

Duke 36

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**From:** Darren Keating  
**To:** Martin Carter; Toni Hoffman  
**Date:** 25/10/2004 3:58pm  
**Subject:** ICU RN OT hours

Hi Martin & Toni

As you know RN OT hours in ICU have dramatically increased in the period Jul-Sep 04 and the DM has asked for review of the reasons for such.

As can be seen in the attached sheet (based upon ICU data), there has been an increase in YTD total ICU patients, similar numbers of ventilated patients and significantly increased ventilatory support hours.

Can you provide a breakup of the ventilated patients and their diagnosis admitted to ICU during this period with hours of ventilatory support ?

Is there a trend in age, co-morbidities or major diagnosis?

Your review and analysis would be helpful.

Can you provide this data by COB 1 Nov 04 ?

Thanks

Darren

**CC:** Linda Mulligan; Paddy Martin

**From:** Toni Hoffman  
**To:** Darren Keating  
**Date:** 1/11/2004 2:18pm  
**Subject:** ICU stats

Dear Darren,

I broke up all of the ventilated pts into diagnosis, age and co-morbidities. Nothing stood out. The main issue was the length of stay; the patients' diagnoses seems pretty much the same, although there has been an increase in the ratio of ICU patients to CCU patients, in fact in some months there were more ICU patients than CCU (IT usually ran around 60% CCU to 40% ICU). The other issue is the number of vents at any one time. Up until about 18 mths ago we were very strict about transferring ventilated patients out after 24-48 hrs. It has become more the norm to wait until we have 2 or even 3 vents before trying to transfer them. Several issues have impacted upon this decision, from individual physician/surgeon preference, to no beds available in Brisbane, to Brisbane not wanting the type of patients we have. I shall enclose the breakdown of figures that I have done, if there is anything else I can help with please ask

Thanks Toni

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**CC:** Linda Mulligan

ICU DATA July 2003-SEPT 2004.

Number of Ventilated patients has stayed static around 90-100. This is only Invasive ventilation. We do not have accurate hours yet of non invasive ventilation . ie Bipap. We are in the process of collecting this data. I have enclosed the stats we keep. We are in the process of changing these stats to include some different ones. Some we no longer need to keep , such as lysis, as it is mostly done in DEM now.. I have no record of Planned admissions, this goes through Liz Allan, except for the allocation book which tells me we have about one per week. All the rest are emergency admissions. We have no stats on the number of times we have tried to transfer a patient out and couldn't due to bed blockage, but we shall start keeping that data now. Rather than me go back through the budget for the whole 2 years, to ascertain how many discharges, This data can be easily accessed from the "gail sheet" or through DQDSU. I have added transfers and deaths in the stats I have sent you, but it doesn't give a total number. Occupancy rates are quoted in the "gail sheet " at around 79-85 %.. The number of ventilated hour has increased

There are many inappropriate admissions because many of the patients are not seen by a consultant before they are admitted. The PHO is able to admit patients here and they should not, as they then leave and the patient is left with no orders etc. The admission policy states the ICU consultant should be notified prior to admission, they should also see the patient to ascertain whether it is appropriate to admit that patient into the ICU.

Bed blockage is a huge problem, we have patients waiting for days for a ward bed , the N/m are reluctant to give up the bed until ICU has to take an emergency and then there is a huge scramble to transfer out a patient, clean the bed area and get another.

Equipment issues. Last week we had a patient who was admitted into the ICU isolation room ? TB, because the one on medical ward was broken. This gentleman, discharged himself , but was given a pass to return at his leisure to the ICU. This went on for 6 days, whilst we awaited his sputum specimens, partly because there were no sputum samples sent off early as requested.

Admission and discharge policy, last reviewed by Dr Martin Carter and myself , last year. Shall send a copy, otherwise should be on G drive.

Up until about 2 yrs ago, ICU was very strict adhering to the 24-48 rule of transferring out patients. Now we may wait many days, before making the initial phone call. Due to the reluctance of one of the surgeons, one of the doctors refuses to transfer patient out, which mean it impacts on our staffing overtime and morale.

