How improved retention affects healthcare employer costs and productivity: Exploring the full value of Defined Be plans

Evidence Review Findings

BIT | HOOPP

Contents

Context and objectives

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- **Defined benefit (DB) pensions play a vital role in helping many Canadians achieve financial security in retirement.** Employers recognize the value of DB plans in recruiting and retaining top talent.[1][2][3] However, the financial value of this recruitment and retention dividend is under-studied and perhaps less well understood, especially in light of the unique health care labour market context in Ontario.
- Workforce pressures in Ontario's healthcare sector continue to mount, with growing workforce shortages and retention challenges reinforcing the business case for DB plans.[4][5]
- **The business case for DB pensions may be growing stronger**, **but we need better evidence on associated *cost savings***.
- The Healthcare of Ontario Pension Plan (HOOPP) commissioned The Behavioural Insights Team (BIT) to conduct an **evidence review** on **the impact of turnover on employer costs** (including productivity) in the healthcare sector in Ontario. This review aimed to identify healthcare-specific point estimates for the cost of turnover, the factors that contribute to or mediate those costs, and the strengths and limitations of the current evidence base.

Context and objectives

This research will add to the evidence base by identifying:

1. Relevant, **healthcare-specific point estimates** for the impact of turnover on employer costs, including productivity costs.
2. The **factors** that contribute to or otherwise **mediate the cost savings.**

The evidence review represents a critical starting point in helping Ontario healthcare employers understand and integrate the cost savings associated with offering a DB plan into their decision-making.

It may act the basis for a broader research project to develop and validate a model or calculator in order to assess turnover-related cost savings for Ontario healthcare employers offering a DB plan.

More information on potential next steps to build on the evidence review are included in the final section of this presentation.

Methodology and scope

Methodology and scope

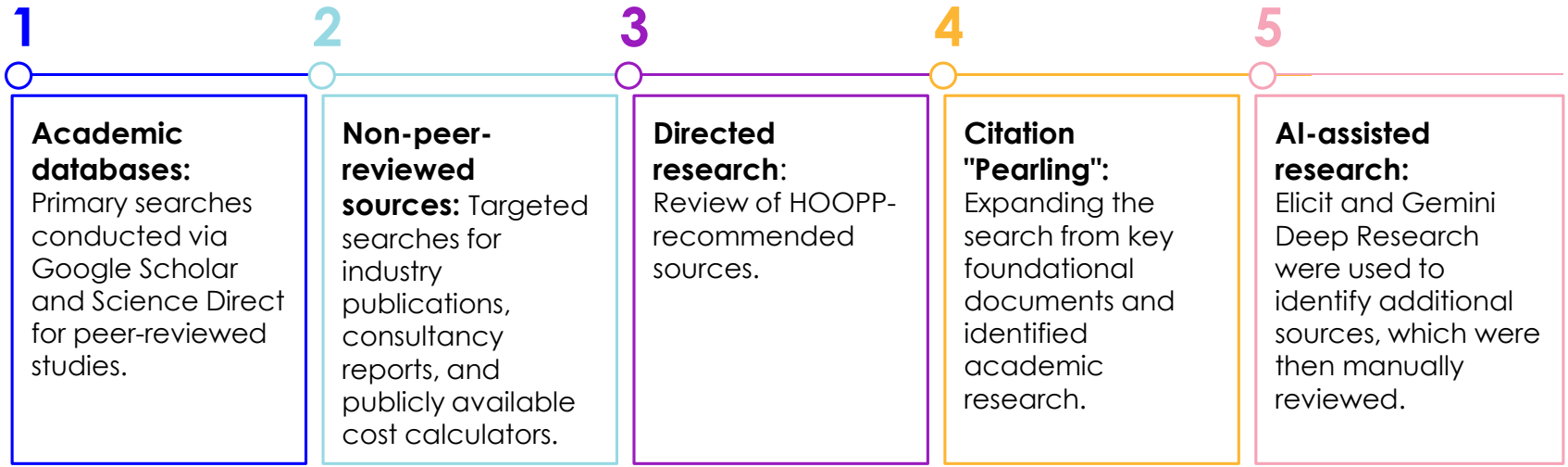
This evidence review aims to answer three research questions:

1. **What is the impact of reduced turnover (caused by offering a defined benefit pension plan) on employer costs**, with a focus on Ontario healthcare employers.
2. **What is the impact of reduced turnover (caused by offering a defined benefit pension plan) on productivity**, with a focus on Ontario healthcare employers.
3. **What are the strengths and limitations of the current evidence base in assessing the impact of defined benefit pensions** on Ontario healthcare employer costs and turnover.

