

Supplementary Table 1: Number of young people absent or withdrawn from a NAPLAN assessment by grade

	Grade 3				Grade 5				Grade 7				Grade 9			
	Burn case		Comparison		Burn case		Comparison		Burn case		Comparison		Burn case		Comparison	
	<i>n</i>	% ¹	<i>n</i>	% ¹	<i>n</i>	% ¹	<i>n</i>	% ¹	<i>n</i>	% ¹	<i>n</i>	% ¹	<i>n</i>	% ¹	<i>n</i>	% ¹
Absent for NAPLAN assessment																
Numeracy	97	2.4	56	1.4	83	2.6	58	1.8	115	5.1	57	2.5	124	9.4	35	2.6
Reading	86	2.2	39	1.0	69	2.2	49	1.5	93	4.1	50	2.2	107	8.1	23	1.7
Withdrawn from NAPLAN assessment																
Numeracy	45	1.1	21	0.5	30	0.9	13	0.4	18	0.8	6	0.3	8	0.6	7	0.5
Reading	86	2.2	39	1.0	31	1.0	15	0.5	18	0.8	6	0.3	7	0.5	7	0.5

¹ Percent calculated for young people hospitalised after a burn and comparison cohorts available to take each NAPLAN assessment.

NAPLAN: National Assessment Plan for Literacy and Numeracy.

Supplementary Table 2: Chronic health conditions and ICD-10-AM classifications

Health condition	ICD-10-AM classifications
Circulatory system	
Hypertension	I10-I15
Digestive system and allergies	
Celiac disease and other serious allergies	K52.2, K90.0, T78.0, T78.2, T78.4
Endocrine, nutritional and metabolic conditions	
Diabetes	E09-E14
Obesity	E66
Cystic fibrosis	E84
Immune system conditions and coagulation defects	
Anaemia	D50-D53 and D55-D64
Coagulation defects (e.g. haemophilia)	D65-C68
Mental health conditions	
Autism spectrum disorders	F84
Behavioural and emotional disorders of childhood	F90-F98
Cognitive and behavioural delay	F80-F83 and F88-F89
Eating disorders	F50
Hyperkinetic disorder	F90
Mental retardation	F70-F79
Mood affective disorders	F30-F39
Neurotic, stress-related and somatoform disorders	F40-F48
Personality disorders	F60-F69
Schizophrenia, schizotypal and delusions disorders	F20-F29
Neoplasms	
All malignancies	C00-D48
<i>Acute lymphoblastic leukaemia and acute myeloid leukaemia</i>	C91.0, C92.0
<i>Brain cancer</i>	C71
Nervous system conditions	
Cerebral palsy	G80
Epilepsy	G40
Renal conditions	I12.0, I13.1, N03, N05, N18-N19, N25.0, Z49, Z94.0, Z99.2
Respiratory conditions	
Chronic lower respiratory disease	J40-J47
<i>Asthma</i>	J45

Risk of a National Assessment Plan for Literacy and Numeracy (NAPLAN) numeracy or reading assessment below the National Minimum Standard for Grade 3, 5, 7 or 9 separately.

Generalised linear regression was used to assess the difference in proportions of performances below the national minimum standards (NMS) (i.e. binary variable – Y/N below NMS) for each assessment for the school grades 3, 5, 7 and 9 for young people hospitalised after a burn and their matched counterparts (Supplementary Table 3). The generalised linear regression was used to compare performance at each Grade separately to assess whether academic performance in a particular Grade was more adversely affected by hospitalisation for a burn injury.

For each assessment, separate models were fitted using generalised estimating equations (GEE) with binomial distribution and a log link function. Adjusted relative risks (ARR) and 95% confidence intervals (CIs) were calculated. Variables were included in the models that had previously been associated with school performance and forward selection was used to sequentially add covariates to the models, with significance assessed using p-values ($p < 0.05$).

The final models included burn status (i.e. case-comparison), sex, LBOTE, socioeconomic status of residential area, highest level of education for any parent/guardian (i.e. bachelor or higher degree or other) and log of hospital LOS. As matched counterparts could have nil hospital LOS, a constant value was added to LOS before log transformation. The log of hospital LOS was included within the regression models in recognition that some young people may spend more days in hospital compared to others and that hospital LOS would provide a measure of hospital exposure over the study time period.

Supplementary Table 3: Adjusted relative risk of a below the national minimum standard NAPLAN assessment for young people hospitalised after a burn compared to a matched comparison for grades 3 and 5 by assessment

	n ¹	Numeracy				Reading			
		RR ²	95%CI	ARR ³	95%CI	RR ²	95%CI	ARR ³	95%CI
School grade⁴									
Grade 3 ⁵	4,275	1.65****	1.29-2.10	1.32*	1.01-1.72	1.66****	1.32-2.08	1.57****	1.25-1.96
Grade 5 ⁶	3,310	1.64***	1.27-2.12	1.31	0.98-1.74	1.52***	1.22-1.89	1.45***	1.17-1.80
Grade 7 ⁷	2,150	2.32****	1.58-3.41	2.22****	1.51-3.25	1.34	0.99-1.81	1.28	0.95-1.73
Grade 9 ⁸	950	3.38**	1.61-8.10	3.38**	1.61-7.10	1.81**	1.22-2.70	1.80**	1.19-2.60

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; **** $p < 0.0001$ NAPLAN: National Assessment Plan for Literacy and Numeracy.

