



Parliamentary Budget Office - Election Policy Costing

NSW Parliament • Parliament House, Macquarie Street Sydney NSW 2000

Referred By: Australian Labor Party

Proposal No: B322

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Proposal Title: Nurse to patient ratios

Cluster: Health

General Government Sector Impacts

	2018-19 \$'000	2019-20 \$'000	2020-21 \$'000	2021-22 \$'000	4 year Total \$'000
Expenses (ex. depreciation)	-	28,161	158,683	229,463	416,307
Depreciation	-	-	-	-	-
Less: Offsets	-	-	-	-	-
Revenue	-	-	-	-	-
Net Operating Balance:	-	(28,161)	(158,683)	(229,463)	(416,307)

Capital Expenditure	-	-	-	-	-
Capital Offsets	-	-	-	-	-
Net Capital Expenditure:	-	-	-	-	-

Net Lending/(Borrowing):	-	(28,161)	(158,683)	(229,463)	(416,307)
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Total State Sector Impacts

Net Lending/(Borrowing):	-	(28,161)	(158,683)	(229,463)	(416,307)
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Notes and costing assumptions

This policy proposes introducing minimum nurse-to-patient ratios for the following NSW health facilities or roles, phased-in as shown in the table below. Based on advice from NSW Health, the PBO estimates the policy to cost \$416.3 million over the forward estimates, for a total cost over seven years to 2024-25 of \$1.3 billion. The various initiatives would cost around \$590 million per annum, in total, ongoing thereafter, although these costs would be gradually absorbed by adjustments in health growth funding.

Figure 1

Ward/role	Proposed nurse-to-patient ratios	Phase-in period
Emergency	See Table A1 in Appendix	1 July 2020 to 30 June 2024
Paediatric	1:3 + in charge for two shifts	1 July 2022 to 30 June 2025
Medical/surgical	1:4 (AM & PM) and 1:7 (night)	1 July 2020 to 30 June 2024
In-charge nurses (Peer Group A Hospitals)	One in-charge nurse with no patient load funded on two shifts	1 July 2020 to 30 June 2024
In-charge nurses (Peer Group B Hospitals)	One in-charge nurse with no patient load funded on two shifts	1 July 2020 to 30 June 2024
In-charge nurses (Peer Group C Hospitals)	One in-charge nurse with no patient load funded on one shift	1 July 2020 to 30 June 2024
Midwives	1:3 in all NSW postnatal wards	1 July 2020 to 30 June 2024
Specialling Nurses	1:4 (AM & PM) and 1:7 (night) - for all Peer Group A, B and C hospitals	From 1 July 2019 onwards
Mental health	1:4 (AM & PM) and 1:7 (night)	1 July 2022 to 30 June 2024

Notes and costing assumptions continued:

The policy states that additional nurses would be phased using assumptions of geometric growth (see Table A2). NSW Health advice indicates that 4,807 FTE positions would be needed to meet the proposed ratios.

General assumptions

The PBO assumes that there will be enough additional qualified nurses available to meet the policy's nurse-to-patient ratios. This is likely to be ambitious, but achievable over the forward estimates.

The number of nursing staff on each shift is calculated using the formula below. The number of staff required on each shift is rounded up after 50% (e.g. if 0.51 additional FTE is required, then the calculation rounds up the FTE to 1.00 for that shift).

$$\text{Total FTE required per shift} = \frac{\text{Number of Beds or Treatment Spaces}}{\text{Equivalent Ratio (AM or PM or Night)}}$$

The number of beds or treatment spaces per shift is determined to be the maximum available beds or treatment spaces on the particular ED, ward or unit in question, regardless of occupancy. This approach is taken on the basis that there must be capacity to accept patients into 100% of available beds/treatment spaces (i.e. no bed/treatment space closed or unavailable due to insufficient staffing). However, in wards and emergency departments where there is a moderate to significant gap between the daily average number of patients and the number of beds/treatment spaces, this approach will overestimate the FTE that would be required to introduce a shift by-shift ratio.

NSW Health has noted that the dynamic nature of hospitals and the health system results in changes to ward size and patient type over time, which could affect the number of nurses needed to meet the proposed ratios.

The policy states that nursing costs are to be based on the 2018-19 registered nurse 5th year workplace awards, escalated by 2.5% per annum in line with the NSW public sector wages policy. Costs include salaries, shift penalty rates, workers compensation and superannuation, and an 18.7% leave loading relief is also factored into the cost to reflect shift employment patterns.

All phase-in periods are calculated using assumptions of geometric growth, to a limit when targets are reached. This means that additional nurse numbers are phased in so that the number of additional nurses grows at a constant annual rate of 50% and reaches maturity at the conclusion of each ward or role's phase-in period (see Table A2 in the Appendix).

Ward- or role-specific assumptions

Emergency departments

For emergency departments (EDs), the policy proposes a range of nurse-to-patient ratios depending on the specialty or ward type (see Table A1). The ratios will be phased in from 1 July 2020 to 30 June 2024. The policy specifies that all currently funded treatment spaces are included, existing award requirements for resuscitation beds are met, Level 2 EDs are excluded, and existing award staffing requirements are not double counted (e.g. shift coordinator and triage).

