PPG

PRAGMATIC POLICY GROUP

Protecting Pathology Services and Jobs

March 2024

Table of Contents

1. Executive Summary **3**
2. Introduction **6**
Scope and objective 6
3. GPs rely on pathology for 1 in every 3 health problems **7**
What is pathology? 7
Pathology contributes to better health outcomes and lowers healthcare costs 7
4. Australians get most pathology tests for free, but providers aren't always paid **9**
Medicare pays for many pathology services 9
Pathology providers are not reimbursed for all tests by Medicare 9
5. Pre-COVID: Growth and efficiency helped offset Medicare rebate cuts **10**
Medicare rebates for pathology services were cut four times 10
Volume growth, productivity growth and low inflation sustained pathology 11
6. Post-COVID: lower revenue and higher costs **12**
Revenues will now be significantly lower because referrals by GPs are lower 12
Pathology companies are providing even more tests for free 13
Costs are rapidly increasing 14
Most of the costs of pathology services are fixed 17
7. Recommendations to protect pathology services and jobs **18**
Investment is needed to prevent loss of pathology services and jobs 18
Funding can come from the underspend on bulk billing of GP services 18
GP-referred pathology tests are the highest priority for investment 18
8. Technical Appendix **19**
Evidence of GP shortage 19
Evidence that lower growth in GP visits leads to lower growth in pathology tests 19
Modelling methodology and detailed analytical results 20
Medical conditions that would benefit from higher utilisation of pathology 21

1. Executive Summary

Pathology providers play an essential diagnostic role in the Australian health system but are not fully reimbursed by Medicare. Over the next few years, pathology providers will be forced to provide billions of dollars more in free tests, due to an outdated Medicare reimbursement system. For tests that are reimbursed by Medicare, rebates have not kept pace with rapid inflation. This immense cost burden threatens the viability of the Australian pathology industry. We expect many unprofitable collection centres will close, particularly in remote, rural, regional, and Indigenous communities. Critical services will be lost and many workers will lose their jobs.

We recommend that the Australian Government urgently invest to protect pathology services and jobs by paying for all pathology tests and/or ensuring rebates for pathology services grow in line with the rapidly increasing cost of providing those services.

GPs rely on pathology for 1 in every 3 health problems

- Around **1 million** Australians access pathology services every week, with blood tests, tissue biopsies, swabs and a range of other tests playing a critical role in the diagnosis, treatment, and management of most health conditions.
    - **70%** of all medical treatment decisions – and **100%** of all cancer diagnoses – depend on the diagnostic information provided by pathology tests.
- Pathology is a critical preventative tool for proactively improving patient health and helping to reduce national healthcare costs. Pathology helps detect disease early and inform the right treatment options, which benefits both patients and taxpayers.
    - Australians suffer many conditions that could be mitigated if treated earlier[1].
    - In particular, people in lower socio-economic groups and vulnerable subgroups suffer delays in diagnosis and management[2] and higher mortality, including a **20%** higher death rate from cancer.[3]

Australians get most pathology tests for free, but providers aren't always paid

- Australians get most pathology tests for free, with pathology providers 'bulk billing' the cost to – and mostly receiving rebates from – Medicare, which sets the price for each service. Keeping services free means more patients get tested – particularly Australians on lower incomes – leading to better health outcomes for the community.
    - Pathology has the highest rate of bulk billing in any health sector, with **99.6%** of pathology services currently bulk billed.

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[1] *Australian Burden of Disease Study 2022*, AIHW, Australian Government, 13 Dec 2022
[2] Caird J, Hinds K, et.al. *A systematic rapid evidence assessment of late diagnosis*, 2012, London: EPPI Centre, Social Science Research Unit, Institute of Education, University of London
[3] *Cancer in Australia 2021*, AIHW, Australian Government, 1 Dec 2021

- However, an outdated regulation called 'coning' means that Medicare only pays pathology providers for the three most expensive tests ordered by a GP for each patient visit. Pathology companies must provide any additional tests for free – something not expected of other Australian industries, and which is not economically sustainable for the pathology industry.

Pre-COVID: Growth and efficiency helped offset Medicare rebate cuts

- Even for pathology tests that Medicare does reimburse, the level of rebates was cut four times – by a total of **12.5%** – between July 2008 and November 2014.
    - By contrast, since January 2008, prices in the economy have risen nearly **52%** and average weekly earnings have increased by over **70%**.[4]
    - Indexation of Medicare rebates for pathology services was frozen by the Australian Government in 1999 meaning that, for the last 24 years, rebates for pathology services have not increased to cover the rising cost of providing those services. This has cost the pathology sector a total of **$13.8 billion**.
    - Despite the size and significance of the sector, pathology still only accounts for **1.5%** of Australia's healthcare budget.
- Prior to COVID, the pathology industry relied on volume growth, productivity growth and low inflation to remain economically sustainable.

Post-COVID: lower revenue and higher costs

- Pathology industry revenues are structurally depressed post-COVID. Australians are visiting GPs less, which means fewer referrals to pathology services.
    - For pathology tests that are being taken, many are still provided free by private pathology companies because Medicare does not cover all pathology tests. Over the next four years, we estimate that the cost to the pathology sector of providing free tests to patients – with no revenue in return – will be **$3.7 billion**.
- The cost of collecting pathology samples alone – before any diagnostics are even performed – is already equal to around **20%** of the entire rebate that pathology providers receive from Medicare.
    - With inflation historically high, we project cost growth of around **5% annually** for pathology providers over the next four years, driven by the increasing cost of labour and rent:
        - **50%** of every dollar of revenue earned by the pathology sector goes to paying wages for Australian workers.
        - Rents for pathology collection centres are growing by **7% annually**.
- Few options remain for productivity increases at pathology providers, with the industry having already made significant productivity improvements.

