

PPM Case Study

Private Health Revenue Modelling Cabrini Health



PREDICT FUTURE REVENUE

95% accurate revenue forecasting



BETTER HPPA NEGOTIATIONS

Able to quantify private health fund provisions



IMPROVED QUALITY

PPM Rule Sets is an essential auditing tool for administration processes

Cabrini Health needed to understand their revenue and profitability to gain an edge in Hospital Purchaser-Provider Agreement (HPPA) price negotiations with private health insurance funds.

Customer Snapshot

Cabrini Health is a not-for-profit Catholic healthcare service inspired by Mother Cabrini and owned by the Missionary Sisters of the Sacred Heart of Jesus.

A pioneer in Australian private health-care, with a track record of significant investment in education, research and health promotion, Cabrini's services and facilities comprise:

- 5 campuses
- 832 beds
- 1,220 specialist doctors
- 5 radiotherapy campuses
- 4,056 staff
- 80,500 episodes per year

Project Snapshot

Every private hospital has a Hospital Purchaser-Provider Agreement (HPPA) with each private health insurance fund, based on complex funding models with intricate provisions. These funding models are either episodic, per diem or a mix of both.

HPPA negotiations have a crucial bearing on the financial performance and ongoing viability of private hospitals as most of their revenue comes from treating insured patients.

Cabrini Health needed to understand their revenue and profitability to gain an edge in HPPA price negotiations with private health insurance funds.

An additional requirement was the ability to adapt quickly to new conditions when corporate takeovers and mergers occurred in private health fund ownership.

Project Approach

Modelling HPPA Contracts

Dr David Phillips and Mr Ainsley Corteling from Cabrini's Business Intelligence Unit worked closely with PowerHealth Solutions (PHS) to analyse the HPPA contracts – breaking down the provisions into decision logic that could be understood and modelled. They found that once the drivers for each funding component were identified, it became much easier to build the custom models.

Around 57% of overnight separations at Cabrini are episodically funded, with the revenue being based on the coded DRG (AR-DRG version 4.2) for the episode. Medibank Private, BUPA and MBF were the main funds using episode funding for overnight separations, and each fund also had an add-on for ICU stays if certain criteria were met.

“More than three quarters of private hospital patients have private hospital insurance, with some of the rest receiving treatment as either war veterans or under some form of compensation arrangement.”

*Private hospitals in Australia,
Productivity Commission Research
Paper, 1999*

Fund	Funding Model
MBP	DRG episode funding
BUPA	Mix of DRG episode funding and per diem payment
MBF	Per diem plus CMBS-based payment. Now merged into BUPA.
ARHG	Per diem with stepdowns plus CMBS-based payment.
DVA	Per diem plus CMBS-based payment.
HCF	Per diem plus CMBS-based payment.
AHSA	Per diem with stepdowns plus CMBS-based payment.



79% of same day stays were either completely episodically funded or had a component of package funding.

Using PPM Rule Sets, seven separate revenue models were developed, each with a different mix of episodic and per diem funding.

Testing Revenue Models

PHS tested the models against Cabrini Health billing data¹ until they reached 75% accuracy, at which point they were handed over to Cabrini Health for more detailed Beta testing.

The Beta testing revealed further complexities and idiosyncrasies in the billing process that were missing from the revenue models. When these additional complexities were coded in, the models came close enough to reality with an accuracy of 95%. Once 95% accuracy was achieved, the models were signed off.

During testing, MBF was taken over by BUPA, and Cabrini Health was able to model MBF activity through the BUPA model.

Project Outcomes

Predicting Health Fund Revenue

PPM Rule Sets provided Cabrini Health with 95% accurate revenue forecasting, allowing them to predict their future revenue and manage their business around this knowledge.

1. Brighton. Prahran Hospital (providing palliative care) and Hopetoun Service (providing rehabilitation) were not included.



PPM Rule Sets

Quantifying Health Fund Provisions

PPM Rule Sets enabled Cabrini Health to quantify private health fund provision options and price changes, to bargain shrewdly at the annual pricing reviews and negotiate favourable prices for HPPA contract renewals. While it is a not-for-profit healthcare service, Cabrini Health works hard to ensure optimum financial health and to avoid operating at a loss.

Quality Assurance

PPM Rule Sets is now an essential internal auditing tool for Cabrini Health's administration processes and is routinely used for:

- Correcting invoices – quickly identifying incorrectly coded invoices for Encounters with DRG changes, and resubmitting those corrections within the permitted resubmission timeframe
- Checking billing processes – identifying flaws in billing processes that could impact revenue. For example, where incorrect same day medical fees were applied instead of full chemotherapy fees
- Verifying price changes – checking that rate changes in the billing process have been applied correctly

Bonus Outcomes

The testing process compared modelled revenues against actual revenues. When the models reached the required accuracy, Cabrini Health found it useful to reverse the process and compare the actual revenues to the modelled revenues.

By using PPM Rule Sets as an auditing tool, they uncovered several hidden flaws in their billing process, outlined below.

Mid-Encounter DRG Changes

Each health fund allows a specific time-frame during which an account can be resubmitted. When DRG changes occurred, some were not being picked up before the resubmission deadline, leading to potential loss of revenue.

By setting up a dummy PPM Rule Sets database, Cabrini Health calculated daily revenue from recent discharges, following audit and review, for swift identification of incorrectly coded invoices for timely resubmission.

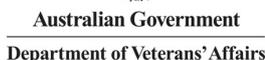
Incorrectly Coded Invoices

Cabrini Health found chemotherapy invoices that were routinely coded incorrectly with the same day medical fee instead of the full chemotherapy fee. The problem was tracked down to the Day Oncology forms being incorrectly filled in by nurses, who did not enter all the CMBS codes for chemotherapy.

Cabrini Health reviewed their ward data capture processes and took steps to ensure that nursing staff understood the correct information capture required.

Pricing Changes

The test period covered pricing changes due to annual reviews as well as HPPA renewal negotiations. Once the new rates had been implemented in the Patient Administration System billing processes, Cabrini Health used PPM Rule Sets to double-check that rate changes had been applied correctly.



www.powerhealthsolutions.com



+618 8410 6404



PowerHealth

Knowledge | Experience | Results