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REVIEW ARTICLE

PRIVATE EQUITY INVESTMENT IN PRIVATE FOR-PROFIT HEALTHCARE IN AUSTRALIA AND NEW ZEALAND: A SCOPING REVIEW

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ABSTRACT

OBJECTIVES

Private Equity (PE) involvement in healthcare has been evident in the United States (US) for some time, with questionable benefits reported. There are significant differences in funding, health insurance and regulation in the US, when compared to Australia and New Zealand (NZ), so it is not clear whether existing US research can be generalised to these settings. This study aims to examine published information regarding PE involvement in the private-for-profit (PFP) healthcare sector in Australia and NZ, including evidence of PE shareholdings and its impacts.

DESIGN

This scoping review considers academic and grey literature, including academic research and commentary papers, media reports, corporate reports, PFP healthcare websites and government submissions.

MAIN OUTCOME & RESULTS

Thirty-three relevant sources were identified, but no specific information on the impacts of PE investment were discovered. The academic papers highlight an ongoing debate (but limited research evidence) about PFP healthcare, including the quality of clinical care, practice consolidation and a downward trend on clinician ownership. The grey literature offered more information on PE investment and growth of the PFP sector, but limited detail about shareholdings.

CONCLUSION

With little research on PE investment in Australia and NZ, it is difficult to know if continued PE growth will have a positive or negative affect on operational performance and outcomes, such as clinician engagement and clinical care. The authors conclude that there is a shifting landscape of PFP healthcare in Australia and NZ, to less clinician and greater PE ownership. Given the reports of negative impacts of PE involvement in the US, these trends pose significant immediate and long-term implications. This paper sets the agenda for further research to explore the organisational and system-level impacts of PE growth in Australia and NZ.

KEYWORDS

Ownership, Healthcare, pathology, imaging, hospital facility, aged care, for-profit, not-for-profit, Australia, New Zealand private equity,

INTRODUCTION AND BACKGROUND

There has been considerable growth in the number of private-for-profit (PFP) healthcare organisations in Australia and New Zealand (NZ) over recent decades. This trend began in Australia in the late 1980s when corporations like Mayne Nickless started acquiring hospitals. [1-3] In NZ, growth in PFP resulted from outsourcing of public services to private ownership during the 1990s.[4-6]

Internationally, Private Equity (PE) has become a major player in the PFP healthcare sector, especially in the United States (US).[7] PE refers to a class of funds, under management by PE firms, used for investing in other companies. [8, 9] PE Investment concerns value creation through the application of effective management expertise to make organisational and structural changes that improve efficiency. These changes generally occur over a 3-5-year period, prior to realising the added value of the healthcare entity through on-sale or listing on the stock exchange.

The most recent data available on PE deals in healthcare globally shows growth of 187% from 2010-2017, to a value of US$42.6 billion.[10] Incentives for PE firms to acquire healthcare entities lie in the conditions of management and sale. One such condition is PE firms' insistence on holding paid management service agreements with an acquired healthcare entity.[7] Even more important are the debt and eventual sale conditions. In common PE investment models, PE firms (on behalf of PE funds) acquire a healthcare entity using approximately 70% debt [7, 15, 17], which the acquired entity is responsible for, and the remaining 30% is raised by the PE fund and partners.

PE firms aim to acquire high asset turnover entities including larger physician practices that can be expanded, such as ophthalmology [11], dermatology [10] and radiology [12]. The PE firm behind the PE fund may fund as little as 2-10% of the purchase. Despite this small investment, on exit the PE firm typically takes up to 20% of any capital gain. PE firms therefore place emphasis on profit growth, often attempted via acquisition and consolidation of smaller entities. However, the financial risk from the debt remains with the healthcare entity. [7, 11]

The overt focus on short-term profits by PE firms has raised concerns about clinician engagement, organisational performance, and clinical outcomes. [7, 10, 12, 13] Clinician engagement is broadly defined as "the involvement of clinicians in the planning, delivery, improvement and evaluation of health services…".[59] Organisational performance refers to performance on governance, financial, human resource and other non-clinical measures.

Clinician concerns with PE acquisition include reporting to non-medical managers, increasing clinician workloads, decreasing clinical quality and higher clinician turnover.[14] Long term engagement by a PE firm in an acquired healthcare entity can be of concern to clinicians due to the firm's focus on increasing short-term revenue targets for on-sale, which may impact patient care.[7] However, relevant evidence is limited to mainly the US, and inconclusive.[15]

PE activity in healthcare in both Australia and NZ has increased in recent decades.[16-18] Between 2015 and 2021, 111 PE healthcare acquisitions and mergers were recorded.[19] A recent example is the international PE firm KKR's [20] failed attempt to acquire Australia's largest provider of private healthcare, Ramsay Health Care, for approximately AU$20 billion.[21] Similarly, there has been PE interest in NZ with the proposed acquisition of Pulse Health NZ by Pacific in 2021.[22] Despite this trend, there is even less known of the impact of PE on healthcare delivery in Australia and NZ, when compared to the US.