NSW Health advises that this policy component would require an additional 1,415 full-time equivalent (FTE) nurses per annum from 2023-24 to meet the proposed ratios. Once the ratios are fully implemented in 2023-24, the ongoing, annual, cost of these additional staff is \$167.1 million (Table A3).

The number of staff required in EDs is assumed to grow in line with expected growth in ED presentations, and is based on NSW Health long term planning assumptions and Department of Planning and Environment population projections (1.3% in 2020-21 and 1.8% in 2021-22).

ED services are categorised in ascending order from limited services (RD level 1) to managing all complex emergencies (RD level 6). RD (Role Delineation) is a planning tool used to describe the minimum support services, workforce and other requirements for the safe delivery of clinical services.

Notes and costing assumptions continued:

The policy includes RD 3-6 only, with RDs 1-2 excluded from the costing. Additionally, only dedicated Medical Assessment Units (MAUs) have been included in the costing. MAUs are inpatient short-stay units that are usually close to, or co-located within, an ED.

Paediatrics

For paediatric nurses, the policy proposes minimum shift ratios of 1:3 plus an in-charge nurse for two shifts. The ratio will be phased in from 1 July 2022 to 30 June 2025. NSW Health has excluded paediatric wards with less than an average of three patients from the costing.

The number of staff required in paediatric wards is assumed to grow in line with expected growth in medical and surgical wards (2.5% in 2020-21 and 2.1% from 2021-22 onwards).

NSW Health advises that this policy component would require an additional 537 FTE nurses per annum from 2024-25 to meet the proposed ratios. Once the ratios are fully implemented in 2024-25, the ongoing, annual, cost of these additional staff is \$65 million (see Table A4).

Medical and surgical

The policy proposes minimum shift ratios of 1:4 (morning and afternoon) and 1:7 (night) for all medical and surgical wards in NSW hospitals classified under the NSW Hospital Peer Groups 2016 as peer groups A, B and C. These peer groups categorise hospitals with similar characteristics, predominantly for comparative reporting and service planning.

The ratios will be phased in from 1 July 2020 to 30 June 2024. NSW Health has only included overnight inpatient wards for the purpose of this costing. This includes Drug and Alcohol, Rehabilitation, Palliative Care, Short Stay, Transition, Psychogeriatric and Geriatric Evaluation Management wards. The costing excludes Day Only, Critical Care, and wards that are not open 24/7 or that only open on demand for a period of time.

The number of staff required is assumed to grow in line with expected growth in medical and surgical wards (2.5% in 2020-21 and 2.1% from 2021-22 onwards).

NSW Health advises that this policy component would require an additional 648 FTE nurses per annum from 2023-24 to meet the proposed ratios. Once the ratios are fully implemented in 2023-24, the ongoing, annual, cost of these additional staff is \$76.5 million (see Table A5).

In-charge (Peer Group A Hospitals)

The policy proposes one in-charge nurse with no patient load on two shifts in NSW hospitals classified under the NSW Hospital Peer Groups 2016 as Peer Group A. The ratio will be phased in from 1 July 2020 to 30 June 2024.

The number of staff required is assumed to grow in line with expected growth in medical and surgical wards (2.5% in 2020-21 and 2.1% from 2021-22 onwards).

NSW Health advises that this policy component would require an additional 687 FTE nurses per annum from 2023-24 to meet the proposed ratios. Once the ratios are fully implemented in 2023-24, the ongoing, annual, cost of these additional staff is \$81.1 million (see Table A6).

In-charge (Peer Group B Hospitals)

The policy proposes one in-charge nurse with no patient load on two shifts in NSW hospitals classified under the NSW Hospital Peer Groups 2016 as Peer Group B. The ratio will be phased in from 1 July 2020 to 30 June 2024. The number of staff required is assumed to grow in line with expected growth in medical and surgical wards (2.5% in 2020-21 and 2.1% from 2021-22 onwards).

Notes and costing assumptions continued:

NSW Health advises that this policy component would require an additional 353 FTE nurses per annum from 2023-24 to meet the proposed ratios. Once the ratios are fully implemented in 2023-24, the ongoing, annual, cost of these additional staff is \$41.7 million (see Table A7).

In-charge (Peer Group C Hospitals)

The policy proposes one in-charge nurse with no patient load on one shifts in NSW hospitals classified under the NSW Hospital Peer Groups 2016 as Peer Group C. The ratio will be phased in from 1 July 2020 to 30 June 2024.

The number of staff required is assumed to grow in line with expected growth in medical and surgical wards (2.5% in 2020-21 and 2.1% from 2021-22 onwards).

NSW Health advises that this policy component would require an additional 239 FTE nurses per annum from 2023-24 to meet the proposed ratios. Once the ratios are fully implemented in 2023-24, the ongoing, annual, cost of these additional staff is \$28.2 million (see Table A8).

