Contracting with medical providers in NSW public hospitals

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Context

• The public and private medical systems are not independent and parallel but complex and interdependent.

• Outcomes in the health sector depend on the decisions of many agents and how they interact.
• Need analysis of the behaviour of participants to determine likely impacts of changed incentives and constraints.
• Impact of contracts and institutional arrangements
NSW public hospitals

- Mixture of public and private patients
- Mixture of employed and outsourced medical providers
- Number of different interactions and incentives arise

Aims
- Understanding the contracts
- Monitoring performance
- Re-aligning incentives to objectives
Public hospital inpatients

• May be public or private patients
• Public patients incur no charge - no choice of doctor (perhaps)
• Private patients may face gap payments - choice of doctor (perhaps)
• Admissions to hospital are via
  – Accident and Emergency or
  – Referral and booking by a medical specialist
Admission by a medical specialist

• Outpatient clinics funded by public hospitals
  – in some specialties
  – no charge to patient
  – booking as public patient

• Booking from doctor’s private consulting rooms
  – Patients may be public or private
Public hospital medical specialists

- Two types:
  - Salaried Medical Officers, SMOs
  - Visiting Medical Officers, VMOs
- SMOs are employed for treatment of public patients
- VMOs are contracted for treatment of public patients
- Both can treat private patients in public hospitals
Remuneration for public patients

- SMOs are salaried
- VMOs are paid both by
  - sessional payments
  - fee-for service
Remuneration of SMOs for private patients

- Hospital claims reimbursement from Medicare in doctors name (75% of scheduled fee)
- Paid into a trust fund nominated by the SMO and administered by hospital
- Hospital can charge fees from fund
- Remainder available for research, education, additional equipment for members of the trust
- Patient claims reimbursement of (any) gap from private insurer
- Patient pays any remainder out-of-pocket
Remuneration of VMOs for private patients

- VMO bills the patient
- Patient claims reimbursement from Medicare (75% of scheduled fee)
- Patient claims reimbursement of gap from private insurer
- Patient pays any remainder out-of-pocket
- Private practice elsewhere
- No maximum income
SMO salary contract options

1. 100% salary + 20% allowance

2. 100% salary + 14% allowance + drawing rights (11% to 24%)

3. 100% salary + 8% allowance + drawing rights (17% to 36%)

4. 100% salary + drawing rights (25% to 50%)

5. 75% salary + drawing rights (0% to 100%)
# SMO salary summary %

<table>
<thead>
<tr>
<th>Scheme</th>
<th>Salary</th>
<th>Allowance</th>
<th>Drawing Rights</th>
<th>Min income</th>
<th>Max income</th>
<th>Hospital contribution to income</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td>20</td>
<td>0</td>
<td>120</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>2</td>
<td>100</td>
<td>14</td>
<td>24</td>
<td>125</td>
<td>138</td>
<td>114+(11-DR) if DR&lt;11% or 125+(18-DR) if 11%&lt;DR&lt;18%</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>8</td>
<td>36</td>
<td>125</td>
<td>144</td>
<td>108+(17-DR) if DR&lt;17%</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
<td>50</td>
<td>50</td>
<td>125</td>
<td>150</td>
<td>100+(25-DR) if DR&lt;25%</td>
</tr>
<tr>
<td>5</td>
<td>75</td>
<td>0</td>
<td>100</td>
<td>75</td>
<td>175</td>
<td>175</td>
</tr>
</tbody>
</table>

- S and A depend on SMO level and year
- Maximum income
- Maximum DR from the trust fund (as % of salary) shown
- S and A - PAYE and super; DR no PAYE, no super entitlements
- Hospital tops up draws from trust fund within limits (offsetting the facility fee)
- In scheme 5, leave w/o pay permitted for 25% of full-time commitment in that specialty with no private practice allowed in the other 75%.
Issues

• Number of trust funds in a hospital
• Variation in member numbers
• Specialty based
• Entry
• Mix of contracts in a single trust fund
• Variation in contributions to the trust (Medicare rebates for private patients)
Medical indemnity