Recent US research investigating PE investment in nursing homes found alarming levels of morbidity and mortality.[57] In Australia, there was recent news of GenesisCare, an Australian PFP specialist healthcare provider with significant PE investment, suffering significant financial distress. GenesisCare originated in specialist rooms and grew to become an international radiation oncology provider that is now facing severe liquidity problems. Lynch, et al. (2023) stated that this news has "added stress to GenesisCare's thousands of patients who are at their most vulnerable while receiving treatment for cancer and sounded an alarm to doctors when corporations approach them about joint ownership models". [58 p17]

The existing research on outcomes of PE investment in healthcare is largely limited to reporting from the US, which has a significantly different health system structure to Australia and NZ. These differences include: universal healthcare funding (Medicare and Medicaid in the US differs from funding in Australia and NZ); the types of health insurance organisations (no Healthcare Maintenance

Organisations in Australia and NZ and no private health insurance available for general practice or outpatient specialist consults in Australia); and divergent regulatory regimes in all three countries. Given these differences, one may assume that there would be diverse patterns of PE investment and outcomes across each context.

The aim of this exploratory, scoping review is to explore what is known in the academic research and grey literature of PFP healthcare ownership in Australia and NZ, with an emphasis on PE investment and its impacts. This represents the first stage of a broader research project aiming to rigorously evaluate the impact of PE investment on clinician engagement, organisational performance, and clinical outcomes.

METHODS

A scoping review was undertaken of academic and grey literature, focused on the following PFP sectors: hospitals, pathology, diagnostic imaging, aged care facilities and general practices. These are all prominent in relevant US literature [11,12, 14] and identified in the Preqin database as the object of multiple PE transactions.[19] The review utilised Arksey & O'Malley's scoping review framework [23] as it is advantageous when considering a broad, under-explored or under-theorised topic.

The review of academic literature occurred in August 2021, searching the following databases: ABI/Inform, CINAHL, Medline, and Pubmed. The date range was 1990-2021. The search terms were:

> *Ownership AND (healthcare OR "health care" OR clinic OR pathology OR practice OR Imaging OR hospital OR facility OR specialist* OR "aged care") AND (private OR for-profit OR not-for-profit) AND (Australia OR New Zealand) OR (corporates* OR "private equity")) AND (loc.exact("Australia") AND ("New Zealand")* [1]

A further database (Proquest/Australian Financial Review) was searched using the same search terms. This search in March 2022 was limited to three years (29/3/2019 – 29/3/2021) to identify media articles on contemporaneous ownership in PFP healthcare in Australia and NZ. This search covered a shorter time frame for practical reasons, as the daily reporting in the AFR results in a vast number of potentially relevant articles.

Included in both searches were all material that discussed private healthcare ownership in Australia and/or NZ, published in English. Excluded were any articles that: did not include Australia and NZ (Reason 1), did not discuss private health care (Reason 2), were solely clinical in focus (i.e., not management) (Reason 3), were non-healthcare-related (Reason 4), or not available to be accessed (Reason 5). [2]

Additional grey literature sources were searched via Google. Keywords were used (as above) and up to 20 pages examined. Specific sites were also reviewed, including: the Australian Bureau of Statistics, NZ Statistics, the World Health Organisation (WHO), the Australian Institute of Health and Welfare (AIHW), as well as websites of the main four investment and accounting firms in both Australia and NZ – Price Waterhouse Coopers (PWC), Deloitte, Ernst & Young (EY) and KPMG. Annual reports from the two largest PFP health care companies, Ramsay Health Care and Healthscope[3], were also examined, as it was thought likely that these companies might have PE involvement. The websites of other private healthcare providers were also reviewed, including: Virtus, Icon, Nexus, and Genesis Care in Australia, and TPG Medical Imaging, Evolution Healthcare and Ascot Cardiology in New Zealand.[4]

