Mapping PBS Drug Pathways in Australia: A Framework and Interactive Tool for Category-Specific Pricing Calculations

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INTRODUCTION

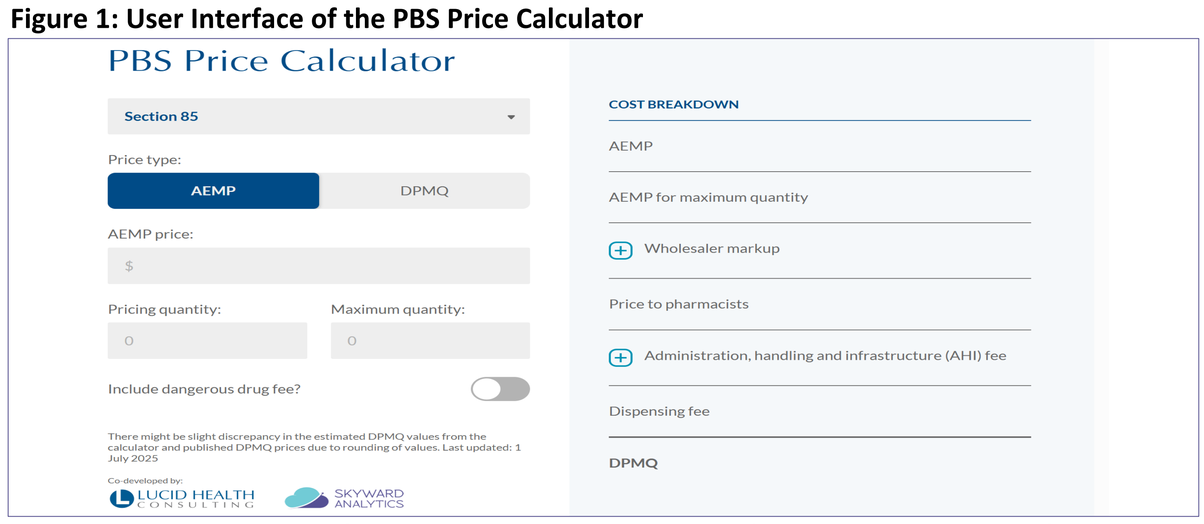
- Australia's Pharmaceutical Benefits Scheme (PBS) comprises of multiple listing categories, each governed by distinct pricing and reimbursement rules
- PBS pricing is based on two key components:
  - **Approved Ex-Manufacturer Price (AEMP):** the base amount paid to the sponsor
  - **Dispensed Price for Maximum Quantity/Amount (DPMQ/DPMA):** the maximum price a pharmacist can charge a patient for a prescription drug which includes; pharmacy markups, administration, handling and infrastructure (AHI) fees, and dispensing fees
- This study aimed to develop a framework mapping PBS listing pathways and create an interactive dashboard to automate forward and reverse price calculations based on category-specific PBS rules

METHODS

We applied a systematic approach to develop a robust framework and an interactive tool for navigating PBS pricing

- **PBS Policy & Pricing Review:** We began by meticulously reviewing PBS policy documents and pricing guidelines. This allowed us to identify and understand the various price components that differ across diverse listing categories.
- **Structured Framework Development:** A key step was creating/developing a structured framework to classify drugs based on their PBS listing pathways. This framework broadly categorized drugs into:
  - **Section 85:** Standard community pharmacy pricing
  - **Section 100:** Hospital-specific AHI fees; further granular categorisation includes growth hormones (GH), in-vitro fertilization (IVF), highly specialized drug (HSD) and HSD community access (HSD CA)
- **Interactive Dashboard Integration:** The framework was seamlessly integrated into an interactive dashboard in Excel™, designed to automate bidirectional AEMP and DPMQ/DPMA calculations, dynamically adjusting for category-specific AHI fees, markups, and unique pricing rules. This is available online at the following link: https://lucidhealthcon.com/pbs-price-calculator/ **(Figure 1)**

Figure 1: User Interface of the PBS Price Calculator



Abbreviations: AEMP, Approved ex-manufacturing price; AHI, Administration handling and infrastructure; DPMQ, Dispensed price for maximum quantity; PBS, Pharmaceutical benefits scheme.

