

Funding of diagnostic imaging in Australia: *challenges and policy imperatives*

November 2010

Report by Access Economics Pty Limited for

The Australian Diagnostic Imaging Association

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Summary of findings

Introduction and context

There is growing concern over the inadequacy of Medicare funding for diagnostic imaging (DI) services in Australia. Apart from occasional adjustments for some individual services (both increases and reductions) and the introduction of the bulk-billing incentive in November 2009, Medicare Benefit Schedule (MBS) rebates for DI have remained unchanged over the past decade. Rebates have not been indexed despite strong growth in the cost of providing DI services.

In 2007 an Access Economics study¹ found that the average cost per Medicare-eligible DI service marginally exceeded the MBS rebate in 2005-06 (by around \$1.40 per service). The study also found that unit costs exceeded average MBS revenue at around 50% of practice sites. Overall the study highlighted an emerging funding shortfall – DI services could not be bulk-billed without the practice sustaining a financial loss.

The analysis presented in this summary report updates and expands on the earlier study, using 2008-09 data collected from a comprehensive survey of members of the Australian Diagnostic Imaging Association (ADIA). The results reported here summarise the high-level findings of the analysis. A complete version of the report has been presented to ADIA on a confidential basis, since many of the data are commercially sensitive.

Overview of the analysis

A detailed survey of the cost of providing DI services in ADIA member practices was undertaken. A custom-designed data collection instrument was developed and piloted before circulation to a representative sample of DI providers. The sample survey covers:

- 285 practices representing 76% of ADIA member practice sites;
- nearly 6.5 million services (32% of total), of which 87% were Medicare-funded;
- approximately one third of Medicare eligible MRIs; and
- all States and Territories and all Australian Standard Geographic Classification (ASGC) remoteness regions.

Data sourced through the survey were collated and a range of validation checks undertaken to verify their integrity before further modelling and analysis were conducted.

¹ *The costs of diagnostic imaging for services covered by the Radiology MoU*, Report for the Australian Diagnostic Imaging Association, 2007.

Greater detail in relation to the survey is provided in Box 1 below.

Box 1: Overview of ADIA member survey

The survey instrument was a refined version of that used for Access Economics' 2007 study. The survey was originally developed based on a literature review of radiology costs, discussions with ADIA members and previous cost modelling work undertaken by the Royal Australian and New Zealand College of Radiologists. The survey was piloted with seven companies (six urban sites and one rural site) and one partnership.

For the 2010 survey, the original instrument was circulated to a reference group of ADIA member financial managers to ensure it remained valid, meaningful and clear, and to seek advice on the best ways to accommodate additional information required by ADIA.

In order to identify potential respondents, ADIA approached member organisations to ascertain their willingness to participate in the survey. For the subset willing to participate, financial managers were asked to provide data for as many sites as possible. This approach maximised response rates and ensured respondent cooperation in providing high quality data.

The survey encompassed all costs — labour (including all salaries, wages and on-costs), capital (including the opportunity cost of capital, depreciation and maintenance costs) and other costs. The opportunity cost of capital was derived and included an estimated market return on equity and interest paid on borrowings. Unit costs were estimated as total costs divided by total throughput (by modality). Revenue from Medicare rebates and total revenue (including Medicare plus other revenue) were recorded separately. Revenue from Medicare rebates was estimated on the assumption that all Medicare patients were bulk-billed.

Key findings

The survey data reveal that, on average, unit costs associated with delivering Medicare-eligible DI services exceeded Medicare revenue by \$33 per service in 2008-09 (Table 1.1). In addition, if private practices were to bulk-bill all Medicare services, Medicare rebates would not have covered service costs at 89% of sites. In other words, at current rebate levels, bulk-billing is not commercially viable for the great majority of DI practices.

A diagnostic imaging bulk-bill-incentive payment for all bulk-billed out-of-hospital DI services was introduced in November 2009. The survey reveals that, even if the incentive applied to all Medicare-eligible services, average rebates would still not cover unit costs. Indeed, extrapolating the findings of the analysis to 2009-10 to capture the impacts of the incentive suggests that a loss of \$26 per service would be sustained in delivering bulk-billed services.

Looking further ahead, continued growth in service-delivery costs coupled with the absence of indexation of Medicare rebates points to a growing shortfall in Medicare funding. Projections by Access Economics – assuming no changes in regulatory requirements and continuation of historical growth in individual cost components – suggest that by 2011-12 average unit costs will exceed average Medicare rebates by \$53 per service for non-bulk-billed services and \$40

per service for bulk-billed services (Table i). Evidently, absent policy change, the viability of bulk-billed DI services will continue to deteriorate.

At an aggregate level, per-unit funding gaps suggest a significant shortfall across the sector: \$570 million in 2008-09 rising to \$820 million by 2011-12.

Table 1.1: Unit costs and average rebates for Medicare-eligible services

	2008-09	2011-12 (projected)
MBS mean unit costs	\$142	\$162
Revenue – non bulk-billed services		
MBS unit rebate	\$109	\$109
Difference	-\$33	-\$53
Difference as % unit cost	-23%	-33%
% sites with unit revenue < unit cost	89%	N/A
Revenue – bulk-billed services[^]		
MBS unit rebate	\$109	\$122
Difference	-\$33	-\$40
Difference as % unit cost	-23%	-25%

[^]Includes the bulk-billing incentive from November 2009.