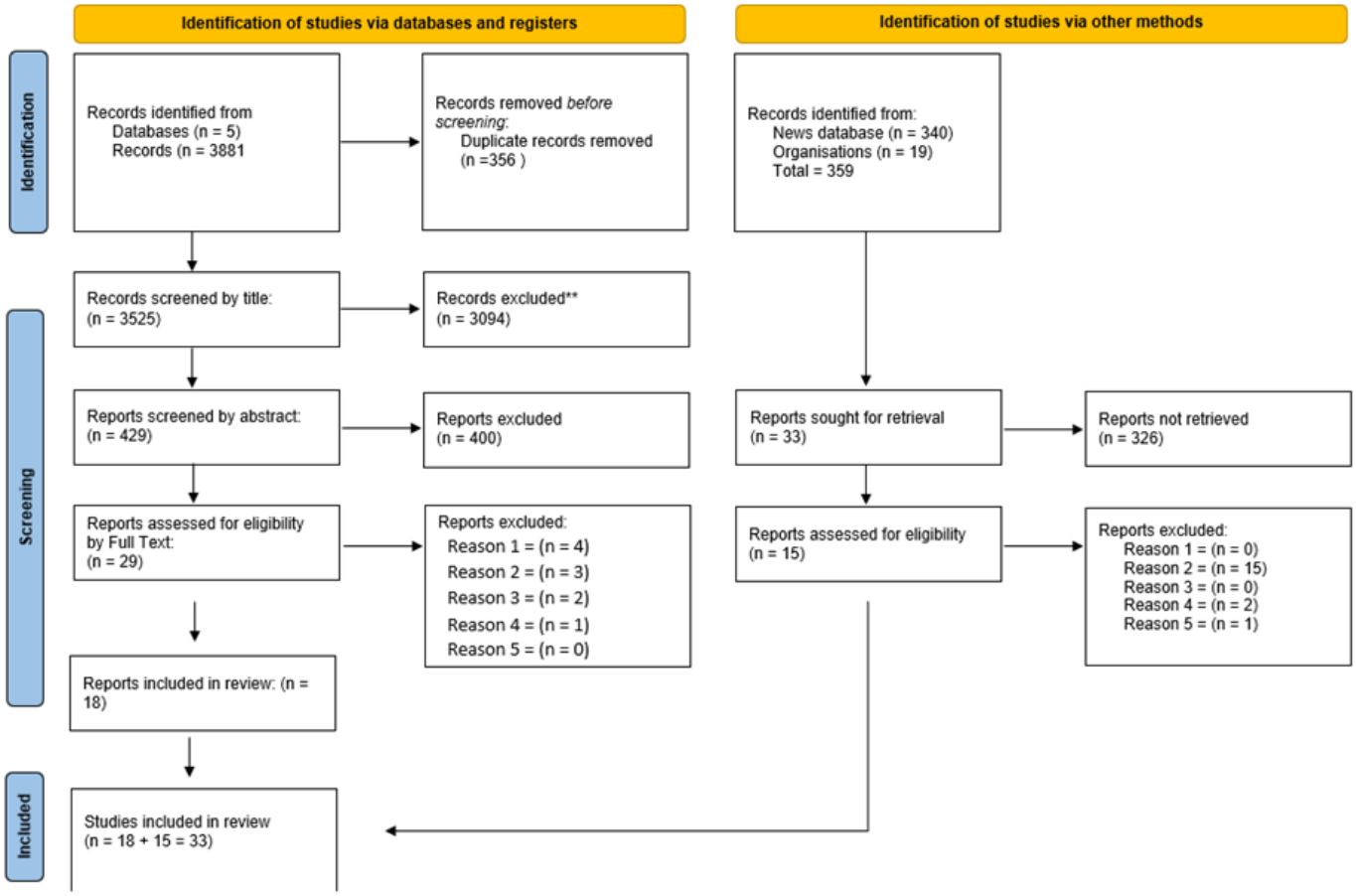
Screening and data extraction was completed by the first author, with regular input from the other authors. Disagreements regarding inclusion were resolved through mutual consensus. Emergent themes were debated and consolidated collaboratively among the authors.

RESULTS

Across the academic and grey literature, 3,884 sources were identified after duplicates were removed. Thirty-three met the inclusion criteria (see Table 1).

1. Australia and New Zealand searched separately in ABI/Inform.
2. It is notable that some papers were excluded on several criteria.
3. Ibisworld Industry Report: https://my.ibisworld.com/au/en/industry/home
4. The above is a sample not an exhaustive list of sites reviewed.

TABLE 1: PRISMA FLOWCHART: SCOPING REVIEW – OWNERSHIP TYPES IN PRIVATE HEALTH CARE AUSTRALIA & NEW ZEALAND 2022



ORIGINAL RESEARCH LITERATURE

Only eight research articles were identified in the Australasian context that analyse the ownership of PFP healthcare organisations, the factors influencing ownership, or the outcomes produced (see Table 2).

TABLE 2: RESEARCH PAPERS INCLUDED IN THE FINAL REVIEW OF ACADEMIC LITERATURE.

