Central Northern Adelaide Health Service

Observation Charts as Point of Care Clinical Resources

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the LMH Documentation Working Party

Government of South Australia

SA Health

Lyell McEwin Hospital - Snapshot

Profile:

- 280 bed acute hospital
- Part of the Central Northern Adelaide Health Service (CNAHS)
- Located 20 km north of Adelaide, serves a population of 330,000 people

Specialties:

- Cardiology, Day Procedures, Emergency Medicine, Endocrinology, Gastroenterology, General Medicine, General Surgery, Gynaecology, Hospital at Home, ICU, Medical Imaging, Oncology, Neonatal, Obstetrics, Orthopaedics, Paediatrics, Palliative Care

Activity 07/08:

- Occupied Bed Days – 118,000
- Total Separations – 58,000
- Emergency Department presentations – 51,000

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Observation Charts as Point of Care Clinical Resources

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Observation Charts as Point of Care Clinical Resources

Where did this concept come from?

- My background
- A Heart Failure Study

How have we implemented it?

- Developing & trialling new charts
- Evaluating results
- The implementing change

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My Background

Clinician

- Nursing practice
- Language of Nursing

Ceramic Artist

- Visual language

The Nurse in Clinical Practice

Assessment ^ Appropriate Action

No Action
Action

Material action
Linguistic action

the thinking nurse ^ the doing nurse
the saying nurse

1. Mary *How you going there?*
2. Mrs Smith *Bit hot*
3. Mary *Bit ==hot?*
4. Mary *All right.*
5. Mrs Smith ==[laughter] *Bit ==flushed*
6. Mary ==[chuckle]
7. Mrs Smith *I think I've got too many bed clothes on... for a start.*

15. Mary *Don't feel ==nauseous or... Umm?*
16. Lesley *==you got*
17. Mrs Smith *No ==I don't.*
18. Mrs Smith *==No*
19. Mary *I just feel ((a little)) warm.*
20. Mary *Yea.*

51. Mary *What's that blood pressure?* [Quiet chuckle]
52. Mary *One fifty.*
53. Mary *That's all right.*

The Heart Failure Study

Examination and evaluation of nursing practices in the monitoring of hydration requirement for patients with cardiac failure.

Investigators: Jill Kealley, Aye Aye Gui, Angela Kucia, Richard Bates

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The System

- The staff on the wards
  - Nurse's understandings & linking theory to practice
- Documentation for heart failure patients
- Dietary requirements of heart failure patients

Nurse's understandings & linking theory to practice

- Education sessions on heart failure
- Developed new chart for monitoring hydration
- Developed resources for nurses to utilise while 'on the floor' to enable them to access 'theory'

Hydration Monitoring Practices for Heart Failure Patients

During the first 24 hours after admission to the Cardiac Unit

Unstable or unknown hydration status
Patient's hydration status is or becomes unstable

All patients with acute and /or chronic CCF
Indicated by **any** of the below

- Ejection fraction of 40% or less
- Basal (or greater) creps on presentation
- Peripheral oedema
- Patient on regular diuretics at home
- IV inotropes
- IV diuretics in hospital

Aim — to closely monitor and assess the hydration status of all patients with acute and /or chronic CCF

Monitoring Practice: Intake and output monitoring and daily weigh

After 24 hours post admission to the Cardiac Unit

Either

Hydration status is or becomes unstable

Indicated by **any** of the following criteria persisting or occurring

- Pulmonary Congestion — creps with or without increase in dyspnoea
- Dehydration
- IV fluids/blood
- IV ABs given in a total of more than 100mls of fluid during a 24 hour period
- IV diuretics
- Creatinine — an increase of 100umol/L from baseline and level continuing to rise
- Reduced urine output that is less than 750mls in 24 hours

Aim — to closely monitor and assess the hydration status of unstable patients

Monitoring Practice: Intake and output monitoring and daily weigh

Or

Hydration status is stable

Indicated by the presence of **all** of the criteria below

- Pulmonary congestion not present or stable
  eg patient regularly has basal creps with or without dyspnoea
- Creatinine stable and within patient's normal range
- Urine output steady and within patient's normal range
- No IV diuretics or fluids/bloods
- IV ABs given in a total of less than 100mls for a 24 hour period

And either

Patient is not physically well enough and/or does NOT have the cognitive ability to monitor own care

Aim — routine monitoring and assessment of the patient's hydration status

Monitoring Practice: Intake monitoring and daily weigh

or

Patient is physically well enough and has the cognitive ability to monitor their own care

Aim — to monitor and assess the hydration status and teach patient in preparation for discharge

Monitoring Practice: Intake monitoring and daily weigh – self care

Lyell McEwin Hospital
Nutrition and Dietetics Department

Food Item	Volume of Fluid (mls)
Juice (apple/orange)	110
Juice (apple & blackcurrant)	150
Milk (plain/light start)	150
Milk (flavoured)	250
Milkshake	200
Jelly	100
Icecream	150
Custard	250
Tea/coffee	200
Yoghurt	200
Soup	300
Sustagen tetrapak	250
Ensure Plus — can	237
Ensure Plus — tetrapak	200
Enlive Plus — tetrapak	220