Implications for patients

The trends identified in this report have wider implications extending beyond the viability of DI practices. Quality, affordability and accessibility of DI services are also potentially affected. Specifically:

- accessibility is reduced if financial pressures force practice closures. This can manifest in increased waiting times and is a particular risk in rural and remote areas where low service volumes and medical workforce constraints create inherent challenges to services provision;
- affordability is reduced if funding shortfalls induce practices to charge increasing patient co-payments in order to cover their operating costs. Patients with less capacity to pay will be most directly affected;
- quality of patient care is potentially compromised if practices cut costs in ways which undermine professional practice, including:
 - narrowing the spectrum of services available to patients at a given practice, hence limiting the access of some patients to the most clinically appropriate services;
 - economising excessively on the input of professional radiologists and specialist labour input more broadly; and
 - postponing or even abandoning investment in updated or new equipment, hence failing to keep abreast of best clinical practice over time.

Policy imperatives

Access Economics' analysis of service delivery costs in DI points to inadequate funding of the private DI sector in Australia. Funding gaps have grown significantly over time. While this has delivered an efficiency dividend to government, there are limits to the ability of DI to remain viable without additional resources. Despite continued advances in technology, the scope for the sector to continue to sustain itself through productivity improvements is limited. There is a strong case for existing funding shortfalls to be met and for ongoing indexation – at a rate consistent with the growth in efficient service delivery costs. Indeed, the case for indexing rebates for DI services into the future seems difficult to deny given the extent of the anticipated funding shortfall in the sector.

As the industry has adjusted to a more demanding financial environment, concerns have arisen that service quality has been compromised in the process. Both to arrest further declines in service quality and to ensure that additional funding translates into quality patient care, professional standards underpinning service delivery should be reinforced. In particular, appropriate supervision by a qualified radiologist should be prescribed and enforced.

Looking further ahead, there is a case for a more comprehensive response to the shortcomings identified in this report. An appropriate policy framework for private DI services is currently lacking. Funding for DI services should be aligned with efficiency, quality, accessibility and affordability to the patient. Without such a framework, the viability of the private DI sector in Australia is under threat.

Access Economics

Appendix A: The survey instrument

FIRST, please save this file in the name of the organisation/member company and save regularly while you fill it in.

SECOND, please fill in your contact details in the yellow squares .

THIRD, please read the instructions below.

YOUR CONTACT DETAILS (in case we have an enquiry). Thank you.

Name:	
Position title:	
Company name:	
Telephone:	
Email:	

INFORMATION AND INSTRUCTIONS

- 1 Your practice's information will remain strictly confidential. A signed confidentiality deed is provided in a pdf file with this survey. **De-identified data will be supplied to ADIA at the end of this process.**
- 2 Responses are due back no later than Friday 2nd October to penny.taylor@accesseconomics.com.au.
- 3 Survey scope.

The scope of this new survey is all of the items in Groups I1, I2, I3, I4 and I5 of the Diagnostic Imaging Services Table. The DIST Table is provided in a pdf file with this survey

'B' type practices are excluded from this survey. Practice types are defined on the Compulsory sheet. B type practices are general practice or private specialist medical practice other than in Group A.

- 4 Please fill in the survey for one site/one location. This will generally coincide with one LSPN. We need the costs of running an independent diagnostic imaging practice.
- 5 Information collection is grouped as follows:

Sheet 1: Offsite overheads & finance

Off-site overheads: to collect data on costs incurred at head office or other offsite locations - a proportion of which need to be allocated to each site.

Capital structure questions.

Sheet 2: Site A

Site overheads: to collect information about the site and overheads incurred at the site.

MRI: to collect information about the direct costs of MRI. Only fill out this sheet if you offer MRI at this site.

CT: to collect information about the direct costs of CT. Only fill out this sheet if you offer CT at this site.

Mammography: to collect information about the direct costs of mammography. Only fill out this sheet if you offer DR at this site.

General X-Ray: to collect information about the direct costs of General X-Ray. Only fill out this sheet if you offer DR at this site.

Screening-fluoroscopy: to collect information about the direct costs of Screening-fluoroscopy. Only fill out this sheet if you offer DR at this site.

Dental OPG: to collect information about the direct costs of DR. Only fill out this sheet if you offer DR at this site.

DSA: to collect information about the direct costs of DR. Only fill out this sheet if you offer DR at this site.

US: to collect information about the direct costs of US. Only fill out this sheet if you offer US at this site.

NM: to collect information about the direct costs of NM. Only fill out this sheet if you offer NM at this site.