Authors, Title	Year	Country	Profession/ Perspective	Findings
Barnett, P., & Malcolm, L. Beyond ideology: the emerging roles of New Zealand's crown health enterprises.	1997	NZ	Cross sectoral	Historical study of public health reforms in NZ found public reforms meant outsourced purchase and providers, primary health care remained outside of accountability, implementation of reforms less radical than proposed.
Cheng, T. C., Joyce, C. M., & Scott, A. An empirical analysis of public and private medical practice in Australia.	2013	Aust.	Specialist	Analysis of data from MABEL surveys found considerable variations in practice patterns across doctors' employment arrangements, specialist practicing in public or private, remuneration and number of locations. Findings included no gender or total hours difference in type of practice and proposed policy initiatives to induce specialists to spend more time in public. Ownership structures/frameworks not considered.
Crampton, P. The ownership elephant: ownership and community-governance in primary care.	2005	NZ	GP	Data analysis of NatMedCa surveys. Study concerned hypothesis testing between community owned GPs and for-profit, looked at quality, cost, and other areas. Findings - as non-profit and for-profit ownership forms have different social roles, and as meaningful community participation in governance is determined in large part by ownership structures.
Crampton, P., Davis, P., Lay-Yee, R., Raymont, A., Forrest, C. B., & Starfield, B.	2005	NZ	GP	Considered the above study, the findings support a link between higher governance with non-profit community governance occurring in New Zealand.
Joyce, C., McDonald, H., & Lawlor-Smith, L. (2016). General practitioners' perceptions of different practice models: a qualitative study.	2016	Aust.	GP	Data analysis of semi structured interviews reviewed impact of general practice and ownership model. Outcomes highlighted the variety of differing perceptions of advantages and disadvantages of practice ownership and reinforced downward trend on ownership.
Moel-Mandel, C., Sundararajan, V., & de Moel-Mandel, C. The impact of practice size and ownership on general practice care in Australia.	2021	Aust.	General Practice	Analysis of RACGP "Health of a Nation" report considers impact of practice size and ownership on service provision, concludes that, whilst there is a move to larger corporate practices (though fewer corporate groups) and against individual ownership, there is no discernible difference to patient care.
Sturgiss, E. B., Haesler, E., & Anderson, K. General practice trainees face practice ownership with fear.	2016	Aust.	GP	Semi structured interviews on ownership with GP trainees. Found fear expressed in regard to ownership due to financial, business concerns. No structures discussed.
Yong, J., Yang, O., Zhang, Y., & Scott, A. Ownership, quality, and prices of nursing homes in Australia: Why greater private sector participation did not improve performance.	2021	Aust.	Aged Care	Internal data studied (Quality and price efficiency) of government NFP, government and FP aged care. Found government facilities greater quality and price over NFP and FP.

Barnett, et al. (1997) explored the impact of the 1993 NZ health sector reforms, including the creation of a managed market with publicly owned, corporate providers. This research reviewed reform documentation and interviews with 21 CEOs of Crown Health Entities (CHE's). This study found public reforms meant outsourcing, both of purchasing and service providers, resulting in primary healthcare remaining outside of existing accountability mechanisms, and that reform implementation was less radical than proposed.[4] The authors concluded that the intended benefit from competition was not particularly helpful, with collaboration thought more useful.

Crampton, et al. (2005a) utilised data from the NZ National Primary Medical Care Survey MaMa 2001-2002 to explore the impact of community governed not-for-profit (NFP) GP practices versus PFP practices. The study identified that community governed NFP differ from their for-profit counterparts around social roles, and that meaningful community participation in governance is determined by ownership type. Crampton, et al. [28] reviewed Quality Management System (QMS) presence as an indicator of governance quality in general practice in 2001-2002 and found that NFP organisations had more systems in place. However, the authors noted that PFP practices were likely to have access to significantly more equipment than NFP practices.

A second report from Crampton (2005b) on the above NatMedCa results, aimed to: (a) define ownership and community participation; (b) summarise evidence on ownership related differences; and (c) discuss policy implications of different ownership types in primary care including implications of merging types under the umbrella of Primary Health Organisations (PHO)s. This report supported the strong relationship between ownership and governance and found that community owned, NFP, primary healthcare organisations were more likely to have diverse community input in governance. Community-governed NFP charged lower patient fees, employed more Māori and Pacific Island staff, thus reducing financial and cultural barriers to access. The capacity of community governed NFP practices to serve diverse ethnic and low-income population groups highlights the role of ownership and governance in shaping the purpose and function of primary care practices.[27]

Cheng, et al. (2013) undertook a quantitative analysis on the "Medicine in Australia: Balancing Employment and Life (MABEL)" survey of more than 10,000 doctors, including the differences in public and private sector medical specialist work. They found that mixed and private practice specialists differ from public sector specialists on annual earnings, sources of income, maternity and other leave taken, and number of practice locations. Public sector specialists are likely to be younger, international medical graduates, devote more time to education and research, and more likely to do after hours and on-call work compared with private sector specialists.[26]