While reviewing the evidence base, it became clear that productivity costs associated with turnover are generally included in estimates for the total cost of turnover. We subsequently **combined research question 1 and 2** in reporting our findings.

Methodology and scope

This evidence review used a **targeted rather than comprehensive approach** and included:



Priority was given to sources published since 2016 and to Canada-specific, healthcare studies. Due to limited evidence, we expanded inclusion to post-2000 studies and research from other OECD countries.

The factors that contribute to the costs of turnover

The factors that contribute to turnover costs

- While there is no single standardized approach to calculating turnover costs, existing research consistently identifies common cost drivers of turnover costs, which are mostly structured into two broad categories:

    1. **Direct costs**. The costs directly attributed to replacing a departing member of staff. They include recruitment, vacancy coverage, and hiring expenses.

    2. **Indirect costs**. The financial impacts that arise as a result of staff turnover. These include measurable costs, such as orientation and training, and costs which can be more hidden and harder to quantify, such as lost productivity and lower morale.

- The majority of the existing research focuses on the cost of nurse turnover rather than healthcare workers more broadly, robust frameworks like the Nursing Turnover Cost Calculation Methodology (NTCCM) have been adapted for other healthcare professionals, including emergency medical services.[6]

The factors that contribute to turnover costs

We identified 32 relevant cost categories (i.e., factors).

Direct costs			Indirect costs		
Recruiting	**Vacancy**	**Hiring**	**Orientation**	**Productivity**	**Termination**
1. Labour 2. Equipment 3. Advertising 4. Consultant costs 5. Recruitment programs 6. Labour and expense costs for outreach (e.g. career fairs) 7. Miscellaneous	1. Temporary staff (inc agency fees) 2. Overtime 3. Closed beds 4. Patient deferral 5. Reduced productivity costs for supervisors / coworkers 6. Additional staffing plannings 7. Consultants 8. Miscellaneous	1. Labour (hiring) 2. Employment processing (e.g payroll) 3. Search firm costs 4. Bonuses 5. Miscellaneous	1. Labour (training) 2. Preceptor costs 3. Supply/ Equipment 4. Consultant costs 5. Miscellaneous	1. Reduced productivity prior to turnover for outgoing staff, supervisors and colleagues. 2. Reduced productivity from new staff during 'learning period' and supervisors and colleagues	1. Labour (exit interviews) 2. Severance and separation 3. Early retirement 4. Associated equipment 5. Miscellaneous

Vacancy costs lead the direct cost drivers of turnover, alongside hiring and training

- Across the studies identified, vacancy costs were among the highest contributors to the total cost of turnover. Studies from the US and Canada found that **vacancy costs accounted for between 41% - 78% of total RN turnover costs.**[7][8][9][10]
- The main drivers of high vacancy costs were **temporary staff replacement costs** and **overtime costs** for existing staff. For instance, one Australian study found temporary replacement accounted for approximately 90% of direct costs and nearly half of total turnover costs.[11]

Indirect costs including those related to productivity are also a significant contributor to turnover costs

- Several studies found that indirect costs related to productivity losses drive a substantial share of total turnover costs.[12][13][14]
- The impact of the indirect costs (particularly those related to productivity) on turnover are difficult to measure precisely and **estimates vary significantly**.
    - Within the NTCCM framework, indirect cost variables associated with orientation, training, and productivity account for approximately 13-22% of total turnover costs.[15][16]
    - Other studies, which measured turnover costs using institutional modelling, estimated that productivity accounts for 42-80% of total turnover costs.[17][18]
    - One study conducted in Canadian healthcare settings found that decreased productivity represented approximately 60% of the indirect turnover costs.[19]

What drives productivity loss associated with turnover?