Sheet 3: Site B

(add sheets as necessary for each new site)

- 6 Please fill in all of the yellow squares. If this information is not readily available, a best guess or notional estimate is better than no information. We need all the information requested by the survey.
- 7 For equipment, we need the upfront cost, and the useful life and the current age for equipment. We need this data whether equipment is leased or owned. The ADIA useful life estimates for tax purposes are in a separate document provided with this survey.
- 8 The aim of the survey is to ensure proper remuneration under the Medicare Benefits Schedule (MBS), so we need Medicare throughput and revenue as well as total throughput and revenue.
- 9 Exclude sessional income (eg. provision of radiologist reporting sessions to a public hospital one day a week).
- 10 Please only fill out the costs of any item once. Do not duplicate any costs by including them twice anywhere in the survey.
- 11 If you have any queries, please contact Catherine Bergin at ADIA, Catherine@adia.asn.au, or Penny Taylor at Access Economics, Penny.Taylor@AccessEconomics.com.au.

Thank you for your participation in this survey

OFF-SITE OVERHEADS

THERE ARE 3 QUESTIONS ON THIS SHEET

1) Offsite overheads for services (eg at head office) for allocation to the sites you have responded for. **Note please only provide offsite overhead costs covering the sites for which data are provided. Overheads in this sheet will be allocated to each site according to the site's share of revenue, and then to each modality at each site according to the modality share of revenue at each site.**

- a) Offsite labour costs including on costs 2008-09
- b) Capital value/Depreciation (eg courier vehicles, head office fitout, IT&T, etc) .
- \$ Depreciation in 2008-09
- \$ 'Depreciated' historical cost 2008-09
- \$ Book value of assets excluding intangibles, before interest and tax 2008-09
- c) Other costs 2008-09

2) If you have not filled out off-site costs, please indicate why (eg. you are filling out this survey for more than one site and off-site costs are therefore included elsewhere in this survey)

3) Capital structure and financing

\$ interest paid on debt 2008-09

\$ book value of debt 2008-09

Interest rate paid on debt (nominal) (%)

Corporations only Debt/equity ratio

Corporations only Weighted average cost of capital (WACC) (%)

Corporations only Intangible to tangible asset ratio

NOW, PLEASE FILL IN THE SHEETS FOR EACH INDIVIDUAL SITE (click on the relevant tabs at the bottom of the screen)

SITE A

THERE ARE QUESTIONS ON SITE OVERHEADS, FOLLOWED BY QUESTIONS ON INDIVIDUAL MODALITIES

1) LSPN, POST CODE and PRACTICE TYPE

→ Insert more columns as necessary if you have more LSPNs.

	First LSPN	Second LSPN	Third LSPN	Fourth LSPN
LSPN No.	1	2	3	4
City	1	2	3	4
State	1	2	3	4
Post code	1	2	3	4
Practice type defined below.	1	2	3	4
Registered remote area for Medicare (defined below) (Yes/No)	First	Second	Third	Fourth

Definition of registered remote area for Medicare purposes — a site that is more than 30 kilometres by road from: (a) a hospital which provides a radiology service under the direction of a specialist in the specialty of diagnostic radiology; and (b) a free-standing radiology facility under the direction of a specialist in the specialty of diagnostic radiology.

TYPE OF PRACTICE

NOTE: 'B type' practices are excluded from this survey. B type practices are general practice or private specialist medical practice other than in Group A.

Group A - Private specialist radiology

A1 Base for mobile equipment

A2 Stand-alone practice site

A3 Part of or co-located with a primary care practice or group

A4 Part of or co-located with a private specialist medical centre

Group C - Public Facility (eg. radiology or urology department of hospital)

Comments - is there anything unusual about this site that might affect our ability to interpret the cost data?

A5 Co-located with public hospital

A6 Co-located with a private hospital

A7 Private hospital

A8 Private hospital co-located with a public hospital

A9 Other

Comment 1	Comment 2	Comment 3	Comment 4
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2) Modalities offered in 2008-09 at each LSPN

Magnetic resonance imaging MRI (yes/no)

Computed tomography CT (yes/no)

Mammography (yes/no)

General X-Ray

Screening-fluoroscopy

Dental Orthopantomography (OPG)

Digital Subtraction Angiography (DSA)

Ultrasound US (yes/no)

Nuclear Medicine NM (yes/no)

Other (PET, DEXA etc) (yes/no)

First LSPN	Second LSPN	Third LSPN	Fourth LSPN
M1	M2	M3	M4
CT1	CT2	CT3	CT4
MA1	MA2	MA3	MA4
X1	X2	X3	X4
SF1	SF2	SF3	SF4
OPG1	OPG2	OPG3	OPG4
DSA1	DSA2	DSA3	DSA4
U1	U2	U3	U4
NM1	NM2	NM3	NM4
Other1	Other2	Other3	Other4

3) After hours services

Standard hours are 8am-6pm Monday to Friday and 9am to 1pm Saturday.

a) Are after hours services offered at this site on a scheduled basis (ie staff rostered on)? (Yes/no)

b) Are after hours services offered at this site on an on call basis? (Yes/no)

c) Total number attendance hours by radiologists at this site in 2008-09 (number of hours for all radiologists)

Total	MRI	CT	Mammography	General X-Ray	Screening-Fluoroscopy	Dental OPG	DSA	US	NM
	MRI	CT	Mam	X	SF	OPG	DSA	US	NM
	1	2	3	4	5	6	7	8	9
1000									

4) Office/administrative equipment at this site 2008-09

Office/administrative equipment = Equipment that is shared across modalities: RIS/PAC, site fit out, lead lining (EXCEPT NOT MRI CAGE), IT&T, faxes, office furniture, photocopiers, resuscitation equipment, trolleys, etc. **DO NOT** include medical equipment (such as MRI units, MRI cage etc) used for each modality - these are in the separate sheets for each modality.