[4] Australian Bureau of Statistics, Consumer Price Index.

Recommendations to protect pathology services and jobs

- Around **one-third** of pathology collection centres – and thousands of pathology workers – are located in regional, remote, and Indigenous communities. Many of these collection centres are currently unprofitable and at risk of closure without additional government funding.
- We estimate that the Australian Government will need to invest around **$890 million** in pathology services and jobs over the next four years, consisting of:
    a) An initial 'stop gap' funding injection equal to **$282 million** in 2024-25, via a one-time 8.1% indexation comparable to that received by diagnostic imaging service providers since 2020.
    b) An annual investment equal to **$190-215 million per year** from 2025-26 to 2027-28, based on annual indexation at 4.98% to cover the projected cost of providing pathology services.
- The Australian Government could make the required investment through one – or a combination of both – of the following measures:
    1. A reduction in 'coning' of GP-referred tests i.e. increase the number of pathology tests per patient visit that are reimbursed by Medicare.
    2. Indexation of all pathology items funded by Medicare.[5]
- We recommend that the cost of this investment be funded from any available underspend of the **$3.5 billion** that the Australian Government originally earmarked for increasing bulk billing of GP services.[6]
    - Since 1 November 2023, the Government has tripled the incentive offered to GPs to bulk-bill most common consults for patients who are children under 16, pensioners or other Commonwealth concession card holders.[7]
    - However, this $3.5 billion investment has so far resulted in only a very small increase – just **2.1 percentage points** – in the GP bulk billing rate, which measures the proportion of all GP visits and services under Medicare that involved no patient payment.[8]
    - The disproportionately small increase in bulk billing of GP services – relative to the Government's very significant investment – suggests that the new incentives are not being fully utilised by GPs. In fact, Chart 2 of this report shows that the volume of GP visits has remained much lower than expected.
    - We recommend that any underspend of funding originally allocated in the 2023-24 Budget to increasing bulk billing of GP services should be repurposed towards pathology.
- Pathology tests referred by GPs are the highest priority for investment and any new funding should be additional to existing Medicare funding already received by the pathology sector.

[5] Excluding COVID-related pathology services.
[6] Budget Paper No.2, Australian Government, Budget 2023-24
[7] Strengthening Medicare, To ensure Australians can get the primary health care they need, Australian Government Budget 2023-24, https://budget.gov.au/content/02-medicare.htm
[8] Bulk billing on the rise, Media Release, The Hon Mark Butler MP, Minister for Health and Aged Care, 1 February 2024.

2. Introduction

Scope and objective

Pragmatic Policy Group (PPG) was commissioned by Healius Limited to independently assess the economic sustainability of the Australian pathology industry and to quantify the size of any investment that the Australian Government may need to make to protect Australian pathology services and jobs.

PPG was further asked to recommend strategies that the Australian Government could adopt to make any required investments cost-neutral for the Federal Budget.

The cost of undertaking this research was covered by Healius Limited. Unless otherwise noted, data is sourced from pathology industry groups and service providers. The conclusions that PPG presents are entirely our own, based on our extensive research, independent analysis of the data and rigorous economic modelling.

Pragmatic Policy Group

PPG is an independent economic research agency, which models the impact of government policy on the economy.

We are particularly focused on the consequences of policy decisions for the most vulnerable members of the community.

We use advanced analytical techniques and industry experience to forecast the impact of policy changes, share evidence-based insights, and help drive informed strategic decisions.

About the Author

Oliver Browne is Lead Economist at PPG. He previously served as Chief Policy Adviser to the Federal Treasurer. During his tenure in that role, he designed national economic policy and helped deliver four Federal Budgets.

Oliver has also worked for nearly a decade in economics, finance and law at BlackRock in New York, J.P. Morgan in Sydney and at global law firm Ashurst.

3. GPs rely on pathology for 1 in every 3 health problems

What is pathology?

Some **500 million** pathology tests are provided in Australia every year. In 2019-20, even before the pathology industry rolled-out free, large scale COVID testing, some **56%** of Australians – or **14 million** people – used Medicare-funded pathology services. Pathology is essential for monitoring health conditions like diabetes, heart, and kidney disease, as well as undertaking genetic testing for those planning a family.

Pathology has one of the country's largest workforces, with around **35,000** people working as pathologists (specialist medical doctors), scientists, lab technicians, collectors, and couriers. Pathology is also one of the most highly feminised workforces, with women performing **75%** of all pathology jobs. Leading private pathology providers like Healius, Sonic Healthcare and Australian Clinical Labs provide a significant share of all pathology services in Australia.

Pathology contributes to better health outcomes and lowers healthcare costs

A large body of medical research demonstrates that increased proactive screening and monitoring via pathology testing will lead not only to lower health system costs, but more importantly, to significantly better patient outcomes, particularly in terms of lower hospitalisation, morbidity, and mortality rates.

Research suggests that **38%** of disease burden in Australia can be reduced by lowering exposure to modifiable risk factors, including improved detection, monitoring and treatment of diabetes, high blood pressure, high cholesterol, impaired kidney function, iron deficiency, low bone density and obesity.[9]

There would be substantial benefit to the Australian health system from greater best practice ordering of pathology tests. Australia is experiencing decreasing availability and utilisation of GP services – and therefore referrals to pathology services – at the very same time that chronic disease is increasing due to an ageing population. In the short term, this results in higher demand for emergency department resources. In the medium term, it means more expensive hospital care due to poorly managed chronic disease.

Pathology testing is vital to the appropriate monitoring of chronic disease, cancer management and medication management. Greater utilisation of pathology services would significantly assist chronic disease patients in complying with best practice guidelines and reducing the burden on the acute care system.