Equipment	Volume of Fluid (mls)
Large pink/grey bowl (soup/custard)	300
Small pink bowl (soy milk)	150
Pink Mugs (coffee/milkshakes)	200
Tall tumbler	230
Short fat tumbler	250

Function of Charts

- Medico-legal record
- Inter and intra professional communication
- Facilitate clinical reasoning

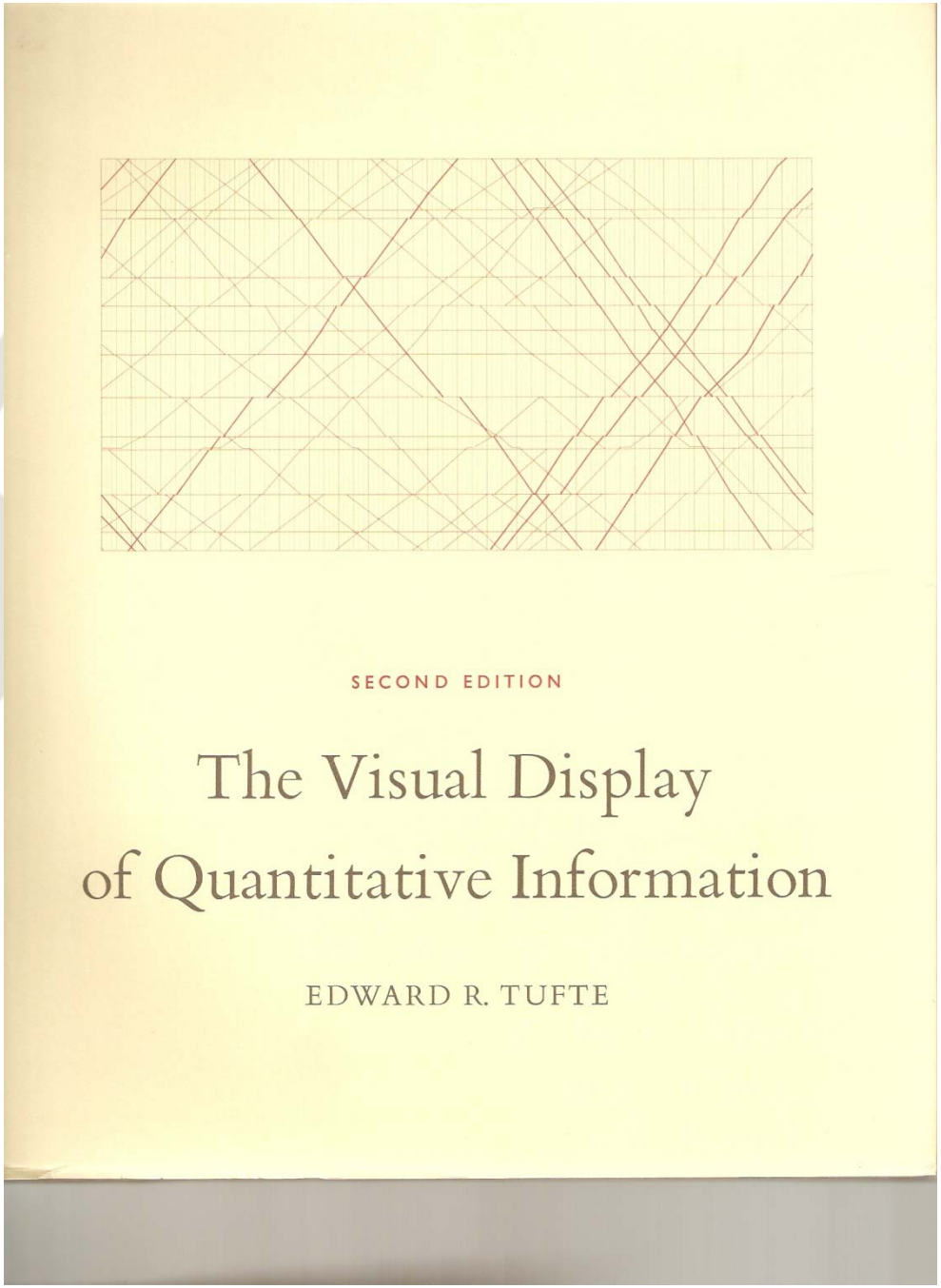
Hydration Monitoring for CHF Patients & Identification of Patients at Risk

Information/data

Treatment = fluid intake

Outcome of treatment = output (hours)