¹n=number with hospitalised with a burn and excludes young people with missing values for socioeconomic status, language background other than English, school sector and remoteness area of school.

²Undadjusted relative risk

³Adjusted relative risk

⁴Reference groups of no burn hospitalisation, male, English-speaking, least disadvantaged, bachelor or higher degree, and hospital length of stay.

⁵Grade 3 numeracy adjusted for burn status, sex, socioeconomic status, parental education and hospital length of stay; reading adjusted for burn status, sex, language background other than English, socioeconomic status and parental education.

⁶Grade 5 numeracy adjusted for burn status, sex, language background other than English, socioeconomic status, parental education and hospital length of stay; reading adjusted for burn status, sex, language background other than English, socioeconomic status, and parental education.

⁷Grade 7 numeracy adjusted for burn status, sex, socioeconomic status, and parental education; reading adjusted for burn status, sex, language background other than English, socioeconomic status and parental education.

⁸Grade 9 numeracy adjusted for burn status and socioeconomic status; reading adjusted for burn status, sex, socioeconomic status and parental education.

Supplementary Table 4a: Multilevel model of characteristics associated with a below the national minimum standard NAPLAN assessment for all young people hospitalised after a burn compared to a matched comparison by assessment

	Numeracy ¹				Reading ²			
	RR ³	95%CI	ARR ⁴	95%CI	RR ³	95%CI	ARR ⁴	95%CI
Burn								
No	1		1		1		1	
Yes	1.76**	1.50-2.07	1.15	0.94-1.42	1.58**	1.37-1.83	1.23*	1.02-1.49
Gender								
Male	-	-	1		-	-	1	
Female	-	-	0.75*	0.64-0.87	-	-	0.60**	0.51-0.69
Chronic health condition								
No	-	-	-	-	-	-	1	
Yes	-	-	-	-	-	-	1.77*	1.12-2.80
LBOTE								
No	-	-	1		-	-	1	
Yes	-	-	0.80*	0.66-0.96	-	-	0.74*	0.63-0.88
Socioeconomic status								
Most disadvantaged	-	-	0.53**	0.39-0.72	-	-	0.32**	0.23-0.44
2	-	-	0.69*	0.51-0.94	-	-	0.41**	0.29-0.58
3	-	-	0.74	0.53-1.2	-	-	0.39**	0.27-0.54
4	-	-	1.06	0.69-1.64	-	-	0.64*	0.42-0.99
Least disadvantaged	-	-	1		-	-	1	
NAPLAN Grade								
3	-	-	1		-	-	1	
5	-	-	1.24*	1.02-1.50	-	-	1.06	0.91-1.24
7	-	-	1.75*	1.27-2.43	-	-	0.85	0.69-1.04
9	-	-	1.16	0.99-1.37	-	-	1.24*	1.07-1.43
Parental education								
Bachelor/higher degree	-	-	1		-	-	1	
Other	-	-	0.35**	0.27-0.46	-	-	0.39**	0.31-0.49
School sector								
Government	-	-	1		-	-	1	
Catholic	-	-	0.97	0.62-1.51	-	-	0.93	0.65-1.33
Independent	-	-	0.39**	0.29-0.51	-	-	0.45**	0.36-0.57
	Covariance		Covariance		Covariance		Covariance	
AR(1) covariance	0.30		0.24		0.43		0.34	

* $p < 0.05$; ** $p < 0.0001$ NAPLAN: National Assessment Plan for Literacy and Numeracy

¹Numeracy adjusted for burn status, school sector, sex, language background other than English, socioeconomic status, NAPLAN grade, parental education and hospital length of stay.

²Reading adjusted for burn status, school sector, sex, comorbidities, language background other than English, socioeconomic status, NAPLAN grade, parental education and hospital length of stay.

³Unadjusted relative risk.

⁴Adjusted relative risk.

Supplementary Table 4b: Multilevel model of characteristics associated with a below the national minimum standard NAPLAN assessment for young males hospitalised after a burn compared to a matched comparison by assessment