Joyce, et al. (2016) discussed the trend to larger practice sizes in Australia and explored GPs' attitudes towards different ownership types through semi-structured interviews, analysed thematically. The study noted the downward trend of GP ownership. The authors state that during the early 1990's up to 25% of practices were solo practices and 40% of GPs working in practices of 2-3 GPs. These figures had reduced to 9.8% and 23.3% respectively by 2013. The factors driving GP ownership were flexibility, autonomy, and financial rewards. Factors discouraging ownership were increased responsibility, time commitment, and financial burden. Participants indicated an interest in future ownership, but GPs were concerned about knowledge and skills required. Another trend that emerged was that of consolidation.[32]

Moel-Mandel, et al. (2021) in their literature review noted that in 2020, 16% of GPs in Australia worked in corporate-owned practices.[34] They considered the impact of practice size and ownership on service provision and found, whilst there is a move to larger corporate practices (though fewer corporate groups), there is no discernible difference to patient care. The factors driving changes to practice size included management responsibilities, financial burdens, and a lack of work–life balance. The study reported that 60% of non-owning GPs are "not at all interested" in ownership in the future. The review investigated whether quality indicators such as patient satisfaction differed with practice size and ownership; however, their results were inconclusive.[34]

Sturgiss, et al. (2016) explored the perception of Registrars and new Fellows regarding practice ownership and management in Australia; specifically, the desire to own, and facilitators and barriers to ownership. Using focus groups and interviews, they identified "worry and fear" (p.662), specifically related to financial concerns, lack of relevant knowledge and skills and balancing different roles as a barrier. The authors identified the presence of role

models and GP supervisors as a facilitator to practice ownership and management. [37]

Public vs private performance efficiencies were examined in a quantitative study of aged care homes in Australia by Yong, et al. (2013), which noted the rise in privatisation and PE firm investment.[39] Utilising retrospective facility-level quality data and measures of price, the study examined which type of ownership - government owned, NFP and PFP aged care homes - gave a higher quality of care within an efficient price range. Government owned NFP aged care homes were found to perform consistently higher on quality indicators and were more efficient on price.

An important implication emerging from this summary of published research above, is that despite there being many purported benefits of PFP ownership, there is limited supporting evidence in Australia and NZ. One key theme was that public NFP aged care facilities appear more efficient and of better quality, while NFP general practice organisations had better community engagement, outreach, and lower prices. On the other hand, the literature also indicates that fears of ownership responsibilities may dissuade younger non-owner clinicians from ownership and management. While these findings are of interest, the research reviewed does not report on ownership structures, PE shareholdings or any subsequent impacts.

See Tables 3 & 4 for a thematic analysis of the research literature.

ACADEMIC COMMENTARY LITERATURE

Table 5 details the academic commentary literature reviewed. These sources, based on author's opinions, identified conflicting interests in the supply of private healthcare to public patients in NZ,[5] increased separations and vertical integration in private healthcare in Australia,[36] perceived disadvantages (or advantages) of private ownership of public services, and conflicts of interest in private and public ownership of healthcare organisations over the searched timeframe. [3, 5, 25, , 29-31, 35, 38]

MEDIA REPORTS – AUSTRALIAN FINANCIAL REVIEW (AFR)

The most information on ownership of PFP healthcare and PE investment was found in media reports of acquisitions and divestments of publicly listed companies (see Table 6). Nine sources reported acquisitions and divestments of private healthcare entities. Of the nine, seven discussed acquisitions in Australia, with two also covering NZ. [40-44, 47, 48] Two discussed acquisitions by Fund Management firms (not PE), the remaining five reported on PE investment. Of the two sources that discussed divestment, one was by shareholders (in response to a notification of lower dividends), and one was by PE. More importantly, seven of the nine sources discussed growth in PE acquisitions. Four separate PE firms were mentioned, KKR being mentioned twice. One paper [46] discussed shareholdings briefly and mentioned that Centuria (a funds management platform) had acquired healthcare assets, including three Nexus hospitals. That article stated that the specialist doctors will retain fifteen percent of shareholdings.

TABLE 3: THEMATIC ANALYSIS OF THE LITERATURE REVIEW

Ref	Authors, Tit	Year	Country	Profession/ Perspective	Study Design or Format	Ownership/Priv. of Public	Perspectives of Ownership and hygiene factors/conditions	Downward trend in ownership/consolidation	Quality Indicators
[4]	Barnett, P., & Malcolm, L. Beyond ideology: the emerging roles of New Zealand's crown health enterprises.	1997	NZ	Cross sectoral	Qualitative - Survey	1			
[26]	Cheng, T. C., Joyce, C. M., & Scott, A. An empirical analysis of public and private medical practice in Australia.	2013	Aust.	Specialist	Quantitative secondary data.		1		
[27]	Crampton, P. The ownership elephant: ownership and community-governance in primary care.	2005	NZ	GP	Analysis/Discussion from NatMedCa studies.	1			1
[28]	Crampton, P., Davis, P., Lay-Yee, R., Raymont, A., Forrest, C. B., & Starfield, B.	2005	NZ	GP	Data extraction and Analysis from National Primary Medical Care Survey (NatMedCa) 2001-2002.	1			1
[32]	Joyce, C., McDonald, H., & Lawlor-Smith, L. (2016). General practitioners' perceptions of different practice models: a qualitative study.	2016	Aust.	GP	Qualitative study		1	1	
[34]	Moel-Mandel, C., Sundararajan, V., & de Moel-Mandel, C. The impact of practice size and ownership on general practice care in Australia.	2021	Aust.	General Practice	Scoping Review			1	1
[37]	Sturgiss, E. B., Haesler, E., & Anderson, K. General practice trainees face practice ownership with fear.	2016	Aust.	GP	Qualitative ground theory study			1	
[39]	Yong, J., Yang, O., Zhang, Y., & Scott, A. Ownership, quality, and prices of nursing homes in Australia: Why greater private sector participation did not improve performance.	2021	Aust.	Aged Care	Quantitative	1			1

