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Managing Prices for Hospital Pharmaceuticals: A Successful Strategy for New Zealand?

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ABSTRACT

Objectives: In 2002, as part of a National Hospital Pharmaceutical Strategy, the New Zealand (NZ) government agency PHARMAC commenced a 3-year period of negotiating prices for 90% of hospital pharmaceuticals on behalf of all NZ public hospitals. The present study was undertaken to determine the effects of this first year of "pooled procurement."

Methods: Using price changes and volume data for each of their top 150 pharmaceutical items, chief pharmacists at 11 public hospitals calculated projected cost savings for the financial year July 2003 to June 2004. Researchers calculated total projected savings for all 11 hospitals, and for three types of hospitals. Estimates of projected savings were made for all 29 major public hospitals by using savings per bed and savings per bed-day. A sensitivity analysis was undertaken. Items showing savings were categorized by using the Anatomical Therapeutic Chemical classification system.

Results: For the 11 hospitals, the top 150 items comprised 612 different items. Projected savings for 2003 to 2004 were NZ$2,652,814, NZ$658,984, and NZ$127,952 for tertiary, secondary, and rural/special hospitals, respectively. Percentage savings as a median (range) of the total top 150 expenditure were: tertiary 5.28% (3.09–16.05%), secondary 7.41% (4.67–12.85%), and rural/special 9.55% (6.27–10.09%). For all 29 hospitals, estimated projected savings were NZ$5,234,919 (NZ$3,304,606–NZ$8,044,482) by savings per bed, and NZ$5,255,781 (NZ$2,936,850–NZ$8,693,239) by savings per bed-day. The main contributors to savings were: agents for infections, the nervous system, musculoskeletal system, and blood/blood-forming organs.

Conclusion: The first year of pooled procurement under the National Hospital Pharmaceutical Strategy (2002–2003) has resulted in moderate savings. For all 29 major public hospitals, savings of around NZ$5.2 million ($2.9 million–$8.7 million) or 3.7% were projected for 2003 to 2004. Longer-term effects, however, on patient outcomes and availability of pharmaceuticals, as well as on pharmaceutical expenditure, have yet to be evaluated.

Keywords: drug costs, group purchasing, hospitals, pharmaceutical preparations, public.

Introduction

In recent decades, countries belonging to the Organization for Economic Cooperation and Development have seen pharmaceutical expenditure rising steadily as a share of gross domestic product, and averaging 15% of health-care expenditure (1970–1996) [1]. This growth has caused concern for countries and health-care organizations alike. Two main approaches have been used in an attempt to control this growth, i.e., supply-side management, and demand-side management [2–5]. Supply-side management focuses on negotiations with vendors and may include price control, profit control, pooled procurement, rebates, reference pricing, expenditure ceilings, or positive/negative lists [5–16]. Demand-side management focuses on the management of utilization of pharmaceuticals by prescribers and patients and may include educational campaigns, prescribing guidelines, patient copayments, switching prescription medicines to over-the-counter medicines, promoting the use of generics, devolution of budgets to practice level, incentives/disincentives for prescribers, or regulation of spending on promotion (also considered as supply-side management) [3,4,6–9]. In 2003, Maynard and Bloor indicated that despite the strategies in place, there is scope for improved efficiency and equity in the use of pharmaceuticals in most countries [6].

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Since 1993, the Pharmaceutical Management Agency (PHARMAC) in New Zealand (NZ) has managed the Pharmaceutical Schedule—a list of pharmaceutical products subsidized by the government for prescribing for patients in the community. By various means, but mainly by supply-side management, the agency has been successful in controlling pharmaceutical expenditure for patients in the community [8]. In contrast to a number of other developed nations, NZ has seen low growth in recent years. From 1998 to 2002 the average annual change in community pharmaceutical expenditure was 1.46%, compared to 14.54% for the United States, 9.7% for the United Kingdom, and 12.1% (1998–2001) for Australia [17–20].

Expenditure on hospital pharmaceuticals has been a sizable proportion of NZ's total pharmaceutical expenditure. In 2003, hospital pharmaceutical expenditure was around $140 million compared with $539 million for the government component of expenditure on community pharmaceuticals, for a population of 4 million people [21]. In February 2002, PHARMAC launched a National Hospital Pharmaceutical Strategy (NHPS) to manage pharmaceutical expenditure in public hospitals [22]. The reduction of prices for pharmaceuticals or "price management" was one of three major areas of focus. Others were the assessment of new medicines and promotion of quality use of medicines. The agency proposed pooled procurement of frequently used pharmaceuticals with the aim of reducing national hospital pharmaceutical expenditure. Consequently, during the first year of implementation, July 2002 to July 2003, new price contracts for all hospitals were negotiated with suppliers for a number of high volume medicines. Contracts were implemented on a month-by-month basis, and items were published in "Section H," an additional pharmaceutical schedule [23]. PHARMAC's stated intention was to negotiate new prices over a 3-year period until approximately 90% of pharmaceuticals used in hospitals were "Section H" items [22].

The majority of Section H items, because they were frequently used hospital items, would be for acute illness/surgical procedures. A smaller proportion would be for continuation outside hospitals, and PHARMAC intended, wherever possible, to negotiate Section H and community contracts with identical unit prices for such medicines. Hospitals were expected to use the Section H brand for a chemical entity selected, but were free to select other chemical entities as clinically appropriate (i.e., were not obliged to use only Section H agents for infections, anesthesia, etc.). To encourage compliance with Section H contracts, hospitals were subject to financial penalties from the suppliers of Section H items if they purchased other brands of a Section H chemical entity outside a small, specified degree of variance ("discretionary variance limits") from the contract.

Pooled procurement has been implemented by various countries and organizations to improve the efficiency of purchase and distribution of pharmaceuticals; reports indicate moderate success [12–16]. The effects of pooled procurement for NZ hospitals as part of the NHPS have yet to be determined.

Aim

The aim of the present study therefore was to determine the effects of pooled procurement on total hospital pharmaceutical expenditure resulting from the first year of implementation of the NHPS. The objectives were to project possible savings for 2003 to 2004 for 11 public hospitals, and to estimate the savings for 29 public hospitals. This study is part of an ongoing evaluation of the impact of the NHPS.

Methods

The 29 major public hospitals (i.e., employing one or more pharmacists) in NZ were classified into three types in an earlier project: tertiary, secondary, and rural/special [24]. The NZ Ministry of Health provided advice and validated the group allocations. Tertiary hospitals were those with all specialties on site; secondary, most specialties on site but some visiting specialists; rural/special hospitals were small hospitals with only visiting specialists or hospitals for a special group of patients (e.g., psychiatric). Thirteen of these hospitals were selected for the present study as representative of the three types of hospital and of different geographic localities.

The chief pharmacists at the 13 hospitals were asked to provide the following financial information for the year July 1, 2002 to June 30, 2003:

1. a list of the top 150 pharmaceutical items by annual expenditure (excluding total parenteral nutrition products and ready-made chemotherapy infusions);
2. the total expenditure for each of these items;
3. the total in-patient pharmaceutical expenditure; and
4. new (Section H) prices for the top 150 items for 2002–2003.