RESULTS

PBS Drug Listing Pathway Classification Framework

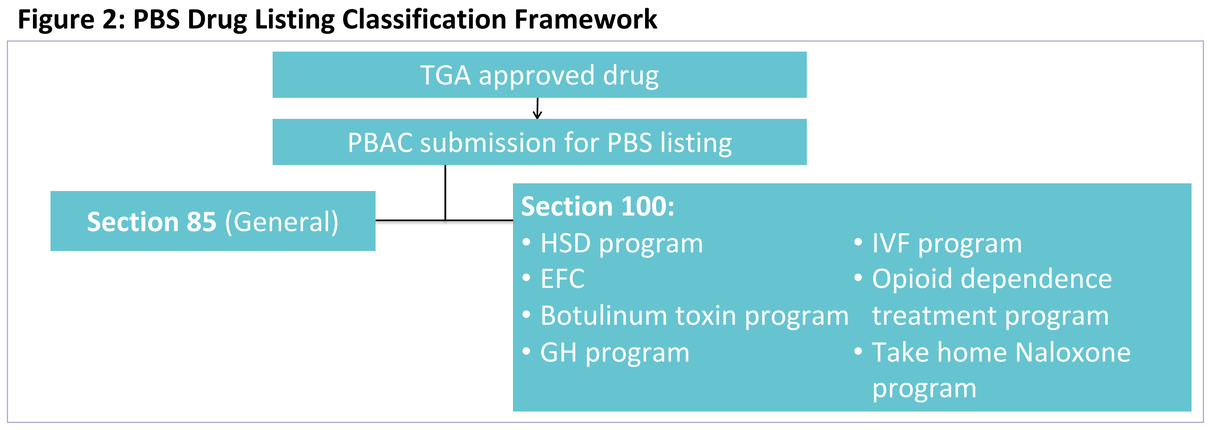
The **Figure 2** outlines the decision-making process for classifying PBS-listed drugs into their respective categories

Optimizing PBS Pricing: An Interactive Dashboard Solution

Our interactive PBS Price Calculator Dashboard, developed using Excel, provides a user-friendly solution to navigate the complexities of Australia's PBS pricing. It enables accurate, bidirectional calculations between AEMP and DPMQ/DPMA, facilitating real-time simulations and informed decision-making

The **Figure 3** showcases the intuitive entry point of the dashboard, where users can easily select the relevant PBS Drug Class from various categories like Section 85, Section 100 (HSDs, EFC, IVF Program, etc.). This structured selection ensures category-specific pricing rules are applied

Figure 2: PBS Drug Listing Classification Framework



Abbreviations: CA, Community access; EFC, Efficient funding of chemotherapy; GH, Growth hormone; GP, General practitioner; HSD, Highly specialized drug; IVF, In vitro fertilization; PBS, Pharmaceutical benefits scheme; PBAC, Pharmaceutical benefits advisory committee; TGA, Therapeutic goods administration.