- Insurance of SMOs and VMOs
  - treating public patients carried by the state government
  - treating private patients met by the doctor from private income
Mix of SMO and VMO expenditures by hospital

\[
\text{VMO share} = \frac{\text{VMO expenditure}}{(\text{VMO expenditure} + \text{SMO salaries})}
\]

SMO salaries include all salaried medical officers
## NSW, Victoria and Australia

<table>
<thead>
<tr>
<th>Recurrent expenditure category</th>
<th>NSW(^{(a)})</th>
<th></th>
<th>Vic</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaried medical officers</td>
<td>599,102</td>
<td>16.3</td>
<td>490,953</td>
<td>18.1</td>
<td>1,791,450</td>
<td>17.4</td>
</tr>
<tr>
<td>Registered nurses</td>
<td>n.a.</td>
<td></td>
<td>1,010,478</td>
<td>18.1</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td>Enrolled nurses</td>
<td>n.a.</td>
<td></td>
<td>123,686</td>
<td>18.1</td>
<td>n.a.</td>
<td></td>
</tr>
<tr>
<td><strong>Total nurses</strong></td>
<td>1,520,087</td>
<td>41.3</td>
<td>1,134,164</td>
<td>41.8</td>
<td>4,338,403</td>
<td>42.0</td>
</tr>
<tr>
<td>Other personal care staff</td>
<td>n.a.</td>
<td></td>
<td>19,265</td>
<td></td>
<td>48,006</td>
<td></td>
</tr>
<tr>
<td>Diagnostic &amp; allied health professionals</td>
<td>446,422</td>
<td>12.1</td>
<td>459,503</td>
<td>16.9</td>
<td>1,298,687</td>
<td>12.6</td>
</tr>
<tr>
<td>Administrative &amp; clerical staff</td>
<td>419,658</td>
<td>11.4</td>
<td>314,509</td>
<td>11.6</td>
<td>1,167,750</td>
<td>11.3</td>
</tr>
<tr>
<td>Domestic &amp; other staff</td>
<td>408,705</td>
<td>11.1</td>
<td>185,236</td>
<td>6.8</td>
<td>1,019,239</td>
<td>9.9</td>
</tr>
<tr>
<td>Not allocatable to a salary expenditure category</td>
<td>. .</td>
<td></td>
<td>11,758</td>
<td>0.4</td>
<td>58,516</td>
<td>0.6</td>
</tr>
<tr>
<td><strong>Total salary &amp; wages expenditure</strong></td>
<td><strong>3,393,974</strong></td>
<td>92.1</td>
<td><strong>2,615,388</strong></td>
<td>96.3</td>
<td><strong>9,722,051</strong></td>
<td>94.2</td>
</tr>
<tr>
<td>Payments to visiting medical officers</td>
<td>289,139</td>
<td>7.9</td>
<td>100,271</td>
<td>3.7</td>
<td>598,958</td>
<td>5.8</td>
</tr>
<tr>
<td>SMO/VMO</td>
<td>2.1</td>
<td></td>
<td>4.9</td>
<td></td>
<td>3.0</td>
<td></td>
</tr>
</tbody>
</table>

### Differences in rates of pay or differences in quantity?

For senior specialist VMOs NSW paid $132 and Vic $109 per hour (1/1/99)
Variation in VMO expenditure shares by NSW hospital types 1998-99