[9] *Australian Burden of Disease Study 2018: Interactive data on risk factor burden,* AIHW, Australian Government, 24 Nov 2021

Greater ordering of pathology tests would:

- Reduce misdiagnosis and treatment delays, improving patient outcomes and reducing the burden on the healthcare system, because delayed diagnosis and treatment in most conditions results in higher rates of hospitalisation, morbidity, and mortality.
- Improve equity across the population (e.g. across income groups, gender, and race).
- Increase savings in prescriptions, surgery, and expensive co-morbidities.[10] [11]

In the Technical Appendix to this report, we provide detailed examples of several medical conditions that would benefit from better proactive detection, monitoring and treatment enabled by a greater investment in, and utilisation of, pathology.

Genomics is also a key growth area in pathology, with the potential to significantly improve early detection and treatment of inherited cancers. In particular, genomics can be used to improve:

- Very early stage cancer detection relying on genomic markers floating in the bloodstream.
- Cancer classification by identifying mutations to determine the type of cancer, and therefore select the right treatment and prognosis.
- Cancer treatment selection e.g. therapies targeting specific genetic mutations, immunotherapy, and monitoring resistance.

Genetics will play an increasingly important role in personalised medicine and selecting targeted therapies. However, the Australian pathology sector does not currently have the financial resources to invest in the equipment and people required to offer these life-saving services. In the United States, all metastatic cancers are sequenced to match against known targeted therapies – giving more hope to cancer patients – however funding is not yet available in Australia for these life-saving tests.

[10] Song Z, Safran DG, Landon BE, He Y, Ellis RP, et al. (2011) *Health Care Spending and Quality in Year 1 of the Alternative Quality Contract*, N Engl J Med 365: 909–918

[11] Winkelman JW, *Less utilization of the clinical laboratory produces disproportionately small true cost reductions*, 1984, Human pathology 15: 499–501

4. Australians get most pathology tests for free, but providers aren't always paid

Medicare pays for many pathology services

Australians typically receive pathology services – like blood tests or tissue biopsies – for free. Pathology providers 'bulk bill' Medicare and mostly receive the fee listed for that service in the Medicare Benefit Schedule (MBS), with all pricing set by Medicare. Pathology has the highest rate of bulk billing in any health sector, with some **99.6%** of pathology services currently bulk billed. Maintaining this high-level of bulk billing preserves free services for all Australians and, by doing so, reduces impediments for patients to get tested, leading to better health outcomes, particularly for people on lower incomes.

Pathology providers are not reimbursed for all tests by Medicare

When GPs send their patients to get tests at pathology labs, they typically order a batch of tests. In 1992, the Australian Government introduced a payment rule called 'coning', under which Medicare only pays for the three most expensive tests requested in each visit. Pathology providers are required to provide any additional tests free of charge. Tests ordered by GPs for out-of-hospital services are the only category of pathology tests that are subject to this peculiar feature of pathology industry regulation.

The number of tests offered for free by pathology providers continues to increase, as the number of tests ordered by GPs during an average patient visit has risen from fewer than **three** tests per person in 1999 to around **eight** tests per person today.

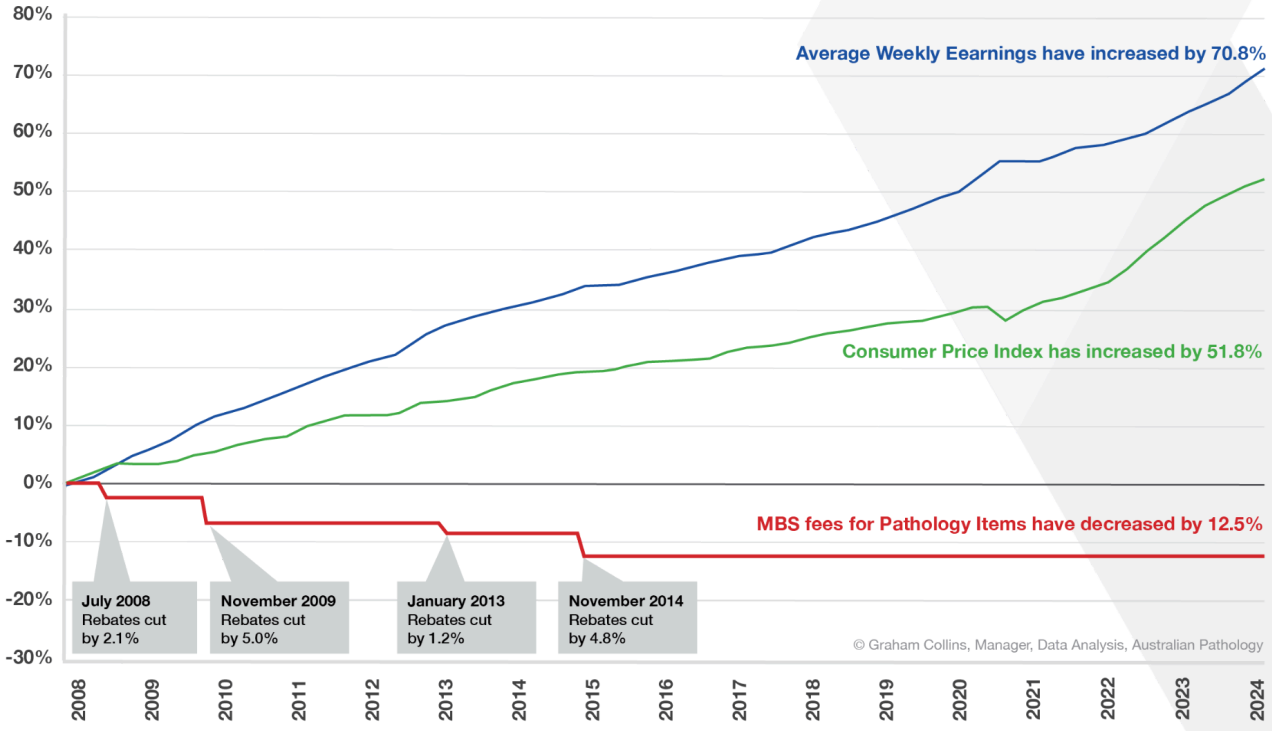
5. Pre-COVID: Growth and efficiency helped offset Medicare rebate cuts