\$ Depreciation 2008-09

\$ 'Depreciated' historical cost 2008-09

\$ Book value of office/admin assets excluding intangibles, before interest and tax 2008-09

Office dep
Office HC
Office BV

The costs of diagnostic imaging

5) Staff costs 2008-09 (including on costs). Exclude sessional costs (eg. provision of radiologist reporting sessions to a public hospital one day a week).

Staff costs = salaries (and/or physician fees), on-call payments, bonuses, training costs and on-costs (on-costs include payroll tax, FBT, superannuation & workers compensation).

	\$ Total all modalities (incl PET, DEXA)	Should add to 100%									
		% MRI	% CT	% Mammography	% General X-Ray	% Screening-Fluoroscopy	% Dental OPG	% DSA	% US	% NM	% Other (PET, DEXA, non-DIST items etc)
a) Non-partner specialists (Radiologist, Registrar) If a partnership, please also answer (d) below.	Total1	M1	C1	Mam1	X1	SF1	OPG1	DSA1	US1	NM1	Other1
b) Non-partner NM physician. If a partnership, please also answer (e) below.	Total2	M2	C2	Mam2	X2	SF2	OPG2	DSA2	US2	NM2	Other2
c) Other staff (Clerical, IT, admin, finance, porters etc)	Total3	M3	C3	Mam3	X3	SF3	OPG3	DSA3	US3	NM3	Other3
d) Contractors (if not included elsewhere)	Total4	M4	C4	Mam4	X4	SF4	OPG4	DSA4	US4	NM4	Other4
e) Technicians (Sonographer, Radiographer, Nurse)	Total5	M5	C5	Mam5	X5	SF5	OPG5	DSA5	US5	NM5	Other5

Please adjust technical staff costs according to time and pay rate for each modality. Eg. In many cases radiographers doing MR are paid at a higher rate than those doing CT, who are paid at a higher rate than those doing DR and sonographers are sometimes paid at a higher rate than radiographers.

		Should add to 100%									
Number FTE partners (all)	No. FTE partners working at the practice	% FTE partners' time MRI	% FTE partners' time CT	% FTE partners' time mammo	% FTE partners' time X- Ray	% FTE partners' time screen-fluoro	% FTE partners' time OPG	% FTE partners' time DSA	% FTE partners' time US	% FTE partners' time NM	% Other (PET, DEXA, non- DIST items etc)
f) Radiologist partner											
g) NM physician partner		not relevant	not relevant	not relevant	not relevant	not relevant	not relevant	not relevant	not relevant		not relevant

FTE is defined as a radiologist working in the practice for 52 weeks of the year less public holidays ie. 250 working days. In reality it will be more than one radiologist to account for leave coverage

Value/cost of an FTE partner will be calculated by Access Economics based on a daily rate of \$3,000 (inclusive of on-costs) x 250 days per year ie. 1 FTE = \$750,000.

6) Maintenance/repairs, 2008-09

a) Annual maintenance and repair costs		\$ MRI	\$ CT	\$ mammography	\$ General X-Ray	\$ screening-fluoro	\$ dental OPG	\$ DSA	\$ US	\$ NM	\$ Other (PET, DEXA)
--	--	--------	-------	----------------	------------------	---------------------	---------------	--------	-------	-------	-----------------------

7) Other non-staff operating costs 2008-09

a) Medical consumables (eg. contrast, disposable injector, film, etc).	\$ Total all modalities (incl PET, DEXA)	% MRI	% CT	% Mammography	% General X-Ray	% Screening-Fluoroscopy	% Dental OPG	% DSA	% US	% NM	% Other (PET, DEXA, non-DIST items etc)
--	---	-------	------	---------------	-----------------	-------------------------	--------------	-------	------	------	---

Medical consumables are requested separately to allow for differences in use by modality - eg. MRI & CT use more medical consumables than other modalities.

b) Other operating costs.

	\$ Total all modalities (incl PET, DEXA)	% MRI	% CT	% Mammography	% General X-Ray	% Screening-Fluoroscopy	% Dental OPG	% DSA	% US	% NM	% Other (PET, DEXA, non-DIST items etc)
--	---	-------	------	---------------	-----------------	-------------------------	--------------	-------	------	------	---

Other operating costs include: (i) Rent (ii) utilities (IT&T, power) (iii) non-medical consumables ie. office supplies, linen, laundry, paper towel etc, iv) waste disposal costs, v) fees and charges (record keeping, legal fees, security, auditing fees, bank charges etc), vi) Insurance, vii) other (entertainment, travel, marketing). EXCLUDE: Leases for equipment, Depreciation, Physician fees - (physician fees should be included with staff costs). If unsure how to split, use revenue shares for each modality.