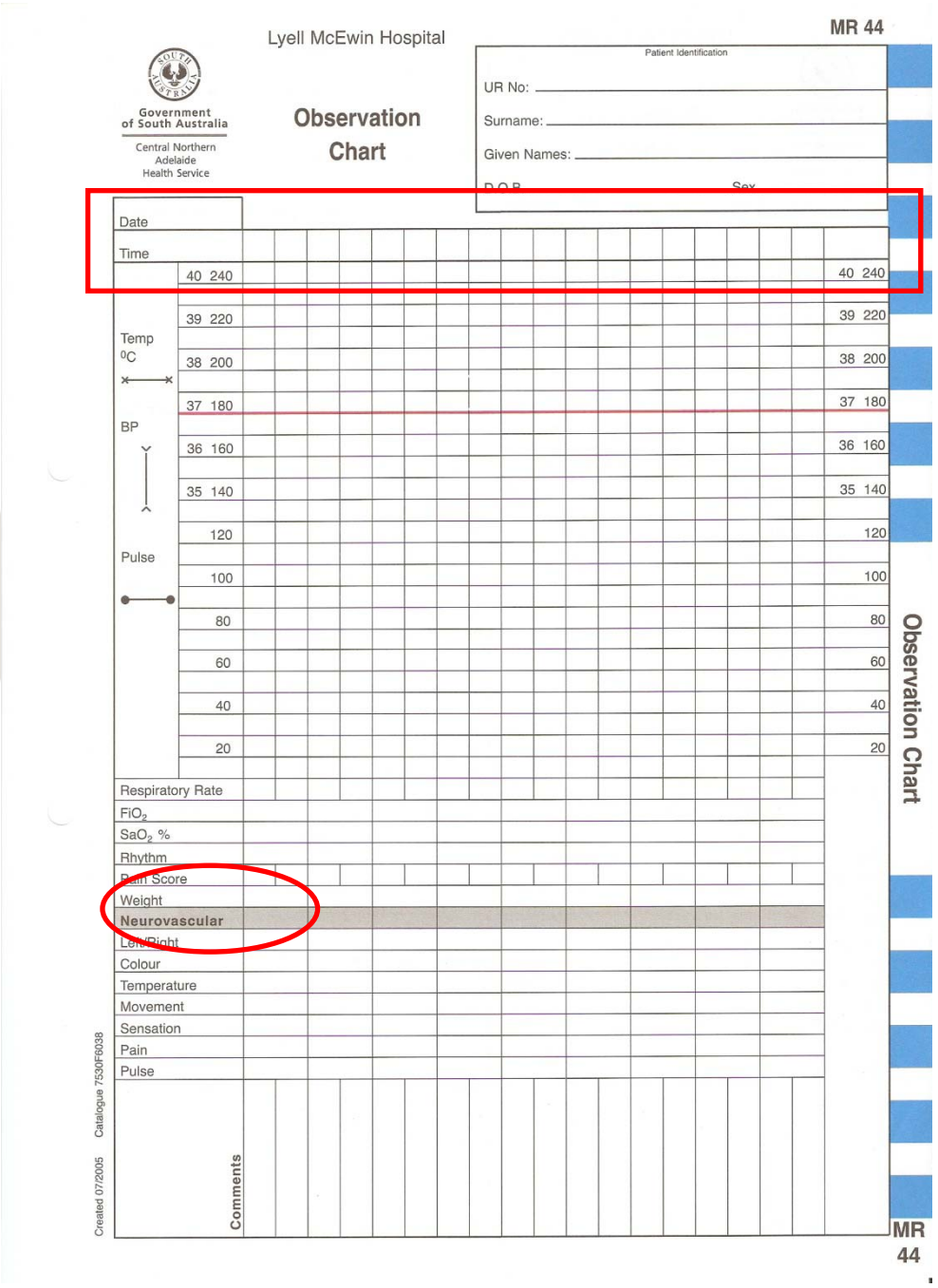
= daily weigh (days)


SECOND EDITION
The Visual Display
of Quantitative Information
EDWARD R. TUFTE

Displaying Visual Data

- *show the data*
- *induce the viewer to think about the substance rather than about the methodology, graphic design, the technology of the graphic production, or something else*
- *avoid distorting what the data have to say*
- *present many numbers in a small space*
- *make large data sets coherent*
- *encourage the eye to compare different pieces of data*
- *reveal the data at several levels of detail, from a broad overview to the fine structure*
- *serve a reasonably clear purpose: description, exploration, tabulation or decoration*
- *be closely integrated with the statistical and verbal descriptions of the data set*

(Tufte 2004 p 13)


Lyell McEwin Hospital
MR 44
Government of South Australia
Central Northern Adelaide Health Service
Observation Chart
Patient Identification
UR No:
Surname:
Given Names:
D.O.B
Sex
Date
Time
40 240
39 220
38 200
37 180
36 160
35 140
120
100
80
60
40
20
Temp °C
BP
Pulse
Respiratory Rate
FiO2
SaO2 %
Rhythm
Pain Score
Weight
Neurovascular
Left/Right
Colour
Temperature
Movement
Sensation
Pain
Pulse
Comments
Observation Chart
MR 44
Created 07/2005 Catalogue 7530F6038

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LYELL McEWIN HEALTH SERVICE

FLUID BALANCE WORK SHEET

MR 46A

U/R No. .....

Surname .....

Other Names .....

Date of Birth ..... Sex .....

DAY..... DATE..... WARD.....

TIME 24 HR	INTAKE ORAL		INTAKE INTRAVENOUS		INTAKE INTRAVENOUS		INTAKE INTRAVENOUS		OUTPUT				C.V.P.
	DESCRIPT.	AMT.	DESCRIPT.	AMT.	DESCRIPT.	AMT.	DESCRIPT.	AMT.	URINE	VOMIT	BOWEL	SUC-TION	
TOTAL													
DAILY TOTAL													

FLUID BALANCE WORK SHEET

3/98

LYELL McEWIN HEALTH SERVICE

MR 46B

FLUID BALANCE SUMMARY

U/R No. ....