Medicare rebates for pathology services were cut four times

Between July 2008 and November 2014, the level of Medicare funding for pathology services was cut four times by a total of **12.5%**, while other Medicare-funded health services remained 'indexed' for inflation, meaning that funding for those services automatically grows every year to cover the increasing cost of providing the service. Pathology is a striking exception. Indexation of rebates to pathology providers was frozen in 1999 and, since then, funding for pathology services has not increased at all to cover cost growth, resulting in a **$13.8 billion** cost impact to the pathology industry.

Chart 1 shows that, since January 2008, prices in the economy as measured by the Consumer Price Index (CPI) have risen by nearly **52%**, while average weekly earnings have increased by over **70%**. By comparison, rebates to the pathology industry have declined **12.5%**.

Chart 1: Growth in pathology rebates vs consumer prices and worker earnings



Source: Australian Pathology, Australian Bureau of Statistics

Volume growth, productivity growth and low inflation sustained pathology

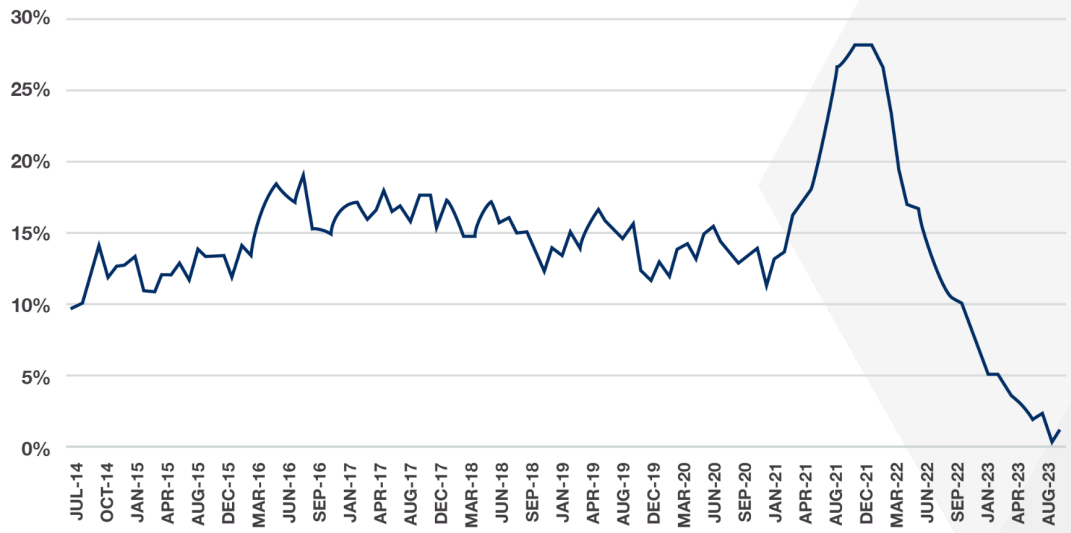
Prior to COVID, the pathology industry covered cost increases through a combination of revenue growth and increasing productivity. This was only possible because population growth (driven by high levels of net inbound migration) underpinned growth in pathology services used by Australians and low inflation meant cost increases were better contained. Industry revenue grew at 3% to 4% per year – enough to cover lower increases in costs. However, revenue growth was driven exclusively by growth in the volume of services provided, while Medicare rebates for pathology services were cut.

6. Post-COVID: lower revenue and higher costs

Revenues will now be significantly lower because referrals by GPs are lower

Our modelling projects that future growth in pathology services will be significantly slower than the 3.6% services growth experienced in 2022-23. Following COVID, Australians are visiting the GP less often and this is leading to fewer referrals for pathology services, which lowers revenue growth for pathology providers. Chart 2 illustrates growth in GP visits compared to four years ago in order to benchmark today's trends against early 2020, before COVID impacted the data.

Chart 2: No growth in GP visits compared to pre-COVID



Source: Services Australia, MBS Group Statistics Reports. Data is collected on a six-month rolling basis and compared to the corresponding period four years ago.

The GP and pathology industries are undergoing several big structural shifts, which are leading to lower overall revenue for the pathology sector (due to a lower number of overall tests being performed), coupled with a larger proportion of free testing. The combination of lower revenue and higher cost due to more free testing, creates a compounded negative impact on financial margins and profits:

- While growth in total GP visits is lower, a greater share of 'visits' are now in the form of GP telehealth consultations, which produce a lower rate of pathology test ordering. Only **10%** of telehealth consultations result in pathology testing, compared to **18-20%** for face-to-face consultations.
- When GPs do refer patients for pathology tests, more Australians are failing to complete those tests. The long-term average for test non-completion is around **20%**, but this proportion has been increasing towards **30%**.
- GP visits are requiring more upfront payments from patients, making GP visits more expensive. Only **50-55%** of standard GP consultations are now bulk billed direct to Medicare (compared to 99.6% of pathology tests). Patients are likely to visit the GP less often as a result of higher costs.
- Doctors are seeing fewer patients. GPs currently see an average of around **four** patients per hour, below the long-term average.