8) Revenue and throughput 2008-09 (Exclude sessional income, eg. provision of radiologist reporting sessions to a public hospital one day a week.)

Throughput (number procedures)		MRI	CT	Mammography	General X-Ray	Screening-Fluoroscopy	Dental OPG	DSA	US	NM	Other (PET, DEXA, non-DIST items etc)
--------------------------------	--	-----	----	-------------	---------------	-----------------------	------------	-----	----	----	---------------------------------------

MBS (Medicare Benefits Schedule) includes bulk billed and private patients. EXCLUDE public patients in public hospitals, workers compensation, motor vehicle third party, other compensable, DVA, defence, correctional or contract.

a) Medicare funded procedures (Number)											
b) Total (Medicare plus other) (Number procedures)											

Revenue (\$ dollars)

To estimate Medicare revenue, add bulk billing revenue to revenue from private patients with the gap deducted. To deduct the gap, estimate average bulk billing revenue per procedure (=bulk billing revenue divided by number bulk billed procedures), then multiply this by the number of private procedures. Add the Medicare revenue for private patients to the bulk billing revenue

c) Medicare (only) revenue (\$)											
d) Total (Medicare plus other revenue) (\$)											

MAGNETIC RESONANCE IMAGING
IF MRI WAS OFFERED AT THIS SITE IN 2008-09, ANSWER THE 5 QUESTIONS BELOW

1) Total number of MRI units

--

2) MRI units →Insert more columns if you have more than 4 MRI units

a) Is this unit registered Medicare eligible? (Yes/No)

b) Upfront cost when purchased \$

c) Useful life when purchased (technological life NOT depreciated life) (years and part years eg. 5.5 means five and a half years)

d) Time equipment has been at this site (years since you purchased it) (years and part years eg. 5.5 means five and a half years)

e) Age of equipment when purchased (years and part years eg. 5.5 means five and a half years)

f) Has the unit undergone significant upgrade (or upgrades) (Yes/no)

g) How many years of additional life were added because of the upgrade(s) (eg. 10 year old unit was upgraded and useful life extended to 15 years, so 5 years added = answer 5)

h) Cost of upgrade(s)

First MRI unit	Second MRI unit	Third MRI unit	Fourth MRI unit

3) Ancillary medical equipment (eg monitors etc) →

If you wish to provide data on ancillary equipment and building fit out for each unit separately, please add columns as necessary. Otherwise, combine data for all units and report total in the first column (but please ensure you provide notional averages for the useful life and age in 2008-09).

a) \$ Depreciation for 2008-09 (straight line method)

b) \$ 'Depreciated' historical cost 2008-09

4) MRI Cage

a) Upfront cost \$

b) Useful life when purchased (technological life NOT depreciated life) (years)

c) Age of fit out in 2008-09 (years)

First MRI, or total for all units	Second MRI unit	Third MRI unit

5) \$ Book value of all MRI assets at this site excluding intangibles, before interest and tax 2008-09

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COMPUTED TOMOGRAPHY
IF CT WAS OFFERED AT THIS SITE IN 2008-09, ANSWER THE 4 QUESTIONS BELOW

1) Total number of CT units

2) CT units → *Insert more columns if you have more units*

a) Upfront cost when purchased \$

b) Useful life when purchased (technological life NOT depreciated life) (years and part years eg. 5.5 means five and a half years)

c) Time equipment has been at this site (years since you purchased it) (years and part years eg. 5.5 means five and a half years)

d) Age of equipment when purchased (years and part years eg. 5.5 means five and a half years)

e) Has the unit undergone significant upgrade (or upgrades) (Yes/no)

f) How many years of additional life were added because of the upgrade(s) (eg. 10 year old unit was upgraded and useful life extended to 15 years, so 5 years added = answer 5)

g) Cost of upgrade(s)

First unit	Second unit	Third unit		

3) Ancillary medical equipment (eg monitors etc) →

If you wish to provide data on ancillary equipment and building fit out for each unit separately, please add columns as necessary. Otherwise, combine data for all units and report total in the first column.

a) \$ Depreciation for 2008-09 (straight line method)

b) \$ 'Depreciated' historical cost 2008-09

First CT or total for all units	Second unit	Third unit

4) \$ Book value of all CT assets at this site excluding intangibles, before interest and tax 2008-09

MAMMOGRAPHY

IF MAMMOGRAPHY WAS OFFERED AT THIS SITE IN 2008-09, ANSWER THE 4 QUESTIONS BELOW

1) Total number of mammography units

2) Mammography units →Insert more columns if you have more units

a) Upfront cost when purchased \$

First unit	Second unit			
------------	-------------	--	--	--

b) Useful life when purchased (technological life NOT depreciated life) (years and part years eg. 5.5 means five and a half years)

--	--	--	--	--

c) Time equipment has been at this site (years since you purchased it) (years and part years eg. 5.5 means five and a half years)

--	--	--	--	--

d) Age of equipment when purchased (years and part years eg. 5.5 means five and a half years)

--	--	--	--	--

e) Has the unit undergone significant upgrade (or upgrades) (Yes/no)