Surname ....

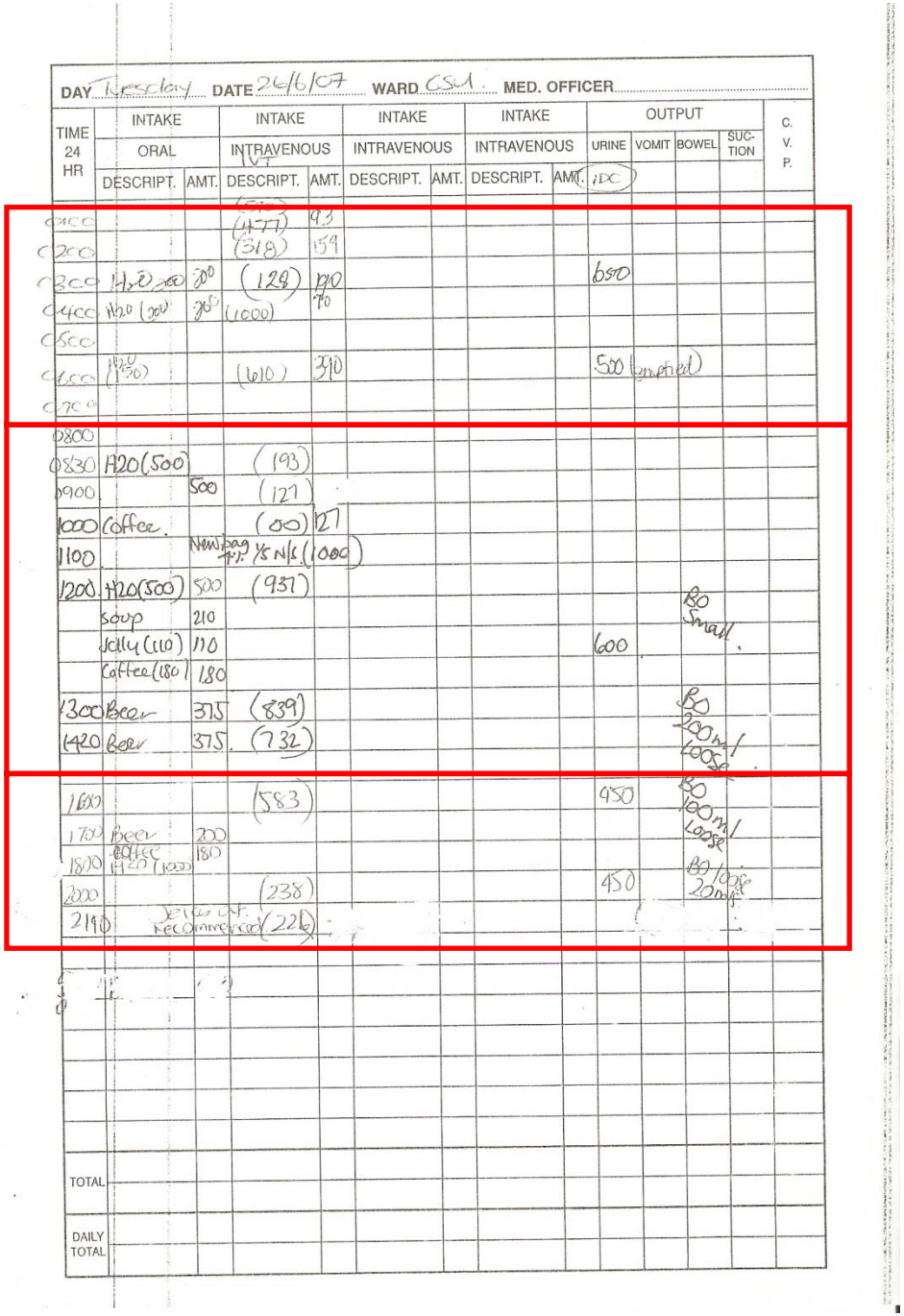
Other Names ....

Date of Birth .... Sex ....

DATE	INTAKE (ml)				OUTPUT (ml)						Daily Balance (ml)
	Intra-venous	Oral	Tube	Daily total Intake	Vomitus	Gastric Tube	Drain Tube	Urine	Other	Daily total Intake	