TABLE 4: DESCRIPTION OF THEMES IN TABLE 3

Theme Number	Description
1	There is considerable discussion in regard **to the relationship between ownership and clinical engagement**. This discussion relates to comparative analysis of public vs private healthcare [4, 27, 28,39], including a paper considering conditions of work in public vs private. [26]
2	There is public discussion about **the relative efficiencies** of private for profit, private not-for-profit and public ownership. Includes conditions of practice i.e., employment conditions (herein discussed as "hygiene" conditions). [4,26, 32, 37]
3	Sources also revealed a trend of **increased consolidation of GP practices** to increase economies of scale, and a downward trend on clinician ownership due to concerns from younger GPs about risks of ownership. [32, 34, 37] A further theme was the use of Quality Indicator measures [27, 28, 34, 39] These themes were identified in Table 3.
4	**Quality Indicators were used as outcome measures in four** of the above sources. [27, 28, 34, 39] Where used, these indicators gave a measurable picture of efficacy, but the outcome overall was unclear due to the various other factors present and differing models of practice. Multiple quality indicators (i.e., falls, adverse events etc) and price were reviewed by Yong, et al. [39] in their investigation of type of aged care facility, but their outcome was conclusively in favour of government facilities as per above.

TABLE 5: REMAINING NON RESEARCH LITERATURE REVIEWED

Cit No.	Authors, Title	Year	Country	Profession/ Perspective	Themes
[25]	Carrigan, C. Privatisation: the threat to Australia's public hospitals.	2013	Aust.	Hospitals	Private interests' conflict with public health needs as costs and risk differ.
[5]	Coney, S. New Zealand doctors' financial ventures.	1995	NZ	Radiology	Clinicians' financial involvement in private facilities can lead to a conflict of interest in referrals.

Cit No.	Authors, Title	Year	Country	Profession/ Perspective	Themes
[29]	Duckett, S. Commentary: The Consequences of Private Involvement in Healthcare - The Australian Experience.	2020	Aust.	Cross sectoral	Mixed public private and private health service have had a deleterious effect on public healthcare in Australia.
[30]	Duckett, S. Does it matter who owns health facilities?	2001	Int	Hospital	Privately funded services are not necessarily more efficient, and emphasis should be placed on policies that improve efficiencies in public healthcare.
[31]	Forde, K., & Malley, A. Privatisation in health care: theoretical considerations, current trends, and future options.	1992	Aust.	Cross sectoral	Viewed advantages and disadvantages of private healthcare. Concluded with a call for attention to contract conditions to safeguard against potential conflicts.
[33]	Lees, M. (1994). Ownership issues obscure outcomes.	1994	Aust.	Cross sectoral	Ownership issues obscure structural issues in public healthcare. A stronger emphasis on health promotion and prevention is necessary.
[35]	Nil. Privatised public health restarts on the Northern Beaches.	2013	Aust.	Hospitals	Private care did not deliver better patient care to local community.
[36]	O'Loughlin, M. A. Conflicting interests in private hospital care.	2002	Aust.	Hospitals	Discussion of changing conditions in healthcare. After an examination of separations, growth in private healthcare provision and providers and complexities of health insurance funding the article warns of conflicts of interest in negotiations.
[3]	White, K., & Collyer, F. Health care markets in Australia: ownership of the private hospital sector.	1998	Aust.	Hospitals	Privatisation of healthcare not advantageous as economic and financial imperatives sacrifice healthcare social objectives.
[38]	White, K., & Collyer, F. To market, to market: corporatisation, privatisation, and hospital costs.	1997	Aust.	Hospitals	The evidence refutes the use of market strategies including privatisation in healthcare for cost efficiencies.

