoid opposition. The reform was implemented incrementally in order to preserve the balance of resource allocation and overall expenditures of the system, thus becoming budget neutral. Yet, as long as gaps remain between marginal costs and prices of procedures, PRGs will not attain all their objectives. Moreover, it is still crucial to refine PRG rates to reflect the severity of cases, in order to tackle incentives for selection of patients within each procedure.

1. Background

Since 1995, Israel has had a national health insurance (NHI) system that provides a broad benefits package to all Israeli citizens and permanent residents, which the government updates each year. The system is financed primarily from public sources via payroll and general tax revenues.

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The share of public financing has declined to 61% of total health system financing [1].

Four competing, non-profit health plans (HPs) are responsible for providing their members with the NHI package and ensuring reasonable accessibility and availability of services. They provide care in the community and procure hospital services. There are four HPs; two of them, Clalit and Maccabi, cover almost 80% of Israel's residents. Both own general hospitals: Clalit owns eight general non-profit hospitals (30% of acute care beds) whereas Maccabi owns five for-profit hospitals (about 3% of acute care beds).

In addition to its regulatory, planning and policymaking roles, the Israeli Ministry of Health (MoH) owns and operates about half of the nation's acute care hospital beds.

Approximately 80% of the revenue of all 45 public general hospitals in Israel comes from the HPs' payments for services. The remaining 20% comes from sales of services to other public bodies (e.g., the National Insurance Institute) and private services such as those not included in the NHI package and medical tourism [2]. In 2014, the rate of acute care beds per 1000 populations in Israel was lower than the OECD average (1.9 compared to 3.3) [3].

From the late 1970s, public hospitals in Israel were paid per-diem (PD) fees for inpatient care; during the 1990s, activity-based payments were introduced through the establishment of 30 Procedure Related Groups (PRG). Emergency and ambulatory care in hospitals are paid on a fee-for-service (FFS) base. In 2012, 23% of the gross revenue of government-owned hospitals was for inpatient care paid by PRG, 40% for inpatient care paid by PD, 21% for ambulatory care paid by FFS or PRGs, 8% for births paid by PRGs and 6% for emergency care paid by FFS [4]. Maximum price lists for all hospital services are mandated by law and set by the government, through a joint MoH and Ministry of Finance (MoF) pricing committee. Since June 2015, as part of the mental healthcare reform, HPs have been purchasing inpatient care from psychiatric and general hospitals. Payments for these services are based mainly on PD fees. Prices for these services, similarly to those for other hospital services, are set by the MoH [2].

The objective of this paper is to analyze how and why Israel adopted activity-based hospital payment by PRG.

The paper proceeds as follows. In Section 2, we introduce the PRG system and reform, in Section 3, we discuss problems that the PRG reform aims to address. In Section 4, we analyze the stakeholders' positions and influence. In Section 5, we describe the current tools available to assess the payment reform and in Section 6 we conclude and discuss the paper.

2. The Procedure-Related Group incremental reform

In the last decade, efforts to reform the Israeli healthcare system have been more intensive than at any time since the passing of the NHI law. Many of these efforts have been, or are in the process of being, implemented, among them the PRG payment reform, which consolidates hospital costing, pricing, and payment mechanisms by the MoH. It is part of the Ministry's broader policy of strengthening the public health system, particularly the hospital market. The reform has been implemented incrementally since 2002 and boosted since 2010.

The objectives of the PRG reform are:

1. To set consistent costing and pricing mechanisms and improve public hospitals' financial balance.
2. To refine the unit of payment, by shifting from PD to activity-based payments.
3. To improve the MoH's capacity to set policy and priorities and to supervise and control.

2.1. Description of the PRG payment system

Characteristically, the PRG payment method is based on the principal procedure carried out, rather than diagnosis. When Israel needed to implement a new payment mechanism, there were insufficient data to build accurate diagnosis-related groups (DRG groups), as is done in most European countries. The solution proposed by the MoH was to build "in house" PRG codes based on its own data collection for micro-costing and pricing.

The PRG tariff includes all hospital costs involved in performing the procedure (i.e., operating room, equipment, overheads, and wages). The PRG tariffs are regularly updated based on the health cost index and, sometimes, on improved costing methods. There is an additional payment for patients who undergo more than one major procedure in different organs.

PRG codes are calculated based on the International Statistical Classification of Diseases and Related Health Problems (ICD-9-CM) codification, where each PRG can be one or a group of ICD-9-CM procedure codes. The description of each PRG is based on Current Procedure Terminology (CPT) codes.

PRGs do not take account of diagnoses or patient characteristics (e.g., age, sex, co-morbidities, severity). The PRG pricing is "budget-neutral;ẅhen determining the price of a new PRG or updating the price of an existing PRG, the hospitals and HPs do not earn or lose funds. However, the mechanism might change the budget allocation within each group (i.e., across hospitals or across HPs). This restriction requires two parallel items of information for the pricing of a certain PRG: it's costing and the quantities used. The "budget-neutral" requirement poses one major constraint for the reform if it is to attain its objectives, as it might force the pricing to be inaccurate or be such that it provides perverse incentives and does not necessarily reduce the gaps between costs and prices for certain procedures. If the marginal cost of a procedure is higher than its marginal price, hospitals might have incentives to underprovide care or avoid the procedure. Similarly, when the marginal cost of a procedure is lower, then the incentive is to overprovide care or to prefer a profitable procedure to another one. For details of the PRG costing and pricing mechanism, see Appendix of Supplementary material.

2.2. The PRG adoption process

Since 2010, the amount of PRG codes and hospital revenues from activities paid by PRGs have significantly increased. Fig. 1 (left) shows the upward trend in the