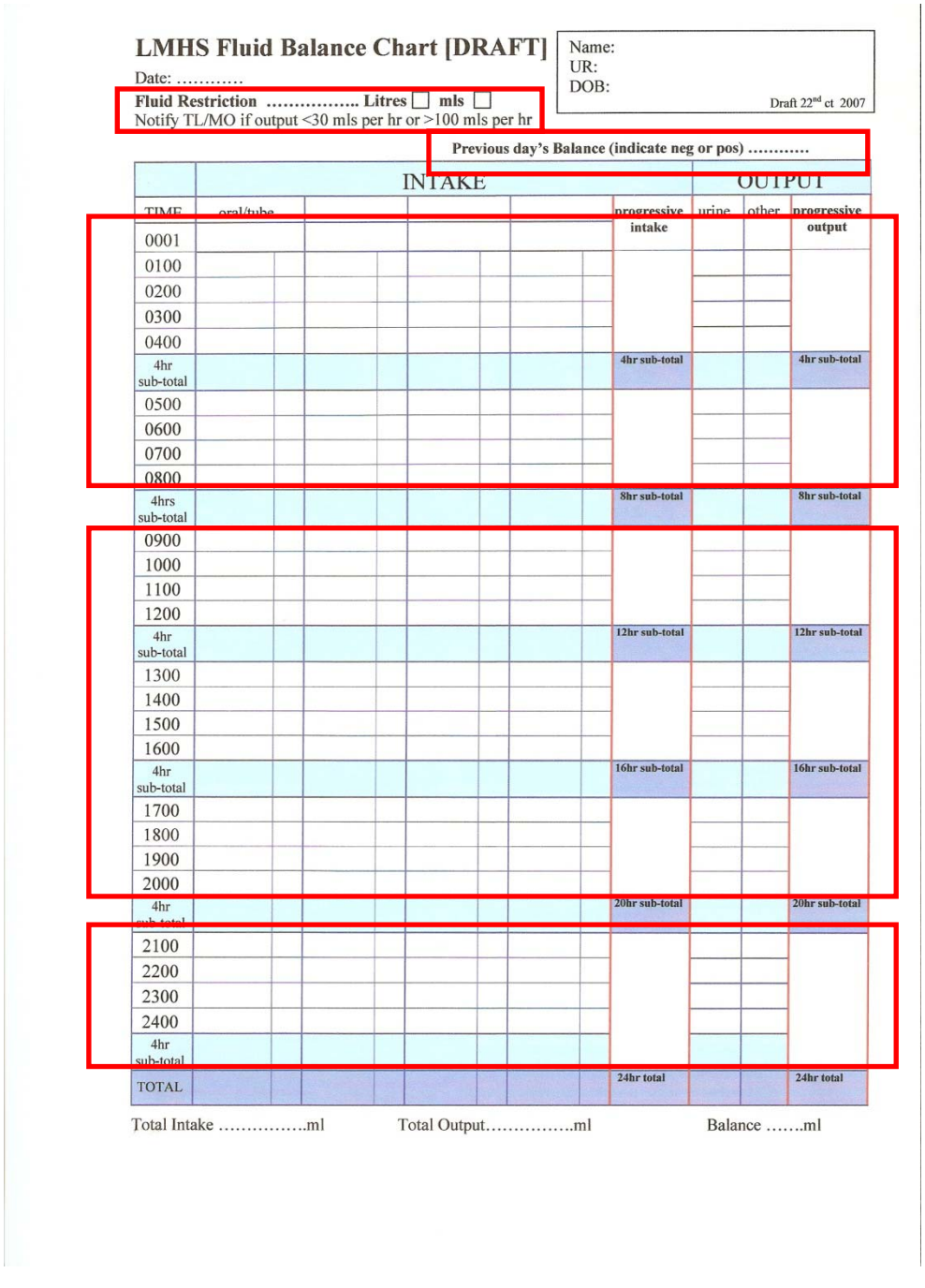
5/90

FLUID BALANCE SUMMARY



DAY Tuesday DATE 26/6/07 WARD CSU MED. OFFICER

TIME 24 HR	INTAKE ORAL DESCRIPT.	AMT.	INTAKE INTRAVENOUS DESCRIPT.	AMT.	INTAKE INTRAVENOUS DESCRIPT.	AMT.	INTAKE INTRAVENOUS DESCRIPT.	AMT.	OUTPUT URINE	VOMIT	BOWEL	SUCTION	C.V.P.
0100			(477)	93									
0200			(318)	159									
0300	H20 (200)	200	(129)	190					650				
0400	H20 (200)	200	(1000)	70									
0500													
0600	H20 (150)		(610)	310					500 (vomited)				
0700													
0800													
0830	H20 (500)		(193)										
0900		500	(127)										
1000	Coffee		(00)	127									
1100		New bag	1/2 N/S	(1000)									
1200	H20 (500)	500	(937)								BO Small.		
	Soup	210											
	Jelly (110)	110							600				
	Coffee (180)	180											
1300	Beer	375	(839)								BO 200ml Loose		
1420	Beer	375	(732)										
1600			(583)						950		BO 100ml Loose		
1700	Beer	200											
1800	Coffee H20 (1000)	180											
2000			(238)						450		BO 100ml		
2100	Fluids encouraged		(226)										
TOTAL													
DAILY TOTAL													



LMHS Fluid Balance Chart [DRAFT]

Date: ……

Name:
UR:
DOB:

