

## Supplementary Digital Content 4

Probability of ICU admission and proportion of ICU admissions with SRMCs								
Reference	Study years	Risk group	Age (years)	Number of children		Probability of ICU admission		
				Total N	SRMC n (%)	SRMC n (%)	Healthy n (%)	OR (95 % CI)
<b>Probability of ICU admission if hospitalised - SRMCs vs 'healthy'</b>								
Blyth (2018)	2017	AIH	≤16	1268	572(45)	113 (19.8)	71 (10.2)	2.17 (1.57-2.99)
Burton (2008)	2006-2007	NACI 2006-2007 + additional SRMC <sup>1</sup>	≤16	371	188 (50)	22 (11.7)	20 (10.9)	1.08 (0.57-2.05)
Chaves (2014)	2003-2012	SRMCs <sup>2</sup>	<1	3157	796 (25)	162 (20.4)	210 (8.9)	2.62 (2.09-3.27)
Coffin (2007)	2000-2004	ACIP 2005-2006	≤21	745	363 (49)	82 (22.6)	56 (14.7)	1.70 (1.17-2.47)
Launes (2013)	2010-2011	chronic conditions <sup>3</sup>	0.5-<18	143	55 (38)	5 (9.1)	15 (17.0)	0.49 (0.17-1.42)
Moore (2006)	2003-2004	chronic conditions <sup>4</sup>	≤18	505	212 (41)	32 (15.1)	21 (7.2)	2.30 (1.29-4.12)
PHAC (2006)	2004-2005	NACI 2004-2005 + additional SRMCs <sup>6</sup>	≤16	391	211(54)	33 (15.6)	15 (8.3)	2.04 (1.07-3.89)
Rojo (2006)	1996-2003	chronic conditions <sup>5</sup>	<3	117	48 (41)	10 (20.8)	0 (-)	-
Sam (2010)	2002-2007	ACIP 2008	<15	132	48 (36)	4 (8.3)	8 (9.5)	0.86 (0.25-3.03)
Schrag (2006)	2003-2004	ACIP 2004 + neuromuscular or cognitive dysfunction	<18	1308	339 (26)	43 (12.7)	104 (10.7)	1.2 (0.83-1.77)
<b>Probability of ICU admission if hospitalised - studies examining specific SRMC condition only</b>								
Feldman (2017)	2004-2012	liver transplant	<18	143	143 (100)	37 (25.9)	-	-
Lee (2015)	1999-2011	ALL and other comorbidities <sup>7</sup>	<19	577	577 (100)	66 (10.5)	-	-
<b>Proportion of ICU admissions with SRMCs</b>								
Kaczmarek (2016)	1997-2013	AIH	<16	704	287 (41)	287 (40.8)	417 (59.2)	-
Spaeder (2011)	2002-2008	ACIP 2007	<18	59	36 (61)	36 (44.1)	23 (39)	-

Footnote: 1 Included neurological/ developmental disorder, genitourinary, gastrointestinal or hepatic disorder, nutritional disorder, bone joint or connective tissue disorder, multi system disorder or syndrome, relevant concurrent acute infection, prematurity, admitted within first year of life; 2: included lung and cardiovascular disease; metabolic disease; renal disease; neurologic and neuromuscular disorder; immunocompromised condition and prematurity (<37 weeks of gestation); 3: included in results as pulmonary, neurological, cardiac, renal, diabetes, immunodeficiency; 4: pulmonary disease, neurologic disease, immune deficiencies, hematologic, cardiac, gastrointestinal, malignancy, renal, endocrine/metabolic; 5: chronic lung disease, congenital heart disease, HIV, anticancer treatment, malnutrition, drepanocytosis, coeliac, mitochondrial diseases, chronic renal failure; 6: those listed at 1 and chronic infection or severe skin disorder; 7: chronic pulmonary, cardiac, neuromuscular or renal conditions.