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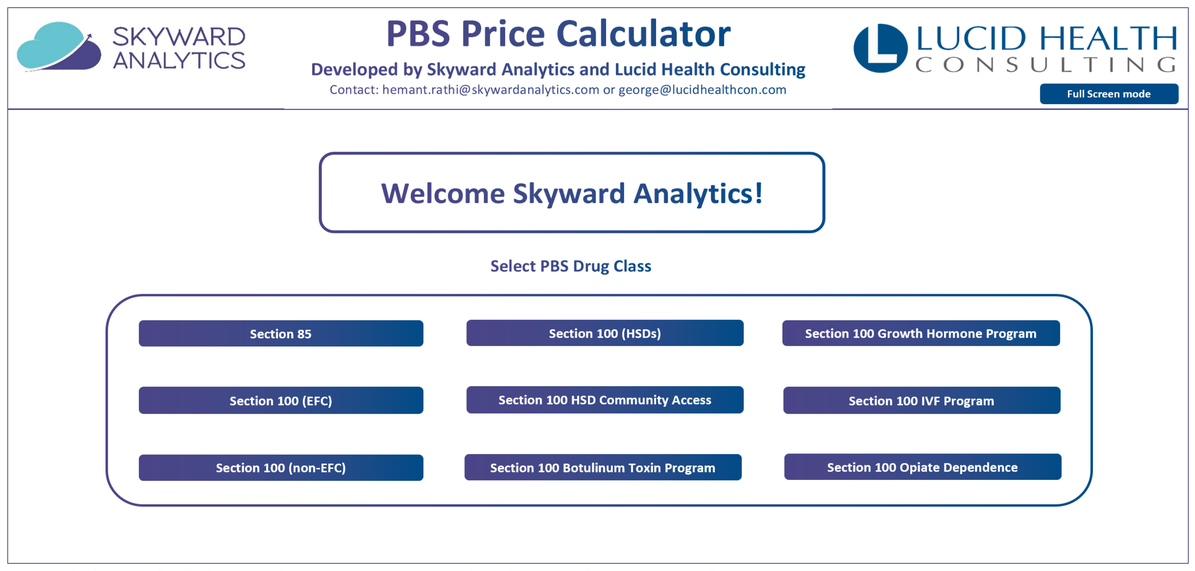
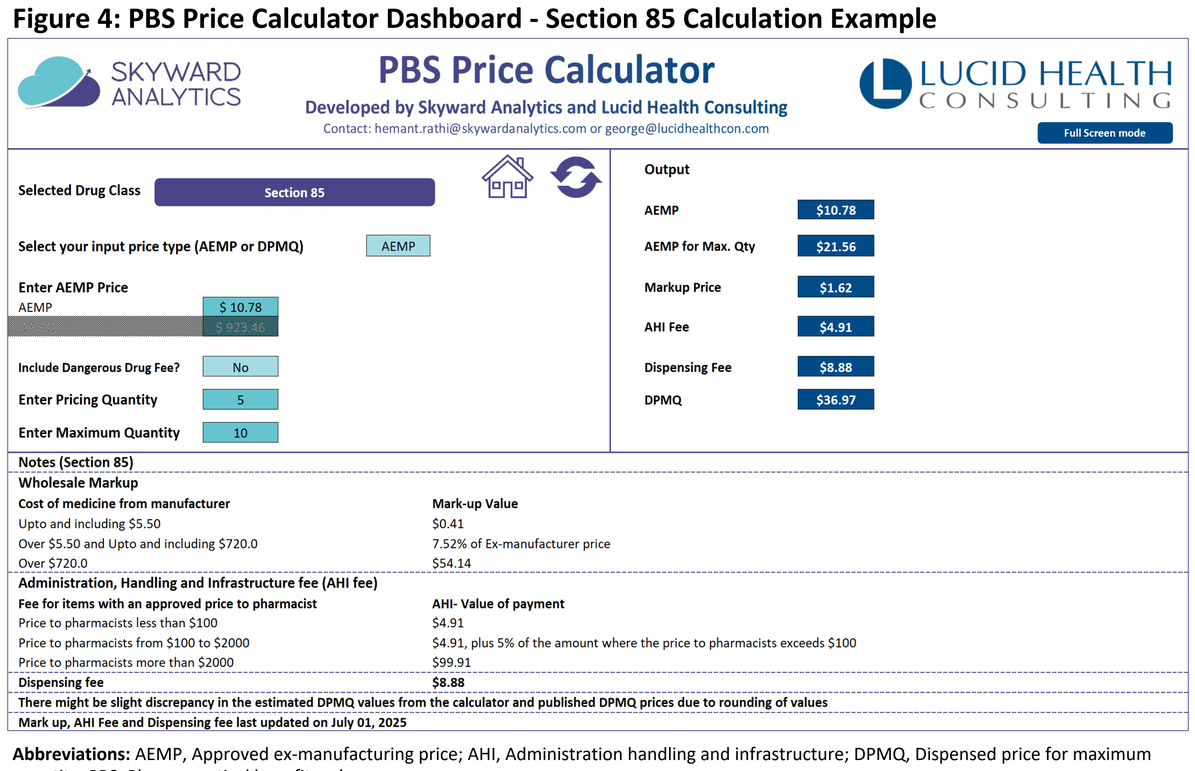
Figure 3: PBS Price Calculator Dashboard - Drug Class Selection