	Numeracy ¹				Reading ²			
	RR ³	95%CI	ARR ⁴	95%CI	RR ³	95%CI	ARR ⁴	95%CI
Burn								
No	1		1		1		1	
Yes	1.57**	1.29-1.92	1.05	0.81-1.35	1.49**	1.25-1.76	1.14	0.91-1.43
Chronic health condition								
No	-	-	-	-	-	-	-	-
Yes	-	-	-	-	-	-	-	-
LBOTE								
No	-	-	1		-	-	1	
Yes	-	-	0.75*	0.59-0.95	-	-	0.77*	0.63-0.95
Socioeconomic status								
Most disadvantaged	-	-	0.35**	0.22-0.55	-	-	0.31**	0.21-0.47
2	-	-	0.46*	0.29-0.73	-	-	0.38**	0.25-0.57
3			0.53*	0.33-0.85			0.38**	0.25-0.58
4	-	-	0.92	0.48-1.74	-	-	0.61	0.36-1.03
Least disadvantaged	-	-	1		-	-	1	
NAPLAN Grade								
3	-	-	1		-	-	1	
5	-	-	1.19	0.93-1.53	-	-	0.96	0.80-1.15
7			1.64*	1.09-2.45			0.72*	0.57-0.91
9	-	-	1.13	0.92-1.39	-	-	1.14	0.96-1.36
Parental education								
Bachelor/higher degree	-	-	1		-	-	1	
Other	-	-	0.36**	0.26-0.50	-	-	0.39**	0.30-0.51
School sector								
Government	-	-	1		-	-	1	
Catholic	-	-	0.93	0.50-1.71	-	-	1.11	0.72-1.71
Independent			0.34**	0.23-0.49			0.53**	0.41-0.69
	Covariance		Covariance		Covariance		Covariance	
AR(1) covariance	0.33		0.25		0.50		0.40	

* $p < 0.05$; ** $p < 0.0001$. NAPLAN: National Assessment Plan for Literacy and Numeracy.

¹ Numeracy adjusted for burn status, school sector, language background other than English, socioeconomic status, NAPLAN grade, parental education and hospital length of stay.

²Reading adjusted for burn status, school sector, language background other than English, socioeconomic status, NAPLAN grade, parental education and hospital length of stay.

³Unadjusted relative risk.

⁴Adjusted relative risk.

Supplementary Table 4c: Multilevel model of characteristics associated with a below the national minimum standard NAPLAN assessment for young females hospitalised after a burn compared to a matched comparison by assessment

	Numeracy ¹				Reading ²			
	RR ³	95%CI	ARR ⁴	95%CI	RR ³	95%CI	ARR ⁴	95%CI
Burn								
No	1		1		1		1	
Yes	2.18**	1.65-2.89	1.34	0.93-1.94	1.81**	1.39-2.35	1.72**	1.33-2.23
Chronic health condition								
No	-	-	-	-	-	-	1	
Yes	-	-	-	-	-	-	2.44*	1.19-5.01
LBOTE								
No	-	-	-	-	-	-	1	
Yes	-	-	-	-	-	-	0.68*	0.50-0.92
Socioeconomic status								
Most disadvantaged	-	-	-	-	-	-	0.33*	0.18-0.58
2	-	-	-	-	-	-	0.49*	0.27-0.87
3			-	-			0.39*	0.22-0.70
4	-	-	-	-	-	-	0.73	0.34-1.56
Least disadvantaged	-	-	-	-	-	-	1	
NAPLAN Grade								
3	-	-	1		-	-	1	
5	-	-	1.33	0.95-1.85	-	-	1.36	1.00-1.84
7			2.06*	1.15-3.69			1.29	0.83-2.00
9	-	-	1.23	0.94-1.62	-	-	1.50*	1.14-1.96
Parental education								
Bachelor/higher degree	-	-	1		-	-	1	
Other	-	-	0.34**	0.22-0.51	-	-	0.40**	0.27-0.61
School sector								
Government	-	-	1		-	-	1	
Catholic	-	-	1.03	0.53-2.00	-	-	0.53	0.27-1.05
Independent			0.47*	0.31-0.72			0.28**	0.17-0.46
	Covariance		Covariance		Covariance		Covariance	
AR(1) covariance	0.26		0.23		0.30		0.25	

* $p < 0.05$; ** $p < 0.0001$. NAPLAN: National Assessment Plan for Literacy and Numeracy.

¹Numeracy adjusted for burn status, school sector, NAPLAN grade, parental education and hospital length of stay.

²Reading adjusted for burn status, school sector, comorbidities, NAPLAN grade, language background other than English, socioeconomic status and parental education.

³ Unadjusted relative risk.

⁴ Adjusted relative risk.

Supplementary Table 5: Adjusted relative risk of not completing high school for young people hospitalised after a burn compared to a matched comparison by grade

	Year 10 n=663 in each cohort			Year 11 n=629 in each cohort			Year 12 n=520 in each cohort		
		<i>n</i>	% ¹		<i>n</i>	% ¹		<i>n</i>	% ¹
No school completion									
Case		27	4.1		202	32.1		202	38.9
Comparison		7	1.1		80	12.7		92	17.7
	n²	ARR^{3,4}	95%CI	n²	ARR^{3,5}	95%CI	n²	ARR^{3,6}	95%CI
All persons	1326	3.86*	1.68-8.86	1258	2.45**	1.89-3.18	1040	2.09**	1.63-2.67

* $p < 0.001$; ** $p < 0.0001$;

¹ Percent calculated for young people in case and comparison cohorts not completing the school grade.

² Number of students hospitalised with burn not completed the year.

³ Adjusted relative risk.

⁴ Year 10 all person adjusted relative risk for burn status and sex.

⁵ Year 11 all person adjusted relative risk for burn status, sex, language background other than English, socioeconomic status, parental education and residential geographic location.

⁶ Year 12 all person adjusted relative risk for burn status, sex, language background other than English, socioeconomic status and parental education.