--	--	--	--	--

f) How many years of additional life were added because of the upgrade(s) (eg. 10 year old unit was upgraded and useful life extended to 15 years, so 5 years added = answer 5)

--	--	--	--	--

g) Cost of upgrade(s)

--	--	--	--	--

3) Ancillary medical equipment (eg monitors etc) →

If you wish to provide data on ancillary equipment and building fit out for each unit separately, please add columns as necessary. Otherwise, combine data for all units and report total in the first cc

a) \$ Depreciation for 2008-09 (straight line method)

First unit or total for all units	Second unit	Third unit
-----------------------------------	-------------	------------

b) \$ 'Depreciated' historical cost 2008-09

--	--	--

4) \$ Book value of all mammography assets at this site excluding intangibles, before interest and tax 2008-09

GENERAL X-RAY

IF GENERAL X-RAY WAS OFFERED AT THIS SITE IN 2008-09, ANSWER THE 4 QUESTIONS BELOW

1) Total number of X-Ray units

2) X-Ray units →Insert more columns if you have more units

a) Upfront cost when purchased \$

First unit	Second unit	Third unit	Fourth unit	Fifth unit
------------	-------------	------------	-------------	------------

b) Useful life when purchased (technological life NOT depreciated life) (years and part years eg. 5.5 means five and a half years)

--	--	--	--	--

c) Time equipment has been at this site (years since you purchased it) (years and part years eg. 5.5 means five and a half years)

--	--	--	--	--

d) Age of equipment when purchased (years and part years eg. 5.5 means five and a half years)

--	--	--	--	--

e) Has the unit undergone significant upgrade (or upgrades) (Yes/no)

--	--	--	--	--

f) How many years of additional life were added because of the upgrade(s) (eg. 10 year old unit was upgraded and useful life extended to 15 years, so 5 years added = answer 5)

--	--	--	--	--

g) Cost of upgrade(s)

--	--	--	--	--

3) Ancillary medical equipment (eg monitors etc) →

If you wish to provide data on ancillary equipment and building fit out for each unit separately, please add columns as necessary. Otherwise, combine data for all units and report total in the first cc

a) \$ Depreciation for 2008-09 (straight line method)

First unit or total for all units	Second unit	Third unit
-----------------------------------	-------------	------------

b) \$ 'Depreciated' historical cost 2008-09

--	--	--

4) \$ Book value of all General X-Ray assets at this site excluding intangibles, before interest and tax 2008-09

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SCREENING FLUOROSCOPY

IF SCREENING FLUOROSCOPY WAS OFFERED AT THIS SITE IN 2008-09, ANSWER THE 4 QUESTIONS BELOW

1) Total number of Screening-fluoroscopy units

2) Screening Fluoroscopy units → Insert more columns if you have more units

a) Upfront cost when purchased \$

First unit	Second unit	Third unit	Fourth unit	Fifth unit

b) Useful life when purchased (technological life NOT depreciated life) (years and part years eg. 5.5 means five and a half years)

c) Time equipment has been at this site (years since you purchased it) (years and part years eg. 5.5 means five and a half years)

d) Age of equipment when purchased (years and part years eg. 5.5 means five and a half years)

e) Has the unit undergone significant upgrade (or upgrades) (Yes/no)

f) How many years of additional life were added because of the upgrade(s) (eg. 10 year old unit was upgraded and useful life extended to 15 years, so 5 years added = answer 5)

g) Cost of upgrade(s)

3) Ancillary medical equipment (eg monitors etc) →

If you wish to provide data on ancillary equipment and building fit out for each unit separately, please add columns as necessary. Otherwise, combine data for all units and report total in the first column

a) \$ Depreciation for 2008-09 (straight line method)

First unit or total for all units	Second unit	Third unit

b) \$ 'Depreciated' historical cost 2008-09

4) \$ Book value of all screening-fluoroscopy assets at this site excluding intangibles, before interest and tax 2008-09

DENTAL ORTHOPANTOMOGRAPHY (OPG)

IF DENTAL OPG WAS OFFERED AT THIS SITE IN 2008-09, ANSWER THE 4 QUESTIONS BELOW

1) Total number of dental OPG units

2) Dental OPG units → **Insert more columns if you have more units**

a) Upfront cost when purchased \$

First unit Second unit Third unit Fourth unit Fifth unit

b) Useful life when purchased (technological life NOT depreciated life) (years and part years eg. 5.5 means five and a half years)

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c) Time equipment has been at this site (years since you purchased it) (years and part years eg. 5.5 means five and a half years)

--	--	--	--	--

d) Age of equipment when purchased (years and part years eg. 5.5 means five and a half years)

--	--	--	--	--

e) Has the unit undergone significant upgrade (or upgrades) (Yes/no)

--	--	--	--	--

f) How many years of additional life were added because of the upgrade(s) (eg. 10 year old unit was upgraded and useful life extended to 15 years, so 5 years added = answer 5)

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g) Cost of upgrade(s)

--	--	--	--	--

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3) Ancillary medical equipment (eg monitors etc) →

If you wish to provide data on ancillary equipment and building fit out for each unit separately, please add columns as necessary. Otherwise, combine data for all units and report total in the first cc

a) \$ Depreciation for 2008-09 (straight line method)