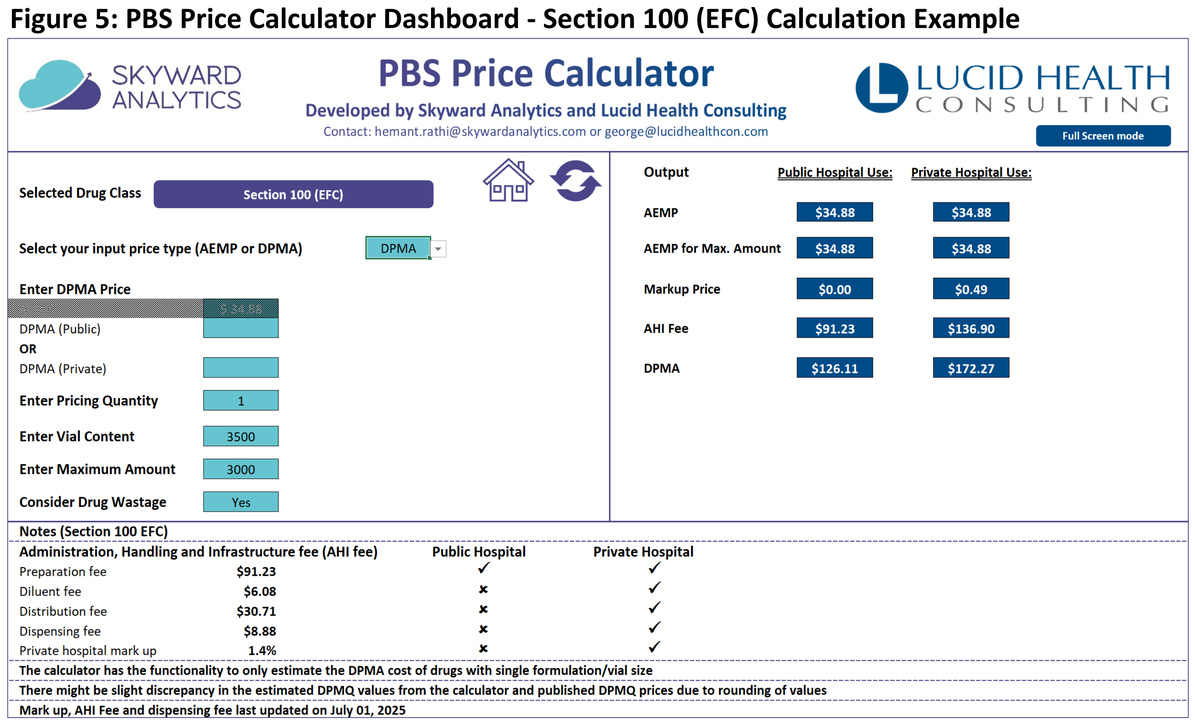
Abbreviations: EFC, Efficient funding of chemotherapy; HSD, Highly specialized drug; PBS, Pharmaceutical benefits scheme.

Figure 4: PBS Price Calculator Dashboard - Section 85 Calculation Example



Abbreviations: AEMP, Approved ex-manufacturing price; AHI, Administration handling and infrastructure; DPMQ, Dispensed price for maximum quantity; PBS, Pharmaceutical benefits scheme.

Figure 5: PBS Price Calculator Dashboard - Section 100 (EFC) Calculation Example



Abbreviations: AEMP, Approved ex-manufacturing price; AHI, Administration handling and infrastructure; DPMQ, Dispensed price for maximum quantity; PBS, Pharmaceutical benefits scheme.

The **Figure 4** and **Figure 5** illustrate calculation examples for Section 85 and Section 100 (EFC) drugs, respectively. They highlight how the dashboard accepts AEMP or DPMQ/DPMA as input and automatically computes the DPMQ/DPMA or AEMP, displaying detailed breakdowns of markup price, AHI fees, and dispensing fees, all in accordance with community pharmacy pricing rules

Validating PBS Price Calculator

The PBS Price Calculator Dashboard underwent rigorous validation against over 50 actual PBS listings, encompassing a diverse range of drug categories and pricing scenarios. This comprehensive testing demonstrated exceptional accuracy, consistently achieving an error rate of less than 1%

CONCLUSIONS

- The PBS Price Calculator is a robust, user-friendly solution designed to address the complexities of Australia's PBS pricing. By integrating a sophisticated classification framework with an interactive interface, the tool significantly enhances the accuracy and efficiency of price calculations
- It serves as an invaluable resource for pharmaceutical sponsors, consultants, and policymakers, enabling them to navigate PBS pricing complexities effectively while supporting informed Health Technology Assessment (HTA) submissions and optimized reimbursement strategies

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