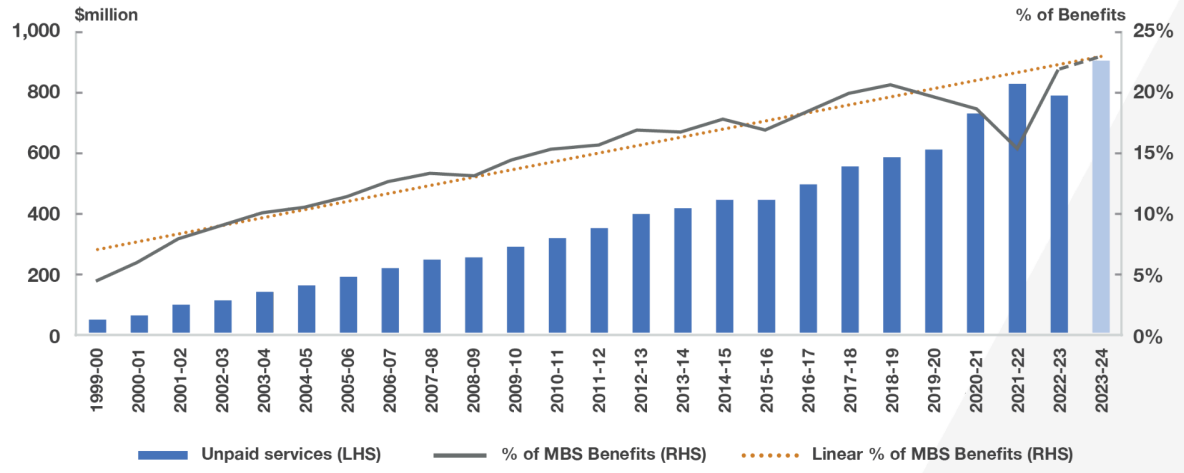
Pathology companies are providing even more tests for free

Private pathology providers are not receiving payments from Medicare for an increasing share of tests. Patients are paying higher gap payments to see GPs, which is likely leading GPs and patients to 'consolidate' the number of health issues treated into fewer GP visits, perhaps in part to get 'value for money'. So, while growth in GP visits has declined, GPs are ordering more tests per patient visit. More tests per visit perversely means that the pathology sector must now provide more tests for free due to the outdated coning restriction (i.e. only the three most expensive tests per GP visit are reimbursed by Medicare). Coning distorts industry economics and also skews testing data (as some tests are more impacted by coning than others).

Chart 3 shows the cost to the pathology sector of providing free tests to patients. In 2023-24, the pathology sector provided **$844 million** in free testing, equivalent to **23%** of the sector's total revenues. Over the next four years, the cost of 'coning' is expected to reach **$3.7 billion**. Since coning was introduced in 1992, **$9.8 billion** of services have been provided for free by the pathology sector.[12]

[12] Estimate by Australian Pathology, based on Medicare statistics (ABS Cat no. 8155.0) and member data.

Chart 3: Cost of pathology tests provided for free by the Australian pathology sector



Source: Australian Pathology. MBS = Medicare Benefits Schedule. Grey line shows the value of free tests provided as a % of total annual revenue earned by the pathology sector. Orange line shows how the grey line would have looked without COVID.

Costs are rapidly increasing

Following COVID, the cost of providing pathology services has increased rapidly due to higher inflation. For the pathology sector, both labour costs and rents have increased dramatically. Medicare funding is not keeping pace. As Table 1 shows, inflation in the Australian economy – as measured by the CPI – was still running at the high rate of 5.4% annually in the September quarter of 2023, when we completed our analysis. Since the June quarter of 2021, CPI averaged 5.5%, reaching as high as 7.8% in 2022.

Table 1. Annual change in CPI by quarter since FY2021-22

Jun-21	Sep-21	Dec-21	Mar-22	Jun-22	Sep-22	Dec-22	Mar-23	Jun-23	Sep-23
3.8%	3.0%	3.5%	5.1%	6.1%	7.3%	7.8%	7.0%	6.0%	5.4%

Source: ABS, September quarter 2023 CPI release

Payments from Medicare for non-COVID pathology tests have been growing at only 2.5% year over year, while Table 1 shows that inflation has increased at a faster pace (between 3.0% and 7.8% since the middle of 2021). Benefits paid for non-COVID pathology tests have therefore declined in *real* terms (that is, after subtracting the cost of inflation) at least since the middle of 2021.

Looking ahead, the Reserve Bank of Australia (RBA) does not project inflation to have fallen back to the 2.5% midpoint of its 2-3% target range until mid-2026.[13]

Further, the CPI only reflects the price of a fictional basket of goods & services that Australian consumers might purchase. Pathology companies are businesses with many different costs from consumers.

Table 2 shows a tailored Pathology Cost Index that we have constructed to more accurately model the major cost groups faced by the pathology sector. This index shows the cost of providing pathology services is estimated to be growing at an annual rate of nearly **5%**.[14]

Table 2: Pathology Cost Index

	Weighting	Proxy	Annual growth
Labour	55%	Wage Price Index	4.0%
Rent	17%	CPI - Rent	7.6%
Consumables, Courier Fleet, Other	28%	CPI - Total	5.3%
Pathology Cost Index	**100%**		**4.98%**

In this section, we provide a detailed breakdown of the drivers of our Pathology Cost Index.

Labour costs

To proxy for labour cost growth in the pathology sector, we used the Australian Bureau of Statistics (ABS) Wage Price Index, which in the September 2023 quarter rose 4% in annual terms - the highest annual growth recorded since March 2009. Private sector wages grew at 4.2% annually.

Further to this, the pathology sector's labour costs are heavily driven by enterprise bargaining agreements, under which wages have been consistently growing by up to 4% annually. The pathology sector is also subject to legislated superannuation increases of 0.5% each year from 2023-24 to 2025-26. Finally, in Victoria, a further 1% payroll tax levy begins in 2023-24 and is set to remain in place for the next decade.