First unit or total for all units Second unit Third unit

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b) \$ 'Depreciated' historical cost 2008-09

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4) \$ Book value of all OPG assets at this site excluding intangibles, before interest and tax 2008-09

DIGITAL SUBTRACTION ANGIOGRAPHY
IF DSA WAS OFFERED AT THIS SITE IN 2008-09, ANSWER THE 4 QUESTIONS BELOW

1) Total number of DSA units

2) DSA units → Insert more columns if you have more units

	First unit	Second unit	Third unit	Fourth unit	Fifth unit
a) Upfront cost when purchased \$					
b) Useful life when purchased (technological life NOT depreciated life) (years and part years eg. 5.5 means five and a half years)					
c) Time equipment has been at this site (years since you purchased it) (years and part years eg. 5.5 means five and a half years)					
d) Age of equipment when purchased (years and part years eg. 5.5 means five and a half years)					
e) Has the unit undergone significant upgrade (or upgrades) (Yes/no)					
f) How many years of additional life were added because of the upgrade(s) (eg. 10 year old unit was upgraded and useful life extended to 15 years, so 5 years added = answer 5)					
g) Cost of upgrade(s)					

3) Ancillary medical equipment (eg monitors etc) → If you wish to provide data on ancillary equipment and building fit out for each unit separately, please add columns as necessary. Otherwise, combine data for all units and report total in the first column

	First unit or total for all units	Second unit	Third unit
a) \$ Depreciation for 2008-09 (straight line method)			
b) \$ 'Depreciated' historical cost 2008-09			

4) \$ Book value of all DSA assets at this site excluding intangibles, before interest and tax 2008-09

ULTRASOUND

IF ULTRASOUND WAS OFFERED AT THIS SITE IN 2008-09, ANSWER THE 4 QUESTIONS BELOW

1) Total number of US units

2) US units → Insert more columns if you have more units

a) Upfront cost when purchased \$

b) Useful life when purchased (technological life NOT depreciated life) (years and part years eg. 5.5 means five and a half years)

c) Time equipment has been at this site (years since you purchased it) (years and part years eg. 5.5 means five and a half years)

d) Age of equipment when purchased (years and part years eg. 5.5 means five and a half years)

e) Has the unit undergone significant upgrade (or upgrades) (Yes/no)

f) How many years of additional life were added because of the upgrade(s) (eg. 10 year old unit was upgraded and useful life extended to 15 years, so 5 years added = answer 5)

g) Cost of upgrade(s)

First unit	Second unit	Third unit	Fourth unit	Fifth unit

3) Ancillary medical equipment (eg monitors etc) →

If you wish to provide data on ancillary equipment and building fit out for each unit separately, please add columns as necessary. Otherwise, combine data for all units and report total in the first column

a) \$ Depreciation for 2008-09 (straight line method)

b) \$ 'Depreciated' historical cost 2008-09

First unit or total for all units	Second unit	Third unit

4) \$ Book value of all US assets at this site excluding intangibles, before interest and tax 2008-09

NUCLEAR MEDICINE

IF NUCLEAR MEDICINE WAS OFFERED AT THIS SITE IN 2008-09, ANSWER THE 4 QUESTIONS BELOW

1) Total number of NM units

2) NM units → Insert more columns if you have more units

a) Upfront cost when purchased \$

b) Useful life when purchased (technological life NOT depreciated life) (years and part years eg. 5.5 means five and a half years)

c) Time equipment has been at this site (years since you purchased it) (years and part years eg. 5.5 means five and a half years)

d) Age of equipment when purchased (years and part years eg. 5.5 means five and a half years)

e) Has the unit undergone significant upgrade (or upgrades) (Yes/no)

f) How many years of additional life were added because of the upgrade(s) (eg. 10 year old unit was upgraded and useful life extended to 15 years, so 5 years added = answer 5)

g) Cost of upgrade(s)

First unit	Second unit	Third unit	Fourth unit	Fifth unit

3) Ancillary medical equipment (eg monitors etc) →

If you wish to provide data on ancillary equipment and building fit out for each unit separately, please add columns as necessary. Otherwise, combine data for all units and report total in the first column.

Note that if there is a generator at this site, please include the costs here. While others will not incur the cost of a generator, they will have more expensive consumables, (ie the high cost of generator equipment balanced by lower cost of consumables)

a) \$ Depreciation for 2008-09 (straight line method)

b) \$ 'Depreciated' historical cost 2008-09

First unit or total for all units	Second unit	Third unit

4) \$ Book value of all NM assets at this site excluding intangibles, before interest and tax 2008-09

THANK YOU FOR PARTICIPATING IN THE SURVEY - NO MORE QUESTIONS RELATING TO THIS SITE.

Appendix B: Practice type definitions

Note: 'B type' practices are excluded from this survey. B type practices are general practice or private specialist medical practice other than in Group A. They were excluded because there are extremely few and allocation of overheads was considered very difficult given the diversity of services provided at these practices.