Midwives

For midwives, the policy proposes minimum shift ratios of 1:3 in all NSW postnatal wards. The ratio will be phased in from 1 July 2020 to 30 June 2024.

The number of staff required is assumed to grow by 2% per annum over the duration of the phase-in period. NSW Health advises that this growth is based on workforce trends since the introduction of Birthrate Plus in 2011. Birthrate Plus is the methodology used in NSW maternity services to calculate staffing needs for midwifery care, and captures the increasing complexity of maternity services.

NSW Health advises that this policy component would require an additional 631 FTE midwives per annum from 2023-24 to meet the proposed ratios. Once the ratios are fully implemented in 2023-24, the ongoing, annual, cost of these additional staff is \$74.5 million (see Table A9).

Specialising nurses

The policy proposes minimum shift ratios of 1:4 (morning and afternoon) and 1:7 (night) for 'specialising care' needs in NSW hospitals classified under the NSW Hospital Peer Groups 2016 as peer groups A, B and C. These ratios will apply from 1 July 2019, with no phase-in period specified in the policy.

There is no state wide definition or standard for the term 'special'. For the purposes of this costing, special is assumed to be an additional resource required to provide care to a patient with clinical needs greater than what is usually required by patients on a relevant ward. For example, additional need may result from behaviour or mental health disturbances or from the increased severity of the medical condition or co-morbidities. It is assumed that the nurses providing specialising care are over and above the nurses that are required to meet the prescribed nurse-to-patient ratios in this costing.

NSW Health advises that this policy component would require an additional 250 FTE nurses per annum from 2019-20 to meet the proposed ratios. Once fully implemented, the ongoing, annual, cost from 2020-21 is \$29.6 million (see Table A10).

Mental health

For mental health nurses, the policy proposes minimum shift ratios of 1:4 (morning and afternoon) and 1:7 (night) for the approximately 37 acute adult mental health units currently applying the award nursing hours system. The ratios will be phased in from 1 July 2022 to 30 June 2024. The number of staff required is assumed to grow in line with expected growth in medical and surgical wards (2.5% in 2020-21 and 2.1% from 2021-22 onwards).

Appendix

NSW Health advises that this policy component would require an additional 35 FTE nurses per annum from 2023-24 to meet the proposed ratios. Once the ratios are fully implemented in 2023-24, the ongoing, annual, cost of these additional staff is \$4.1 million (see Table A11).

Table A1 - Proposed Emergency Department nursing ratios

	AM	PM	Night
Resuscitation Beds	1:1	1:1	1:1
Level 4 - 6 EDs	1:3 + in charge + triage	1:3 + in charge + 2 x triage	1:3 + in charge + triage
Level 3 EDs	1:3 + in charge + triage	1:3 + in charge + triage	1:3 + in charge + triage
EMUs	1:4	1:4	1:4
MAUs	1:4	1:4	1:4

Table A2 – Geometric growth assumptions used for staff phase-in

*X is the initial increase; Y is the total additional number of staff at the end of the phase-in period

Year 1	Year 2	Year 3	Year 4	...	Final year
X	X * 1.5	X * 1.5 ²	X * 1.5 ³	...	X * 1.5 ^T -1 = Y

Table A3 - No and cost (\$'000) of emergency department nurses

2019-20	2020-21	2020-21	2021-22	2022-23	2023-24	Total
-	-	419	629	943	1,415	-
-	-	45,982	70,698	108,698	167,123	392,501

Table A4 - No and cost (\$'000) of paediatric nurses

2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	TOTAL
-	-	-	239	358	537	-
-	-	-	27,501	42,283	65,010	134,793

Table A5 - No and cost (\$'000) of medical/surgical nurses

2019-20	2020-21	2021-22	2022-23	2023-24	Total
-	192	288	432	648	-
-	21,058	32,376	49,778	76,534	179,746

Table A6 - No and cost (\$'000) of in-charge nurses (Peer Group A)

2019-20	2020-21	2021-22	2022-23	2023-24	Total
-	204	305	458	687	-
-	22,325	34,325	52,774	81,140	190,564

Table A7 - No and cost (\$'000) of in-charge nurses (Peer Group B)

2019-20	2020-21	2021-22	2022-23	2023-24	Total
-	105	157	235	353	-
-	11,471	17,637	27,117	41,692	97,917

Appendix (continued)

Table A8 - No and cost (\$'000) of in-charge nurses (Peer Group C)

2019-20	2020-21	2021-22	2022-23	2023-24	Total
-	71	106	159	239	-
-	7,767	11,941	18,360	28,228	66,295

Table A9 - No and cost (\$'000) of midwives

2019-20	2020-21	2021-22	2022-23	2023-24	Total
-	187	280	421	631	-
-	20,505	31,527	48,472	74,526	175,030

Table A10 - No and cost (\$'000) of specialising nurses

2019-20	2020-21	2021-22	Total
250	256	262	-
28,161	29,575	30,960	88,696

Table A11 - No and cost (\$'000) of mental health nurses

2019-20	2020-21	2021-22	2022-23	2023-24	Total
-	-	-	23	35	-
-	-	-	2,689	4,134	6,822