[13] Statement on Monetary Policy, February 2024, Reserve Bank of Australia.
[14] PPG's Pathology Cost Index attempts to proxy for the major costs borne by the sector. We do not have access to complete data for pathology companies, as they do not share detailed breakdowns of cost drivers for their Australian pathology businesses in their public financial disclosures. We therefore use publicly available data at the sector-level.

Collection centre rents

Australia's pathology system is one of the most accessible in the world, with a large network of around **6,600** patient-facing collection centres across the country, **one in three** of which is located in a rural or regional area, including Indigenous communities. A patient who needs a blood test anywhere in Australia will be able to get one that same day. This is critical given the importance of pathology as the first evidence-based diagnostic tool. However, the cost of operating this vast network is growing rapidly.

The number of collection centres in Australia has grown **164%** since 2010, when deregulation enabled private providers to open collection centres without government approval. The number of collection centres has grown 12% since pre-COVID despite a lower volume of services being demanded by patients and weaker industry revenues. Some pathology companies have been seeking to increase market share by expanding their collection centre networks. Competition for rental space is intensifying and landlords have used their bargaining power to extract higher rents.

Whilst revenue across the pathology collection centre network has declined, market rents for collection centres have grown by up to **7% annually** post-COVID.

To proxy for rent growth in the pathology sector, we have used the rent component of the CPI, in the absence of a more comparable retail or commercial rent index that reflects the actual cost of rent for pathology collection centres.

Consumables, Courier Fleet and Other Costs

We have proxied for these costs using the general CPI index[15], as such costs have drivers more like consumer prices. For example, historically high petrol prices are the same for pathology courier fleets delivering samples as they are for households driving to work or the supermarket.

The pathology sector is also absorbing the increasing cost of technology upgrades, including changes to My Health Record integration, new requirements for a pathology test release, electronic referrals initiative, the national interoperability initiative, and supporting consumer-driven care through new patient booking systems. In addition to these regulatory pressures on technology investment, the pathology sector needs to upgrade its infrastructure to support artificial intelligence (AI), which clinicians increasingly demand to assist them in delivering care and reducing disease burden. The pathology sector also incurs the significant cost of data and maintaining cybersecurity.

Table 3 shows a simplified example of how a collection centre in a remote, rural, regional, or Indigenous area would have become unprofitable (excluding COVID) over the past five years. In this example, higher increases in costs compound over just a few years to overwhelm a modest level of revenue growth. In this case, the pathology provider has little choice but to close the unprofitable collection centre in order to preserve its financial resources to maintain vital collection services elsewhere in the country.

[15] Our Pathology Cost Index uses the seasonally adjusted CPI (growing at 5.3% annually) in order to remove seasonality from our forecasts. In the previous section, when discussing inflation generally, we use the non-seasonally adjusted headline CPI (5.4%).

Table 3: How a marginal collection centre became unprofitable

	5 years ago	Annual change	5-year change	This year
Revenue	**100**	1.5%	7.7%	**108**
Labour cost	50	4.0%	21.7%	61
Rent cost	15	7.6%	44.2%	22
Consumables, courier, other costs	25	5.3%	29.5%	32
Total costs	**90**	5.0%	27.5%	**115**
Profit / (Loss)	**10**			**(7)**

Note: Excludes impact of COVID

Most of the costs of pathology services are fixed

While many businesses can scale down their costs when profitability and viability are at risk, pathology has a high proportion of fixed costs, which are hard to reduce when profitability falls. For example, pathology collection and processing require very specialised skills that are harder to rehire if lost. Rental costs for pathology collection centres are also relatively fixed, with leases locked in for years. These costs cannot be quickly reduced to sustain profitability when revenue growth weakens.

Remote, rural, regional, and Indigenous communities are the highest cost areas in which to provide pathology services because they have increased labour costs, more complex logistics (e.g. flights to transfer samples to the pathology lab for diagnostics) and expensive long-term storage for patient samples. These collection centres also bring in less revenue because they have the lowest population density. Without additional government investment, it will be unsustainable for the pathology sector to continue to offer critical services to patients in these areas.

7. Recommendations to protect pathology services and jobs

Investment is needed to prevent loss of pathology services and jobs

The pathology industry is now on an unsustainable footing. Growth in service volumes has stagnated post-COVID, weakening revenue growth in the absence of price increases. Opportunities for productivity growth through automation require significant investment that the pathology industry cannot currently afford and would only benefit a small portion of the cost base. Investment by the Australian Government is needed to prevent the loss of essential services and jobs. Should these losses occur, taxpayers will incur a significant cost to fund unemployment benefits and reskilling programs for laid-off workers. It would be far better to make the necessary investment now and keep services available, particularly in rural, regional, remote, and Indigenous communities.

We project that the Australian Government will need to invest around **$890 million** in pathology services and jobs over the next four years, which can be achieved by reducing 'coning' and/or reinstating indexation to cover actual cost growth on all Medicare rebates for pathology tests.

Funding can come from the underspend on bulk billing of GP services

We recommend that this urgent investment in pathology services and jobs be funded using the available underspend from the **$3.5 billion** that the Australian Government originally earmarked for increasing bulk billing of GP services.

Alternatively, as detailed in the Technical Appendix, there is strong empirical evidence that an increase in Medicare funding for pathology testing would translate into lower expenses elsewhere in the health system and lower healthcare costs for the Federal Budget. This would again allow more existing health funding to be repurposed towards pathology.

New investment in pathology services and jobs should be additional to what the Federal Government already provides. Requiring offsetting savings from other areas of pathology funding would be self-defeating, as it would merely change the composition of pathology benefits without reducing the overall cost pressures on the industry.

GP-referred pathology tests are the highest priority for investment

If the Australian Government determines that the investment we recommend is not feasible in the current budget circumstances, we suggest that the highest priority areas of pathology could be indexed, particularly pathology tests referred by GPs. Other areas have also been raised as candidates for additional funding; for example, histopathology. While histopathology is an area of critical importance, it accounts for only a small proportion (around 10%) of the pathology sector's revenue and cost base. Concentrating investment in such small areas of pathology will not improve the sustainability of pathology service provision overall for all health issues across the country.