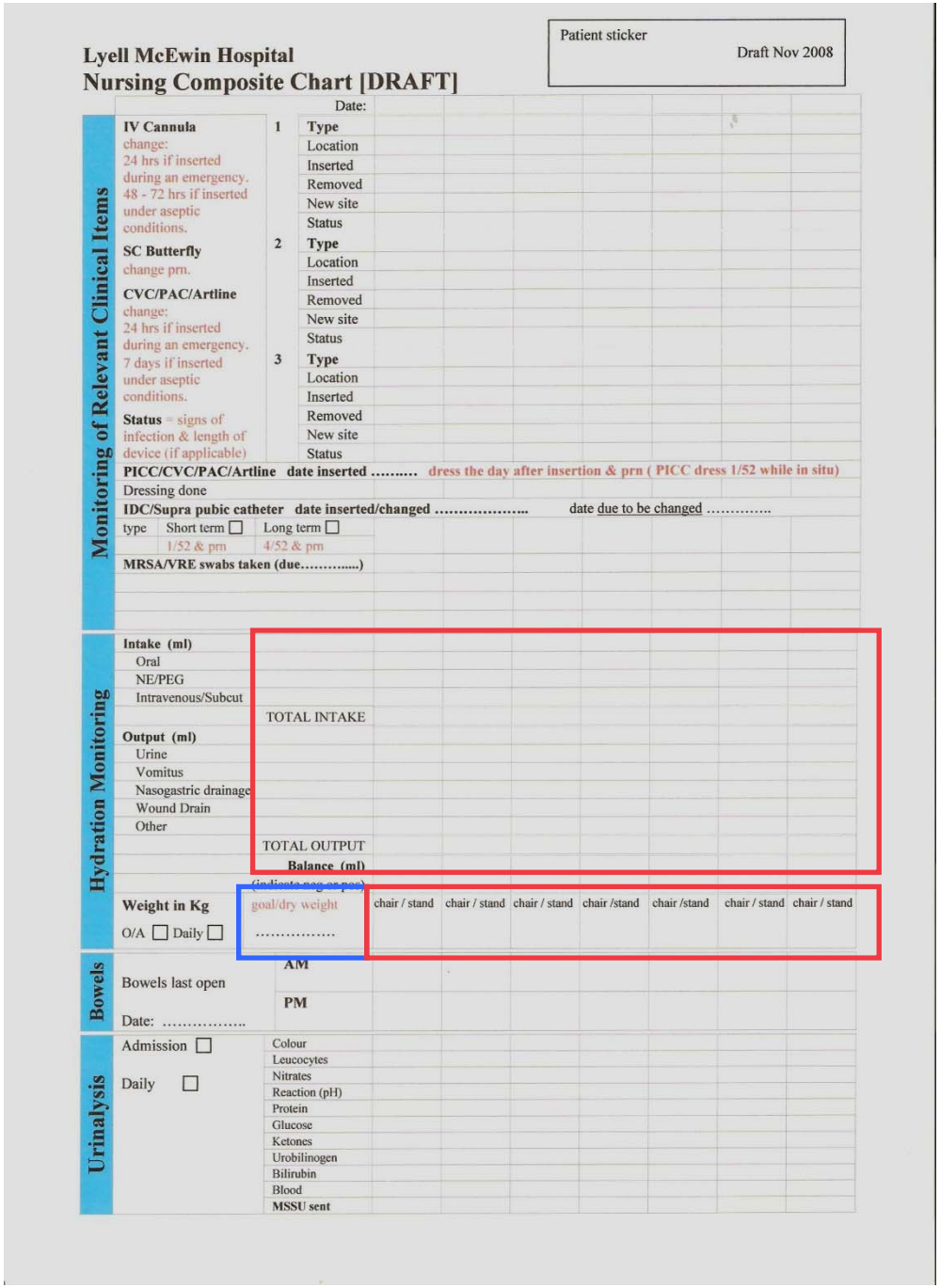
Draft 22nd ct 2007

Fluid Restriction …….. Litres ☐ mls ☐
Notify TL/MO if output <30 mls per hr or >100 mls per hr

Previous day's Balance (indicate neg or pos) ……

	INTAKE					OUTPUT		
TIME	oral/tube				progressive intake	urine	other	progressive output
0001								
0100								
0200								
0300								
0400								
4hr sub-total					4hr sub-total			4hr sub-total
0500								
0600								
0700								
0800								
4hrs sub-total					8hr sub-total			8hr sub-total
0900								
1000								
1100								
1200								
4hr sub-total					12hr sub-total			12hr sub-total
1300								
1400								
1500								
1600								
4hr sub-total					16hr sub-total			16hr sub-total
1700								
1800								
1900								
2000								
4hr sub-total					20hr sub-total			20hr sub-total
2100								
2200								
2300								
2400								
4hr sub-total								
TOTAL					24hr total			24hr total

Total Intake ……ml Total Output……ml Balance …….ml



Lyell McEwin Hospital
Nursing Composite Chart [DRAFT]

Patient sticker

Draft Nov 2008

Date:

Monitoring of Relevant Clinical Items

IV Cannula change:
24 hrs if inserted during an emergency.
48 - 72 hrs if inserted under aseptic conditions.

SC Butterfly change prn.

CVC/PAC/Artline change:
24 hrs if inserted during an emergency.
7 days if inserted under aseptic conditions.