The major issue which has used up all of our OT for the year is the number of ventilated patients at once. We can easily care for them when they are spread out over the year, but all at once uses our resources. The types of patients admitted should be more thoroughly examined. The unit should be a closed unit, except for CCU patients , all patients on BIPap should be under the care of the Anaesthetists for continuity of care.

The Bipap machine has increased our workload as well as the require as nearly the same number of nursing staff as a ventilated patient.

# ICU Ventilator Stats

	Age	Diagnosis	Vent Hours	Other	
Jul-03	1928	pneumonia	5		
	1958	pneumonia	71/2		
	1933	post arrest	2		
	1941	apnoea	48	delay in transferring pt to brisbane	
	1924	SB resection	15	biliary peritonitis	
	1927	perf bowel	6		
	1935	acute resp distress	96		
	1923	post arrest	24		
	1941	post op perf DU	48	x 2 visits	
	1972	post hanging	72 hrs		
			total vent hrs	323	
10 323					
Aug-03	1931	AMI Metalyse	4 1/2	cerebellar he	
	1921	AMI Metalyse	16	cerebral he	
	1987	OD	45		
	1923	Hypertension/ laparotomy	28		
	1919	COPD	(120)		
	1924	Resp arrest	24		
	1966	cardiac arrest.	6		
	1999	Burns	4		
	1960	DKA	19		
	1985	organophosphate poisoning	24	stayed in ICU 4 days longer than nec.	
			TOTAL VENT HRS	290	
10 290					
Sep-03	1939	CCF AF	35		
	1982	Scoline apnoea	1 1/2		
	1935	AMI / cardiogenic shock	3		
	1927	Repair of AAA	(179)		
	1931	Exacerbation of COPD	12		
	1932	perforated DU	(168)		
	1922	COPD	12		
			TOTAL VENT HOURS	410	
	7 586				
			(10)	(9)	
	160	- COPD	Ann repair	119	
166	- Pneumonia	Perf du	168		
240	- Post fetal	Post op acute	312		
148	- Neck drain	Bowel ob.	216		
288	- Cerebral bleed	Post op acute	161		
240	- Multi Org. Fail	Locall infection	141		
240	- ME	Bowel ob	170		
240	- Post Arrest	HA	204		
170	- Pneumonia	Lap.	216		
154	- OD				

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# ICU Ventilator Stats

Month	Age	Diagnosis	Vent Hours	Other
Apr-04	1952	post arrest	13	
	1925	cardiac arrest	31	
	1959	multi organ failure	240	
	1927	post op	3	
	1927	cardiac arrest	40	
	1942	post op colectomy	23	
	1933	Bowel Obstruction	216	
		total vent hrs	566	
May-04	1979	stabbing	11	
	1959	post op lap	14	
	1944	chest pain	240	
	1982	Head injury	7 1/2	
		total vent hrs	272	
Jun-04	1987	OD	154	
	1955	post op arrest	161 hrs	
	1921	post op arrest	2 1/2	
	1930	SAH	2	
	1941	resp failure	3	
	1948	collapse /AF	7	
	1991	pneumonia	5 1/2	
	1987	OD tegretol	48	
	1922	post arrest	6 hrs	
	1933	insertion vascath pef RIJ/ trach	141	perforated trachea.
	1928	SAH	<del>29</del>	
		total vent hours	559	

# ICU Ventilator Stats

Jul-04	<u>Age</u>	<u>Diagnosis</u>	<u>Vent Hours</u>	<u>Other</u>
14 381	1925	sepsis	46	
	1964	MVA	24	
	1958	resp failure	24	
	1954	OD	17	
	1943	collapse resp failure	22	
	1922	collapse VT	22	
	1986	HI	31/2	
	1934	Pancreatitis	58	
	1947	Resp Failure	22	
	1922	post arrest	2	
	1926	post embolectomy	41	
	1967	post arrest	240	
	1948	crush injury to chest	10	
	1936	Brain Stem Infarct	3	
	total vent hours	534		
Aug-04	<u>Age</u>	<u>Diagnosis</u>	<u>Vent Hours</u>	<u>Other</u>
13 702	1928	No Diagnosis entered	96	
	1910	Bowel Obstruction	120	
	1987	MVA	22	
	1918	Post op	96	
	1941	Sepsis	24	
	1941	Head Injury	204	
	1965	Cardiac Arrest	48	
	1948	SAH	6	
	1977	MVA	72	
	1931	MI	81	
	1965	HI	24	
	1943	Post Arrest	24	
	1945	Post Arrest	96	
		Total Vent Hours	913	
Sep-04	<u>Age</u>	<u>Diagnosis</u>	<u>Vent Hours</u>	<u>Other</u>
8 326	1942	Ruptured AAA	8	
	1937	Post op repair pelvic fistula	15	
	1985	# base of skull	6	
	1942	CCF	24	
	1952	APO / AF	72	
	1950	Pneumonia	120	all one weekend
	1965	MVA	12	
	1961	MVA Ruptured Spleen	4	Delay surgeon issue
	Total Vent Hours	261		