8. Technical Appendix

Evidence of GP shortage

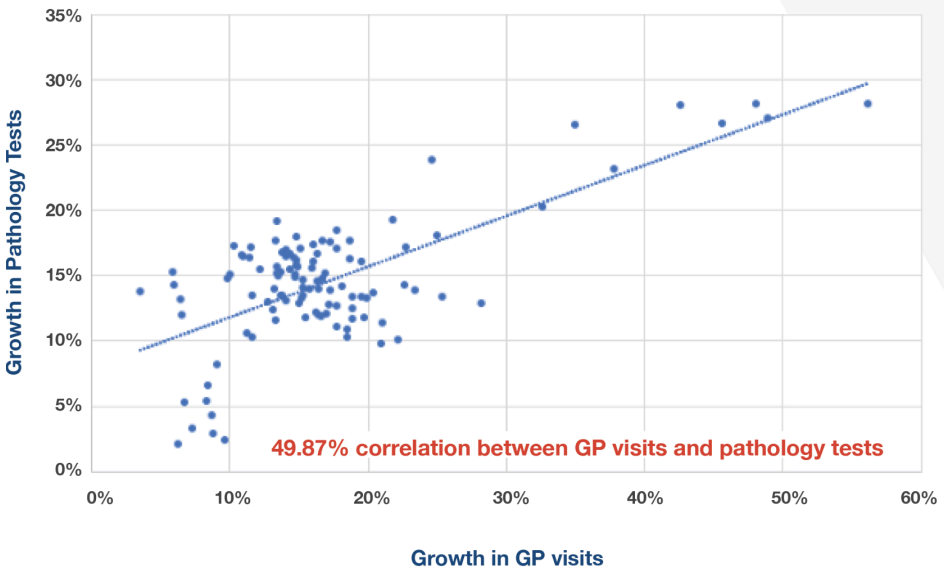
According to the Royal Australian College of General Practitioners, there is currently a shortage of GPs, with **three in ten** practising GPs planning to retire in the next 5 years and **64%** of GPs considering reducing time practicing or stopping practice altogether. There is an increase in the number of GPs reporting they are 'very dissatisfied' with their job, and only **4 in 10** practising GPs would recommend the GP profession to a junior colleague.[16]

Evidence that lower growth in GP visits leads to lower growth in pathology tests

Our modelling demonstrates that the significant decline observed in the growth of GP visits is statistically very likely to lead to a decline in the growth of pathology tests required by patients.

Chart 4 shows the strong relationship between growth in GP visits and growth in pathology tests. Changes in the growth of GP visits have historically accounted for nearly **50%** of the change in the growth of pathology tests that are provided two months later.

Chart 4: Changes in the growth of GP visits explain nearly 50% of changes in the growth of pathology tests provided two months later



Source: Single-variable linear regression using Services Australia MBS data. Growth shown vs 4 years ago.

Our forecast of the number of pathology tests that will be referred by GPs over the next four years is built on the most recent trends in data for GP visits, which show a substantial slowing in patient visits since COVID. Fewer GP visits is a strong indicator that GP-referrals for pathology tests will remain depressed.

[16] *General Practice: Health of the Nation* - Royal Australian College of General Practitioners (2023)

Modelling methodology and detailed analytical results

Table 4 shows our detailed modelling results, which assume that:

- The number of pathology tests will grow at the 1.4%-1.7% per year rate of population growth assumed in the 2023-24 Federal Budget, except category P12 and P13 pathology tests which we assume will maintain their five-year average from 2024-25 onwards.
- Utilisation of pathology services will remain steady (as measured by doctor referrals to pathology tests per 100,000 patients).
- COVID-related benefits are removed from the 2022-23 base year (specifically from categories P3, P10 and P13 which is where COVID tests are captured in the official data on pathology).

Table 4: Forecast Medicare benefits for pathology and Australian Government investment required

			Federal Budget Investment Period			
Medicare Benefits Paid for Pathology Tests ($)	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**
P1 Haematology	305,254,987	310,484,049	340,516,695	362,764,169	386,348,071	411,292,738
P2 Chemical	1,464,515,346	1,489,602,706	1,633,689,690	1,740,425,921	1,853,573,908	1,973,250,404
P3 Microbiology*	574,368,073	584,207,081	640,716,536	682,577,404	726,952,897	773,888,806
P4 Immunology	197,319,935	200,700,054	220,113,462	234,494,456	249,739,331	265,863,818
P5 Tissue Pathology	366,553,165	372,832,274	408,895,768	435,610,751	463,930,531	493,884,330
P6 Cytopathology	66,517,988	67,657,451	74,201,852	79,049,790	84,188,948	89,624,630
P7 Cytogenetics	76,832,739	78,148,895	85,708,118	91,307,811	97,243,884	103,522,461
P8 Infertility and Pregnancy Tests	18,399,583	18,714,771	20,525,022	21,866,013	23,287,559	24,791,126
P9 Simple Basic Tests	3,000,829	3,052,234	3,347,472	3,566,177	3,798,020	4,043,240
P10 Patient Episode Initiation*	246,924,725	251,154,581	275,448,379	293,444,649	312,521,974	332,700,039
P11 Specimen Referred	3,749,203	3,813,427	4,182,294	4,455,542	4,745,205	5,051,580
P12 Mgmt Bulk Billed Services	1,132,767	1,132,767	1,606,155	1,606,155	1,606,155	1,606,155
P13 Bulk Billed Incentive Item*	114,312,754	114,312,754	127,723,125	127,723,125	127,723,125	127,723,125
Total Pathology Benefits Paid ($)	3,438,882,094	3,495,813,043	3,836,674,567	4,078,891,963	4,335,659,609	4,607,242,452
Annual Indexation			8.07%	4.98%	4.98%	4.98%
Investment Needed for Pathology Sector ($)			282,012,521	190,912,926	202,965,664	215,742,422
				INVESTMENT NEEDED OVER FOUR YEARS		**891,633,534**
Annual Pathology Services (#) Growth		1.7%	1.5%	1.5%	1.4%	1.4%
Annual Pathology Services ($) Growth		1.7%	9.8%	6.3%	6.3%	6.3%

Source: PPG modelling of Medicare benefits data from Services Australia with * denoting a category excludes COVID-related tests.