<table>
<thead>
<tr>
<th>Hospital type</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1 - Principal Referral</td>
<td>12</td>
<td>0.236</td>
<td>0.062</td>
<td>0.174</td>
<td>0.367</td>
</tr>
<tr>
<td>A2 - Paediatric Specialist</td>
<td>2</td>
<td>0.135</td>
<td>0.025</td>
<td>0.117</td>
<td>0.152</td>
</tr>
<tr>
<td>A3 - Ungrouped Acute</td>
<td>4</td>
<td>0.300</td>
<td>0.120</td>
<td>0.195</td>
<td>0.446</td>
</tr>
<tr>
<td>B1 - Major Metropolitan</td>
<td>13</td>
<td>0.420</td>
<td>0.084</td>
<td>0.315</td>
<td>0.575</td>
</tr>
<tr>
<td>B2 - Major Non-Metropolit</td>
<td>8</td>
<td>0.604</td>
<td>0.072</td>
<td>0.493</td>
<td>0.736</td>
</tr>
<tr>
<td>C1 - District Group 1</td>
<td>13</td>
<td>0.630</td>
<td>0.143</td>
<td>0.389</td>
<td>0.880</td>
</tr>
<tr>
<td>C2 - District Group 2</td>
<td>28</td>
<td>0.909</td>
<td>0.150</td>
<td>0.497</td>
<td>1.000</td>
</tr>
<tr>
<td>D1 - Community Acute</td>
<td>34</td>
<td>0.992</td>
<td>0.016</td>
<td>0.912</td>
<td>1.000</td>
</tr>
<tr>
<td>D2 - Community Non-Acute</td>
<td>54</td>
<td>0.992</td>
<td>0.037</td>
<td>0.730</td>
<td>1.000</td>
</tr>
<tr>
<td>F1 - Psychiatric</td>
<td>8</td>
<td>0.169</td>
<td>0.238</td>
<td>0.000</td>
<td>0.663</td>
</tr>
<tr>
<td>F2 - Nursing Homes</td>
<td>8</td>
<td>0.063</td>
<td>0.175</td>
<td>0.000</td>
<td>0.497</td>
</tr>
<tr>
<td>F3 - Multi-Purpose Services - Cur</td>
<td>4</td>
<td>0.994</td>
<td>0.009</td>
<td>0.982</td>
<td>1.000</td>
</tr>
<tr>
<td>F4 - Multi-Purpose Services - Fut</td>
<td>11</td>
<td>0.970</td>
<td>0.082</td>
<td>0.723</td>
<td>1.000</td>
</tr>
<tr>
<td>F5 - Hospices</td>
<td>3</td>
<td>0.122</td>
<td>0.100</td>
<td>0.029</td>
<td>0.228</td>
</tr>
<tr>
<td>F6 - Rehabilitation</td>
<td>3</td>
<td>0.227</td>
<td>0.156</td>
<td>0.050</td>
<td>0.344</td>
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<tr>
<td>F7 - Mothercraft</td>
<td>3</td>
<td>0.476</td>
<td>0.494</td>
<td>0.019</td>
<td>1.000</td>
</tr>
<tr>
<td>F8 - Ungrouped Non-Acute</td>
<td>18</td>
<td>0.513</td>
<td>0.407</td>
<td>0.016</td>
<td>1.000</td>
</tr>
</tbody>
</table>
VMO expenditure shares depend on

| Description            | Coef.   | Std. Err. | t      | P>|t| |
|------------------------|---------|-----------|--------|------|
| emerg admissions       | -0.00002| 0.0000    | -4.47  | 0.0000|
| sameday seps           | -0.0002 | 0.0001    | -2.99  | 0.0030|
| average ardrg          | -0.61699| 0.1260    | -4.90  | 0.0000|
| nurse eft              | 0.00030 | 0.0001    | 2.07   | 0.0410|
| admin eft              | 0.00033 | 0.0002    | 1.67   | 0.0970|
| teach & research       | -0.00002| 0.0000    | -3.39  | 0.0010|
| constant               | 1.26309 | 0.1152    | 10.96  | 0.0000|

Number of obs 114
F(  6,   107) 39.81
Prob > F 0.0000
R-squared 0.6907
Adj R-squared 0.6733

- 114 hospitals cover 95% of seps and VMO & SMO expenditure
- ardrg– tonsillectomy = 0.5, liver transplant = 28.6
- Negative impacts of complexity, short stays and teaching and research
- Positive impacts from more nurses, more administration
Outsourcing in public hospitals