# 2002

	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	total
Total pts	76	71	91	64	63	58	67	62	51	55	47	59	764
ICU	27	25	38	22	31	25	22	22	20	20	21	32	305
CCU	48	46	51	40	32	32	44	40	30	34	23	26	446
Paeds	1	0	2	2	0	1	1	0	1	1	3	1	13
Died	5	1	5	1	2	2	1	4	0	1	1	4	27
Ventilated	7	8	6	4	12	4	9	10	6	5	7	12	90
Retrieved	10	9	15	8	9	10	12	12	10	7	11	10	123
CVC inserted	5	3	5	2	4	1	5	5	2	3	6	16	57
Pneumothorax	0	0	0	0	0	0	1	1	0	0	0	0	2
Unplanned readmission	1	1	0	0	0	0	0	0	0	0	0	0	2
Snake bite	6	1	5	0	0	0	0	0	0	0	4	1	17
Overdose	10	5	11	2	5	1	2	1	1	2	5	1	46
CPAP	0	1	1	2	3	0	1	4	2	1	0	2	17
MI	14	12	10	8	11	12	14	11	10	14	11	12	139
Thrombolysis	7	4	2	4	3	3	3	3	0	2	0	5	35

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97/8 - 79  
 98/9 - 93.  
 99/0 Jan 51.

# 2003

	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	total
Total patients	57	59	60	45	50	51	49	55	45	43	43	46	603
ICU	22	26	20	23	15	25	20	28	24	16	29	24	272
CCU	34	32	38	21	35	25	26	25	19	26	14	20	315
Paeds	1	1	2	1	0	1	3	2	2	1	0	2	16
Died	3	2	5	6	7	2	4	2	3	2	4	4	44
Ventilated	6	6	8	5	9	11	11	11	7	5	8	10	97
Vent/tubed hrs	356	220	134	228	401	648	288	250	329	244	231	588	3917
Retrieved ICU	6	6	4	3	3	9	4	6	2	3	6	6	58
Retrieved CCU	8	12	10	6	10	7	7	2	5	6	7	5	85
CVC inserted	7	8	6	3	4								28
Inability to admit													0
Unplanned readmission													0
Snake bite	1	2	2	2									7
Overdose	2	4	3	2	2	3	0	4	2	1	3	3	29
CPAP	1	1	1	1	3	3	2	3	1	6	5	2	29
MI	18	16	18	7	23	11	12	3	9	15	7	8	147
Thrombolysis	4	2	7	0	8	1	3	2	2	1	3	1	34

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# 2004

	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	total
Total patients	56	53	41	54	58	58	79	56	45				500
ICU	23	27	18	21	15	30	35	25	-				194
CCU	30	25	22	30	35	28	43	31					244
Paeds	3	1	1	3	0	4	1						13
Died	0	3	0	2	7	5	4	3					24
Ventilated	7	8	5	7	9	12	15	12	10				85
Vent/tubed hrs	222	509	488	384	248	559	735	812	280				4237
Retrieved ICU	5	6	3	3	3	5	3	6					34
Retrieved CCU	9	8	3	9	10	7	8	8					62
CVC inserted													0
Inability to admit													0
Unplanned readmission													0
Snake bite	2	1	1	0	0	0	0	0					4
Overdose	2	3	0	3		3	4	0					15
CPAP/BIPAP	2	3	3	3	3	192		3					209
													0
MI	20	12	8	8	23	16	14	16					117
Thrombolysis	3	7	3	2	8	1	2	3					29

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