Medical conditions that would benefit from higher utilisation of pathology

Empirical evidence suggests that healthcare costs can be up to **10x** greater due to pathology test underutilisation, relative to test overutilisation.[17] A 15-year meta-analysis also showed that rate of pathology test underutilisation is over **2x** higher than the rate of test overutilisation.[18]

Example 1 - Chronic Kidney Disease

Effective early management of Chronic Kidney Disease requires pathology screening and monitoring.

Early management of kidney disease can reduce kidney failure by **50%**.[19]

Chronic Kidney Disease in Australia:

- affects around **10%** of adults.
- is responsible for **12%** of deaths.
- is responsible for **17%** of hospitalisation.[20]
- cost **$5.1 billion** per annum.[21]
- monitoring is only performed for **25%** of patients.[22]

Example 2 – Diabetes

Reducing the cost of diabetes management requires a higher level of early detection via pathology screening and improved monitoring.[23]

- The direct cost of diabetes management in 2020 was **$3.1 billion**.[24]
  - The indirect cost of diabetes management in 2020 was over **$15 billion**.
- The number of Australians with diabetes has grown **220%** over 20 years, and treating the condition will cost **$45 billion** per annum in 2050.[25]
- Less than **60%** of patients had adherence to diabetes monitoring guidelines.[26]
- Management costs for diabetic patients with complications are **2.7x** the cost of uncomplicated patients.[27]

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[17] Sarkar, Mayukh K et al, "*An assessment of overutilization and underutilization of laboratory tests by expert physicians in the evaluation of patients for bleeding and thrombotic disorders in clinical context and in real time*", Diagnosis (Berlin, Germany) vol. 4,1 (2017): 21-26.
[18] Zhi, Ming et al, "*The landscape of inappropriate laboratory testing: a 15-year meta-analysis*", PloS one vol. 8,11 e78962, 15 November 2013
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[20] *Chronic kidney disease: Australian facts*. AIHW, Australian Government, 30 June 2023
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[26] Dai M, Peabody MR, et.al. *Adherence to clinical guidelines for monitoring diabetes in primary care settings*. Fam Med Community Health 2018;6:161–167
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Example 3 - Cardiovascular Disease

Key decision-making steps in best practice guidelines utilise pathology and radiology results. Early intervention and therapy will reduce cardiac events and complications.

- Health system costs for cardiology were **$12.7 billion** in Australia in 2020 and **10%** of hospital costs.[28]
- Compliance to best practice monitoring and therapy is low, varying between **38%–70%** in heart failure[29], myocardial infarctions[30], and arrhythmias[31].
- Regular testing regimes in heart foundation guidelines include lipids and cholesterol, BNP and echocardiography, CT angiography and CT calcium score, anticoagulation management and coronary angiograms.

Example 4 – Cancer

Opportunities to reduce costs include early detection and monitoring in high-risk patients (e.g. lung cancer), and better monitoring.

Pathology testing is increasingly used to accurately select candidates for expensive targeted therapies. New risk stratification algorithms using pathology tests are assisting in precision medicine e.g. better selection of patients for radiotherapy for breast cancer.[32]

- In 2022, cancer drugs were **38%** of the PBS budget, equal to **$6.16 billion**.[33]
  - Cancer drug costs are estimated to grow by **2.6x** by 2032.[34]
- In 2020, screening and treating cancer cost **$12.1 billion** and was responsible for **8.2%** of hospital costs.[35]

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[30] Anastasius, M et al. "*The underutilisation of dual antiplatelet therapy in acute coronary syndrome*", International Journal of Cardiology vol. 240 (2017): 30-36
[31] Ma, M et al, "*Missed Opportunities to Initiate Oral Anticoagulant in Atrial Fibrillation: Insights from Australian Acute Coronary Syndrome Registries*" Heart, Lung & Circulation vol. 30,8 (2021): 1157-1165
[32] Sutera, Philip et al. "*Histology Specific Molecular Biomarkers: Ushering in a New Era of Precision Radiation Oncology*", Semin Radiat Oncol (2023): 232-242.2023.03.001
[33] *Expenditure and Prescriptions Report 2021-22*, PBS, Australian Government, 2 Aug 2023
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[35] *Disease expenditure in Australia 2019–20*, AIHW, Australian Government, 02 Dec 2022

Pathology can be better utilised for Chronic Disease Management

- GP orders for chronic disease management are relatively lower than expected, with higher rates of tests for new symptoms.[36]
- A UK GP survey (n=550) demonstrated **47%** of responding GPs were not confident in interpreting tests for disease monitoring.[37]
- Studies in lipid control show that there is significant underutilisation of ordering for disease monitoring.[38]
- A review of 63 studies (357,171 patients) showed 17 tests (lab and radiology) which were underutilised over **50%** of the time.[39]

[36] Watson, Jessica et al, "*Exploration of reasons for primary care testing (the Why Test study): a UK-wide audit using the Primary care Academic Collaborative*." The British Journal of General Practice : The Journal of the Royal College of General Practitioners, BJGP.2023.0191, 14 Jul. 2023.
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