TABLE 6: AUSTRALIAN FINANCIAL REVIEW (AFR) SEARCH THEMES

Cit No	Authors, Title	Year	Country	Profession/ Perspective	Divestment	Acquisition	PE Growth discussed	Funds involved.
[40]	La Frenz, C. Liverpool Partners snare Healius' Adora Fertility	2022	Aus	IVF		PE Acq	Yes	Liverpool partners (PE)
[41]	La Frenz, C. Investors sell off ACL despite bumper half	2022	Aus	Pathology	Divestment by shareholders			
[42]	Whyte, J. Quadrant tips $100m into cancer group	2021	Aus	Cancer		PE Acquisition	Yes	Quadrant (PE)
[43]	Macdonald, A, Redrup, Y., and Sood, K. PE snaps up Kiwi IVF player Fertility Associates	2021	Aus/NZ	IVF		PE Acquisition	Yes	Consortium: New Zealand PE firm Pioneer Capital, UK firm White Cloud Capital and Kiwi pension fund NZ Super.
[44]	Schlesinger, L. Developer doubles money on hospital	2021	Aus	Hospital		FM[1] Acquisition	Yes	Centuria (FM)
[45]	La Frenz, C. Medibank closes in on Myhealth	2021	Aus	Medical Centres	PE Divestment			Crescent Capital (PE)
[46]	Fuary-Wagner, I. Centuria ups healthcare dose with $115m spend: Exclusive	2020	Aus	Medical Centres & Day surgery		FM Acquisition	Yes	Centuria (FM)
[47]	Thompson, S., Macdonald, A., and Boyd,T. Bankers hired to sell Australian Clinical Labs	2019	Aus	Pathology		PE Acquisition	Yes	KKE (PE)
[48]	Evans, S. KKR cash injection powers Laser Clinics' foreign foray	2029	Aus	Laser clinic		PE Acquisition	Yes	KKR (PE)

[1] Fund other than PE

OTHER GREY LITERATURE

Amongst the organisational reports, submissions and websites reviewed, few detailed ownership of private healthcare organisations or discussed the impact of PE investment (Table 7). PWC [49] noted consolidation trends in the healthcare mergers and acquisitions markets.[49] A press release regarding Queensland Investment Corporation and Sunsuper [50] noted the NZ Evolution acquisition of hospital assets. The Cura Group Hospital Group website [54] stated that it was established in 2008, with mixed funding including that of the specialist doctors involved in the hospitals.

Annual reports obtained from Virtus Health,[52] Ramsay Healthcare [51] and Healthscope [53] included significant shareholders in their annual reports as required by regulation. However, entities that acquire shares are often opaque, with company names obscuring actual ownership (i.e., it is not clear whether the acquiring company is owned by individual private shareholders or PE funds).

TABLE 7: OTHER GREY LITERATURE

Cit No.	Source	Year	Details	Country	Sector	Format	Findings
[49]	PWC. The Australian M&A Outlook: Health care Insights	2022	https://www.pwc.com.au/	Aus	Cross sectoral	Report	Insights into investment activity in Australia
[50]	QIC: QIC acquires New Zealand's Evolution Healthcare	2021	www.qic.com.au	Aus/NZ	Hospitals	website	As per title - Asset management and Sunsuper acq Evolution.
[51]	Ramsay Health Care. Ramsay Annual Report	2021	https://www.ramsayhealth.com/Investors/Annual-and-Financial-Reports/Annual-Report-2021	Inter	Cross sectoral	Annual Report	Executive staff shares identified; largest shareholders identified.
[52]	Virtus Health	2022	https://www.virtushealth.com.au/	Inter	IVF	Annual Report	Largest shareholders identified.
[53]	Health scope Healthscope Annual Report	2018	https://healthscope.com.au/application/files/3915/3481/6104/HSO_Annual_Report_30_June_18_-_LODGEMENT_VERSION.compressed.pdf	Inter	Cross sectoral	Annual Report	Executive staff shares identified; largest shareholders identified.
[54]	Cura group	2022	https://curagroup.com.au/cura-group/about-cura-group/align-with-cura	Aust	Hospitals	Website	Declares Dr ownership

TABLE 8: PRIVATE FOR PROFIT HEALTHCARE PROVIDERS INDUSTRY THAT MAY OR MAY NOT BE ATTRACTIVE TO PE.