Status = signs of infection & length of device (if applicable)

1	**Type**
	Location
	Inserted
	Removed
	New site
	Status
2	**Type**
	Location
	Inserted
	Removed
	New site
	Status
3	**Type**
	Location
	Inserted
	Removed
	New site
	Status

PICC/CVC/PAC/Artline date inserted ……. dress the day after insertion & prn (PICC dress 1/52 while in situ)

Dressing done

IDC/Supra pubic catheter date inserted/changed …….. date due to be changed ……..

type Short term ☐ Long term ☐

1/52 & prn 4/52 & prn

MRSA/VRE swabs taken (due……..)

Hydration Monitoring

Intake (ml)								
Oral								
NE/PEG								
Intravenous/Subcut								
	TOTAL INTAKE							
Output (ml)								
Urine								
Vomitus								
Nasogastric drainage								
Wound Drain								
Other								
	TOTAL OUTPUT							
	Balance (ml) (indicate neg or pos)							
Weight in Kg	goal/dry weight	chair / stand	chair / stand	chair / stand	chair /stand	chair /stand	chair / stand	chair / stand
O/A ☐ Daily ☐	……							

Bowels

Bowels last open

Date: ……..

AM

PM

Urinalysis

Admission ☐

Daily ☐

Colour	
Leucocytes	
Nitrates	
Reaction (pH)	
Protein	
Glucose	
Ketones	
Urobilinogen	
Bilirubin	
Blood	
MSSU sent	

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Lyell McEwin Hospital
Nursing Composite Chart Instructions for use

Patient sticker

Draft Nov 2008

Monitoring of Relevant Clinical Items

		Date:	24/12/08	25/12/08	*Use one column for each day of admission*
IV Cannula change: 24 hrs if inserted during an emergency. 48 - 72 hrs if inserted under aseptic conditions.	1	**Type**	IV	IV	*IV Cannula / SC needles / CVC / PAC/ Artline*
		Location	L) arm	R) hand	
		Inserted	23/12/08	24/12/08	*Remove devices as indicated in red in the first column AND if signs of infection (red, hot, swelling, pain and/or elevated temperature) notify MO or senior nurse and remove and/or replace ASAP.*
		Removed	24/12/08		
		New site	R) hand		
		Status	NAD	NAD	
SC Butterfly change prn.	2	**Type**	IV	IV	*Type — Record type of device patients may have more than one IV or SC cannula*
		Location	L) arm	L) arm	*Location — Record insertion site*
		Inserted	24/12/08	24/12/08	*Inserted — Record date inserted*
CVC/PAC/Artline change: 24 hrs if inserted during an emergency. 7 days if inserted under aseptic conditions.		Removed			*Removed — Record date removed*
		New site			*New site — If cannula removed & another reinserted, record new site*
		Status	NAD	NAD	*Status — Record infection status = NAD (No abnormalities detected), bruised etc. if the length of the device requires recording, add the length*
Status = signs of infection & length of device (if applicable)	3	**Type**	SC	SC	
		Location	L) chest	L) chest	
		Inserted	23/12/08	23/12/08	
		Removed			
		New site			
		Status	NAD	NAD	

PICC/CVC/PAC/Artline date inserted			**dress the day after insertion & prn (PICC dress 1/52 while in situ)**
Dressing done			*prn = moisture or blood under dressing or dressing loose*
IDC/Supra pubic catheter date inserted/changed	17/12/08		date due to be changed 25/12/08
type Short term ☑ 1/52 & prn Long term ☐ 4/52 & prn	in situ	changed	*Record IDC/Supra pubic catheter information*
MRSA/VRE swabs taken (due.....)			*Utilise the blank lines for other devices eg drains, sutures etc.*
Sutures (head) inserted 23/12 (remove 31/12)	NAD	NAD	*Record infection status and date removed*

Hydration Monitoring

Intake (ml)			*Transfer totals from FBC at midnight each day*
Oral	1000		*Indicate if patient's fluid balance is negative or positive.*
NE / PEG			
Intravenous/Subcut	2545		***Weight and hydration monitoring:***
TOTAL INTAKE	3545		*An increase or decrease in weight of 1 kg = 1000mls*
Output (ml)			
Urine	1050		*Weigh patients in the AM, after they have voided and before they have eaten or drunk anything.*
Vomitus	200		
Nasogastric drainage			*Report changes in weigh to the MO or senior nurse*
Wound Drain			
Other			*goal/dry weigh = the weight of the patient when they are not dehydrated or overloaded*
TOTAL OUTPUT	1250		*Patients with chronic heart or renal failure usually know their goal/dry weight*
Balance (ml)	2295		
(indicate neg or pos)	pos		
Weight in Kg O/A ☐ Daily ☑	goal/dry weight 65	chair / stand 64.5	chair / stand 66.8

chair / stand — circle device used weigh patient on same device each day

Bowels

Bowels last open Date: 22/12/08	**AM**	BNO	BO
	PM	BO	

Bowels last open — Record date bowel open before admission or from previous chart

If the patient has abnormal bowel actions or suspected abnormal bowel actions, record bowel actions on MR 304

Urinalysis

Admission ☑

Daily ☐

Colour	Amber	
Leucocytes	Pos	
Nitrates	Pos	
Reaction (pH)	Ph 7	
Protein	Neg	
Glucose	Neg	
Ketones	Neg	
Urobilinogen	Neg	
Bilirubin	Neg	
Blood	Neg	
MSSU sent	24/12/08	

All patients have a urinalysis on admission, Report any abnormalities to the MO or senior nurse.