Productivity costs are dispersed across multiple cost and performance mechanisms. These include:

1. Pre-turnover productivity loss: Productivity of the departing staff member typically drops during the three-month period immediately preceding a resignation. Supervisors and peers also lose efficiency while managing the impending transition.[20][21]

2. Decreased initial productivity of new hires: New employees operate at a deficit during their orientation period.[22] These costs are highly dependent on the experience level of the new hire. A new registered nurse (RN) may take 14 weeks to reach 90% productivity, whereas an experienced new hire may reach that level in only 6 weeks.[23] One study estimated lost productivity in the orientation period to cost between $1,000 - $6,000 per nurse depending on experience.[24]

3. Supervisor and coworker strain: Experienced staff and managers are required to spend time on recruiting, interviewing, and orienting new arrivals. This can reduce their productivity on other tasks.

What drives productivity loss associated with turnover?

4. Increased workload and burnout: Turnover creates vacancies that require the remaining staff to work overtime and manage heavier workloads, leading to lower morale, deteriorated mental health, and presenteeism (being present but functioning sub-optimally). This can trigger a self-reinforcing cycle where burnout drives further turnover and further productivity loss.[25] A 2022 survey of Canadian employers found that employee burnout (79%) and high turnover (77%) are currently the top concerns for employers, often feeding into one another.[26]

5. Operational delays and missed care: Vacancies reduce an organization's capacity to treat patients. Clinically, high turnover adversely affects the quality of coordinated care and is significantly correlated with increased likelihood of medical errors and adverse events, which represent significant rework and inefficiency. Higher turnover is significantly correlated with increased odds of medical errors.[27][28]

The cost of turnover for healthcare employers

Our evidence review identified 6 relevant estimates for the cost of staff turnover

Canadian data			
Citation	**Turnover costs/salary**	**Turnover Cost per nurse**	**Considerations**
Duffield et al. (2014) from O'Brien-Pallas et al., (2008)	NA	$26,652 USD $40,304 CAD (2025)	Derived from the original NTCCM framework and draws on both survey and administrative data. **It may be conservative relative to later revisions that incorporate broader vacancy, pre-turnover productivity, and early retirement costs.** Because the underlying data includes multiple nursing grades (RNs, LPNs/ENs, and nurse assistants), comparability to RN-specific analyses is limited.
O'Brien-Pallas et al., (2006)	NA	$10,100 USD $17,350 CAD (2025)	Derived from a small retrospective pilot study **relying primarily on manager-reported survey data**, with limited access to administrative financial databases. Challenges isolating cost components and the retrospective design introduce potential recall bias in productivity estimates.

Our evidence review identified 6 relevant estimates for the cost of staff turnover

United States data			
Citation	**Turnover costs/salary**	**Turnover Cost (USD) per nurse**	**Considerations**
NSI (2025)	NA	$61,110 USD $85,365 CAD (2025)	Derived from **self-reported survey data** from a national sample of hospitals. While it captures direct labour budget impacts (e.g., overtime, salary adjustments, agency premiums), it likely **underestimates broader productivity losses** emphasized in NTCCM-based models.
Jones (2004, 2005 & 2008)	1.2-1.3	$62,100 - $67,100 USD $111,277 - $120,237 CAD (2025)	Derived from **administrative data**. It is **comparatively comprehensive**, incorporating vacancy costs, pre-turnover productivity decline, and new-hire learning-curve losses, though some productivity elements rely on modeled assumptions.

Our evidence review identified 6 relevant estimates for the cost of staff turnover

United States data			
Citation	**Turnover costs/salary**	**Cost (USD) per nurse**	**Considerations**
Waldman et al. (2004), reported by Li & Jones (2013)	0.7-1.0	$23,487 - $31,486 USD $43,597 - $58,444 CAD (2025)	Derived from administrative data using an employment-phase framework similar to NTCCM. However, **turnover is defined using new hires rather than separations** and spans multiple health professions. This may blur the distinction between workforce expansion and true attrition, reducing comparability with RN-specific separation-based models.
Strachota et al.(2003) from Advisory Board Company, 2000	NA	$42,000 - $64,000 USD $87,250 - $102,326 CAD (2025)	Derived from an industry benchmarking report produced by the Advisory Board Company, a U.S.-based healthcare research and consulting firm that provides financial benchmarking services to hospitals. **The underlying methodology is not fully transparent or peer-reviewed**.