Group A - Private specialist radiology

- A1 Base for mobile equipment
- A2 Stand-alone practice site
- A3 Part of or co-located with a primary care practice or group
- A4 Part of or co-located with a private specialist medical centre
- A5 Co-located with public hospital
- A6 Co-located with a private hospital
- A7 Private hospital
- A8 Private hospital co-located with a public hospital
- A9 Other

Group C Public Facility

eg. radiology or urology department of hospital

Appendix C: MBS November 2008

Table C.1: Medicare Benefits Schedule Diagnostic Imaging Services

Group		Subgroup		MBS Services 2008-09
I1	US	1	General	1,844,669
		2	Cardiac	732,195
		3	Vascular	677,613
		4	Urological	31,607
		5	Obstetric and Gynaecological	1,618,481
		6	Musculoskeletal	934,469
I2	CT			2,008,071
I3	DR	1	Radiographic exam of extremities	2,384,647
		2	Radiographic exam of shoulder or pelvis	1,239,421
		3	Radiographic exam of head	1,251,291
		4	Radiographic exam of spine	932,160
		5	Bone age study and skeletal surveys	15,877
		6	Radiographic exam of thoracic region	1,782,798
		7	Radiographic exam of urinary tract	36,229
		8	Radiographic exam of alimentary tract and biliary system	254,425
		9	Radiographic exam or localisation of foreign bodies	649
		10	Radiographic exam of breasts	375,671
		11	Radiographic exam in connection with pregnancy	61
		12	Radiographic exam with opaque or contrast media	34,136
		13	Angiography	116,379
		14	Tomography	58,228
		15	Fluoroscopic exam	107,573
		16	Preparation for radiological procedure	71
		17	Interventional techniques	23,293
I4	NM			412,093
I5	MRI	1	Scan of head for specified conditions	70,283
		2	Scan of head for specified conditions	85,886
		3	Scan of head and neck vessels for specified conditions	5,048
		4	Scan of head and cervical spine for specified conditions	1,696
		5	Scan of head and cervical spine for specified conditions	3,738
		6	Scan of spine one region or two contiguous regions for specified conditions	7,631

Group		Subgroup		MBS Services 2008-09
		7	Scan of spine one region or two contiguous regions for specified conditions	97,428
		8	Scan of spine three contiguous regions or two non-contiguous regions for specified conditions	5,545
		9	Scan of spine three contiguous regions or two non-contiguous regions for specified conditions	12,298
		10	Scan of cervical spine and brachial plexus for specified conditions	1,855
		11	Scan of musculoskeletal system for specific conditions	12,280
		12	Scan of musculoskeletal system for specific conditions	145,556
		13	Scan of musculoskeletal system for specific conditions	55
		14	Scan of cardiovascular system for specific conditions	996
		15	MRI Scan of cardiovascular system for specific conditions	135
		16	MRI for specific conditions person under the age of 16	4
		17	MRI for specific conditions person under the age of 16	3
		18	MRI for specific conditions person under the age of 16	325
		19	Scan of body for specific conditions	595
		20	Scan of pelvis and upper abdomen for specific conditions	271
		21	Scan of body for specific conditions	7,631
		22	Modifying items	0

Source: Medicare Benefits Schedule November 2008

Appendix D: List of survey respondents

Table D.1: Survey respondent LSPNs

1001	828	695	654	654	689	5256	685	705	4979
1475	3675	1273	540	1263	1265	1535	1566	1463	1539
1470	987	901	983	908	954	3635	960	1172	1175
1060	963	936	873	1275	1426	3286	1983	1585	4923
4,996	5,089	4,994	4579	663	1564	1542	606	291	1460
3328	651	893	2494	643	733	852	3714	659	1544
428	3203	2483	2518	363	4150	741	887	748	638
672	5	3241	1465	1255	1275	1292	1329	1364	1369
1341	1068	1533	1525	1343	1310	1543	1545	3172	1556
1399	1576	1584	3751	2452	1027	368	1024	2425	2398
1023	536	3118	998	2422	2413	2405	2459	2418	551
2426	545	164	1728	1859	2445	1730	4302	544	1037
1385	1393	1387	1199	3523	1398	1374	803	874	1035
1720	3146	812	817	839	1114	1112	1015	1071	1015
848	4466	4564	1034	1002	1226	1050	3293	4774	3166
2948	1107	634	1007	1009	775	1196	1079	1190	11
1813	970	1192	1195	1104	523	3794	1946	4830	1202
1167	530	1182	4223	4241	761	1140	3283	1054	669
1121	1070	1129	3225	4171	4622	1022	575	581	597
1277	1208	2563	2562	1211	843	4144	859	832	825
1061	728	1098	1092	1351	1390	814	1406	1344	1421
1416	2216	792	1419	801	2208	1392	1397	2206	4845
472	365	1261	463	471	505	1589	3504	4386	440
436	518	556	466	566	497	478	495	489	693
481	458	535	534	1004	542	474	470	526	3128
452	1490	418	504	502	3951	1633	921	539	4435
692	1013	2019	332	456	484	450	461	465	457
933	937	652	3379	642	4633	3358	988	324	327
340	2302	4470	4535	334	4621	548	571	592	598
797	804	811	821	837	849	1073	1082	1085	3247
1014	2316	4649	564						