

## Appendix 6 - Bladder diary abbreviations, formulas, and norms

Abbrev.	Name / description	Formula
V24	Total 24 hour urine volume	Add all volumes voided in 24 hrs starting with the second void of the day and including the first void of the following day
F24	Total 24 hour frequency	Count number of voids in 24 hrs starting with the first morning void
Vave	Average volume per void	$V24/F24$
Vmax	Maximum single volume per void	List single largest volume voided
	Minimum day voiding interval	Single smallest daytime voiding interval
	Maximum day voiding interval	Single largest daytime voiding interval
	Total day time hours	Total day time hours between first void and last void
	Average day voiding interval per day	Total day time hours / F24 - 1

### Female (Amundsen 2007)

	Mean (SD)	One standard deviation	Median (5 <sup>th</sup> -95 <sup>th</sup> %)
V24	1,730 (721)	1009 - 2451	1,576 (734 - 3,150)
F24	7.1 (1.9)	5.2 - 9	7.0 (4.4 - 10.4)
Vave	245 (91)	154 - 336	237 (119 - 406)
Vmax	514 (190)	324 - 704	480 (250 - 775)

### Male (Tissot 2008)

	Mean (SD)	One standard deviation	Median (5 <sup>th</sup> -95 <sup>th</sup> %)
V24	1,713 (744)	969 - 2457	1,556 (814 - 3,198)
F24	6.6 (1.8)	4.8 - 8.4	6.6 (3.8 - 9.5)
Vave	261 (96)	165 - 357	248 (142 - 447)
Vmax	500 (216)	284 - 716	462 (240 - 851)

Abbrev.	Name / description	Formula
Vn	Nocturnal urine volume	Add up all voided volumes included in Fn and the first void on getting out of bed for the day
Fn	Frequency of night time voids	Count number of voids from after the patient retires for the night to before the patient leaves the bed for the day includes only voids preceded and followed by sleep
NPi	Nocturnal polyuria index	$Vn/V24 \times 100$
	# of minutes sleeping	Count total number of minutes from getting into bed for the night to getting out of bed for the day
Pn	Night urine production rate	$Vn/\text{minutes from retiring for the night to leaving bed for the day}$
P24	24 hour urine production rate	$V24/1440$
Pn/P24	Night / 24 hr production rate ratio	$Pn/P24 \times 100$
NBCi	Nocturnal bladder capacity index	$Fn - (Vn/Vmax - 1)$

### Male (Parsons 2007b)

Age	Vn	Fn	Npi= $Vn/V24$	Pn/P24
20	645-479	1.4-1.2	37.6-34.1%	115.5-104.8%
30	779-613	1.6-1.3	39.3-35.8%	122.0-111.3%
40	872-706	1.7-1.4	41.0-37.5%	128.5-117.8%
50	922-757	1.8-1.5	42.7-39.2%	135.0-124.3%
60	931-765	1.9-1.7	44.4-40.9%	141.5-130.8%
70	897-731	2.1-1.8	46.1-42.6%	148.0-137.3%
80	822-656	2.2-1.9	47.8-44.3%	154.5-143.8%

### Female (Parsons 2007b)

Age	Vn	Fn	Npi= $Vn/V24$	Pn/P24
20	793-599	1.3-0.9	44.8-41.1%	120.8-112.3%
30	878-684	1.4-1.0	45.8-42.1%	124.9-116.4%
40	943-750	1.5-1.1	46.8-43.1%	129.0-120.5%
50	988-795	1.6-1.2	47.8-44.1%	133.1-124.6%
60	1013-820	1.7-1.3	48.8-45.1%	137.2-128.7%
70	1018-825	1.8-1.4	49.8-46.1%	141.3-132.8%
80	1003-810	1.8-1.5	50.8-47.1%	145.4-136.9%