Type	Capital Intensive	NDE	Type	Surgery at private hospitals or own facilities	Regulatory Structure	Margin (profitability)	Private Health Insurance	Medicare (Aus)	ACC (NZ)	PE Activity
Hospitals	High	Yes	Nursing/allied health etc	Own	Corporations Act 2001 Aus, Companies Act 2023, mandated quality accreditation, clinical colleges, country (NZ) and state health regulations.	Low	Yes	Yes	Yes	In high volume i.e., Ramsay
Diagnostic Imaging	High	Yes	Radiographers	Other	As per above, additional radiation authorities. Australian Radiation Protection and Nuclear Safety Agency (ARPANSA)	Mid	Yes	Yes	Yes	In high volume
Pathology	High	Yes	Scientists, analysing software	Nil	As per above.	High	Yes	Yes	Yes	In high volume
General Practice	Low	No	Dependant on clinician	Minor	As per above.	Low	No	Yes	Yes	In high volume/consolidated
Ophthalmology	Mid	Yes	Optometrists/orthoptists	Own and other	As per above.	High	Yes	Yes	Yes	In high volume/consolidated
IVF	High	Yes	Nursing/technicians	Own and other	As per above.	Mid	Yes	Yes	No	In high volume/consolidated
ENT	Low	Yes	Audiologists etc	Own and other	As per above.	High	Yes	Yes	Yes	Mid
Cardiologists	Low	Yes	Cardiac sonographers/technicians	Other	As per above.	Mid	Yes	Yes	Yes	Mid
Surgeons	Low	No	Dependant on clinician	Other	As per above.	High	Yes	Yes	Yes	Low
Other rooms based physicians. *	Low	?		Other	As per above.	Mid	Yes	Yes	?	Low
NDE = Non-Discretionary Energy - does not depend on clinician alone										
*Including all rooms based: endocrinologists etc.										

DISCUSSION

The aim of this review was to explore what is known of PFP ownership, with an emphasis on those with PE investment in healthcare in Australia and NZ, both in the academic research and grey literature. None of the academic publications reported detail of PFP ownership structures, PE shareholdings or any subsequent impacts of PE ownership. Whilst the grey literature did discuss PE activity, it did not inform our understanding of the shareholdings within entities (did doctors still have ownership?), with only one source discussing this subject.

Despite this limitation, several findings and implications emerged from this review. It was clear that there is consolidation in the PFP sector, but limited information on the ownership of PFP healthcare in Australia and NZ. No literature regarding PE shareholdings was identified and, more particularly, whether PE firm ownership models include clinicians. This may be because PE investment is commercially sensitive, with fewer regulations requiring transparency than for publicly traded reporting entities.[56] These lower transparency requirements, when combined with the commercial need for confidentiality, may limit the capacity for researchers to identify PE ownership to study the impacts.[11] This is of concern in a healthcare environment characterised by increasing PE activity, with ongoing questions about impact.

It is important to understand the impact of PE investment in PFP healthcare in Australia and NZ, as there is increased volume of PE trading and, given the experience of growth in PE investment in the US, there are potential challenges here which appear to be a major concern to many stakeholders.[11,12,25,29,30,35] The consolidation of practices and "fear and worry" regarding clinician ownership is a trend that also needs to be considered. [32,37]

Given these findings on the diminishing trend in clinician ownership, will further consolidation and PE investment in fields such as radiation oncology [58] impact clinician engagement in healthcare? How will further PE investment impact clinicians and consumers? More generally, should healthcare, which is considered a public good, be run by big business? This review represents the first attempt, within a broader body of work, to uncover and produce evidence that can help answer these important questions.

Limitations and future research

The main limitation was that, despite using a broad search strategy, few relevant sources were identified. This restricted the ability to generate broad theorisation on the topic. Further research is required to understand whether PE acquisition targets in Australia and NZ are similar to the US and other regions and, if so, why? The "high value" sectors which may attract PE investment in Australia/NZ could be argued to be those which have potential for: high cash flows backed by government funding; revenue growth through strategic investment in capital equipment (high capital intensity sectors); cost savings through financial management (efficient debt/equity funding); efficiencies of scale achieved through purchase of smaller competitors and/or vertical integration (e.g. primary care, telehealth, hospital in the home and hospitals) and savings from expert management of workforce, their largest expense (e.g. hospitals, large pathology, diagnostic imaging). Table 8 provides an overview of the relative importance of these factors, which may influence PE investment decisions. Whether these factors help to explain PE investment choices remains a question for future research.

Given the lack of publicly available data on PE investment in Australia and NZ, a potentially fruitful area for future research would be qualitative investigations, such as longitudinal case studies. Cases could provide rich sources of data to better understand the PE investment model, experience of clinicians, clinical and organisational outcomes. Insights from qualitative research could be further enhanced by collecting quantitative data on clinical outcomes. Data collection could include information collected under regulations (e.g., reporting requirements under the Corporations Act, 2001 in Australia, and the Companies Act, 2013 in NZ), and from quality accreditation systems.

CONCLUSION

Given the current lack of research on PE investment in healthcare in Australia and NZ, further investigations that enable a better understanding of the relationship between PE shareholdings, clinician engagement, organisational performance and clinical outcomes may provide valuable insights to allay consumer and clinician concerns and enhance service provision by the increasing number of PE owned PFP healthcare providers. It is hoped that this initial review of published information may provide a catalyst for further stakeholder reflections, and research investigations,

on how best to understand the increasing role of PE in PFP healthcare.

CONFLICTS OF INTEREST

There are no conflicts of interest to report.

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