- Support services eg laundry, meals, cleaning
- Clinical services such as radiology and pathology
  - often a response to staff shortages
- Nursing through agency employment
  - staff shortages
  - lack of employer flexibility
- Management
- Building and operation
- Aspects of care
  - shorter stays, outreach, hospital in the home
Building, owning and operating

- Whole public hospitals
- Goals of
  - private funding of capital upgrades
  - efficiency through competition and flexibility
  - accountability through contract definition and performance monitoring
- Problems encountered
  - cost savings not realised, eg Port Macquarie estimated to cost an additional $143m over 20 years
  - equity of access, monitoring of quality and community suspicion of for-profit operation
  - difficulties specifying long term contracts (technological and epidemiological change)
Conventional approach to outsourcing/contracting out/competitive tendering

- Organisation initiates
- Seeking greater efficiency through
  - flexibility
  - competition for contracts
  - specialisation
- Disadvantages
  - Transactions costs, including defining contracts and monitoring performance
  - Substantial cost savings not always achieved
  - Lower quality
Outsourcing of medical services

- Organisation initiates
  - flexibility
  - competition for contracts
  - specialisation
- transactions costs,
  - cost savings not always achieved
  - quality

- Doctors initiated
  - not clear
  - competition for doctors
  - increasing specialisation
- complex contracts
  - unknown
  - unknown
Doctors move from salary to private practice

- 1788 - naval surgeons employed to provide care for military and convicts.
- 1820 surgeons given the right to leave government employment and set up private practice.
- 1850 non government hospitals established as charitable institutions
  - Poor treated in hospitals as charity cases, funded by cash donations and pro bono by doctors
  - Rich treated at home and paid the doctors
With advances in medical technology

- Hospitals became institutions for treating the sick (not just poor)
- Doctors needed hospitals to provide inputs to episodes of care
- As costs grew states became involved in funding, and then Commonwealth
- Doctors resisted idea of salaried medical service
- No civil conscription clause in constitution
Doctors were honoraries

- They agreed to treat public patients at no cost
- In return for the right to admit private patients to the hospital
- Hospitals and doctors billed patients separately
More recently

• In the 1960s
  – hospitals began to employ specialists in diagnostic services
  – universities began to employ clinical instructors in teaching hospitals.

• In 1974 Medibank replaced honorary system with salaried appointments and sessional payments

• Medical profession resistance

• In 1976 dismantling Medibank began
And again

- Medicare 1984 again replaced honorary system with doctors resisting change
- Hospital diagnostic specialists strike over rights to private practice
- NSW hospital procedural specialists strike over fee setting, public hospital budgets and private insurance
- ‘doctors reluctant to accept structural change … at considerable cost to the public purse’
Aims for research

- Understanding the contracts
- Monitoring performance
- Re-aligning incentives
What is the agency relationship

- Who is outsourcing whom?
- Are hospitals outsourcing medical services?
- Are doctors outsourcing other inputs?
Contracts

- Do hospitals choose doctors or do doctors choose hospitals?
- Contract negotiation – state awards, AMA and medical bodies, individuals
- Career paths – how often do doctors change hospitals?
- Choice of VMO or SMO?
- Choice of SMO contract? Formation of trust groups? Disbursement of trust monies?
Doctors choice between SMO and VMO

• As SMO
  – Developing a reputation
  – Research and teaching
  – Particular specialties

• As VMO
  – Allows admitting rights for private patients in public hospitals
  – More fee-for-service private practice and more income
  – Admitting rights to private hospitals (greater capacity)
Monitoring performance - system

• Private practice as safety valve
• Private practice in private hospitals as the outside option
• Effect on costs and quality
  – Short term, seasonal flexibility
  – Long term, flexibility, technological adoption, skills
Monitoring performance - individual

- Time and effort
- Waiting times, private vs public
- Time allocation to public vs private patients
- Productivity and quality
- Use of other inputs
  - Substitutes, effort or experience
  - Complements
Re-aligning incentives

- What speciality
- Where to practice
- Style of practice
- Hours of work
- Division between public and private
- Effort