Estimating the retention - related cost savings of a DB pension plan

We estimate the cost savings related to turnover reduction that an Ontario healthcare employer might generate as a result of offering a DB plan. The estimate is based on the following assumptions:

- Staff of 1000 RNs, reflecting a relatively large hospital in ON
- Estimates of turnover costs of $78,000 (1x salary, 2026 Ziprecruiter ON RN data) or $40,000 (the more accurate of the two Canadian projections, in BIT's opinion)
- Turnover rate data in Ontario is very patchy and depends a lot on setting, but we assume 20%, following guidance from.[29][30]
- A turnover rate reduction of 2-6 percentage points. There is currently limited evidence to quantify the impact of DB pension plans on turnover. Available estimates range from ~20-40%.[31][32][33] If a healthcare organization has a baseline tenure of 5 years (20% baseline turnover rate), a 20% reduction in turnover caused by offering a DB pension would increase average tenure to 6.25 years. This reduces the turnover rate by 4pp.

The impact of reduced turnover caused by offering a defined benefit pension plan on employer costs

The following table estimates of the cost savings related to turnover reduction that an Ontario healthcare employer might generate as a result of offering a DB plan

Turnover reduction (%)	# of fewer exits	Cost per exit (CAD)	Annual cost savings (CAD)
2	20	$40,000	$0.8M
		$78,000	$1.6M
4	40	$40,000	$1.6M
		$78,000	$3.1M
6	60	$40,000	$2.4M
		$78,000	$4.7M

Our assessment of the evidence

Evidence gaps and modelling considerations

- The existing research offers a reasonably reliable and consistent indication of the cost categories generated by turnover (e.g., recruitment, temporary replacement, orientation, training, etc.). However:
    - These variables have been defined, measured, and applied inconsistently across studies, settings, and time period. As a result, the "point estimates" for overall costs vary significantly.
    - Virtually all of the existing research focuses on the nursing profession, excluding other groups of healthcare workers (e.g., technicians, administrative staff, physiotherapists etc.).
- We did not find any existing research, models, or calculators that directly quantified the impact of DB pensions on employer costs or productivity. Further, while not the direct focus of our review, we found few studies that *quantified* the extent to which DB plans reduce turnover or facilitate recruitment.
- The evidence presented in this evidence review **clearly indicates that the turnover reductions associated with DB plans reduce employer costs** by increasing retention and facilitating recruitment. We further have a **clear sense of the specific categories of cost / savings**. However, **developing relevant and accurate estimates for those savings in the Ontario healthcare sector will require further research and modelling** (see paths forward and considerations).

Paths forward and key considerations

Paths forward and key considerations

- **There are no existing models or calculators for Ontario healthcare employers to assess the cost savings** that DB plans would generate through reduced turnover.
    - Existing estimates are too old, too limited (e.g., in professions), and too imprecise.
- There is a clear set of cost factors, so **the development of a calculator is feasible** and would be beneficial in **advancing the case for defined benefit pension plans**.
- Our proposed approach is to set up a model based on the factors identified, fill it in where high-quality data is publicly available, validate the cost categories with employers, and then obtain representative data points for all missing variables.
    - We may also need better quantitative estimates of the impact of DB plans on turnover rates (which was not the focus of this evidence review; although we did some limited searching and turned up little)

Paths forward and key considerations

There are at least three approaches we could take to do this, ordered from simplest to most robust:

1. **Develop the calculator** by validating the factors (interviews). HOOPP can then use this calculator with individual employers to generate specific cost savings estimates. However, there would not be sufficient data to publish illustrative or specific savings estimates at a sectoral level.
2. **Develop the calculator and use it for case studies with a handful of employers**. After the steps noted above, BIT would facilitate a process with employers to enter real data into the calculator and develop estimates that could be published as illustrative scenarios.
3. **Develop the calculator and conduct a broad-based survey to capture data from a wide range of Ontario employers**. Instead of a handful of case studies, a major data collection effort would be undertaken to generate a sectoral estimate for total cost savings (and a number of specific employer-based scenarios).

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