MSSU to be taken if patient has symptoms of a urinary tract infection or positive nitrates

Approach to the Evaluation

- Did the charts fulfil their purpose as point of care clinical resources?
- Educative process – encourage clinician to look at the chart as a point of care clinical resource.
- Recognise that clinicians, other than nurses, use the charts – multi-discipline involvement.

Questions for Evaluation

The chart explains what information I need to collect.

The chart gives me guidelines about the information I'm required to enter.

The chart gives me information about what may be considered abnormal, and if I need to have the patient assessed by someone else.

The chart makes is easy to enter information/data that I need to monitor, assess, and treat my patient.

Once the information/data is entered, it is easy for me to see changes in my patient's condition.

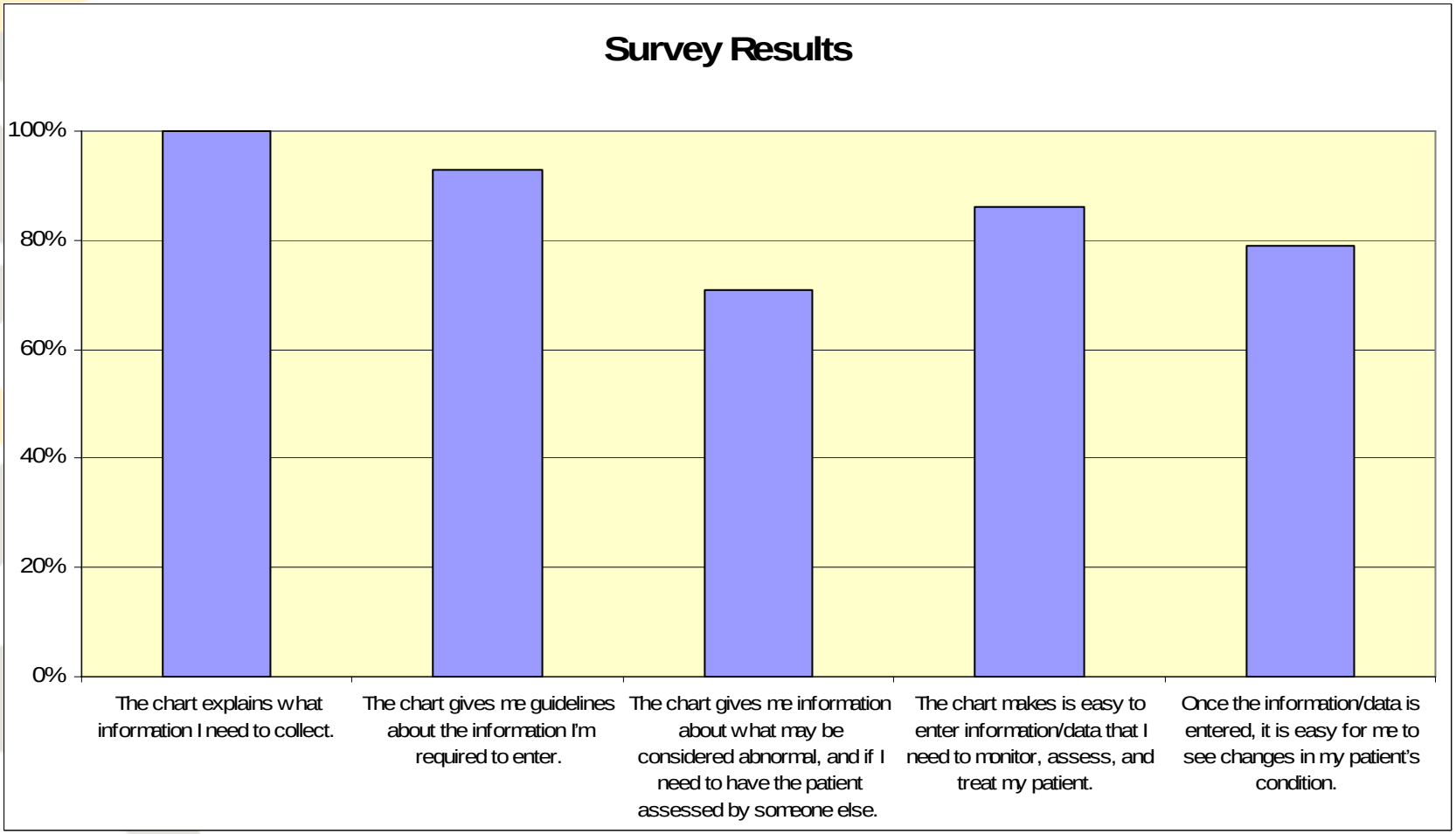
Is there any other information that would help you assess your patient's condition that is not on the chart? Please give details and reasons:

Can you please tell us what you think is the best thing about this new chart and why?

Can you please tell us what you think is the worst thing about this new chart and why?

Are there any modifications to this chart that you would like to see that may improve its application in your clinical practice? Why?

Results


Survey Results
100%
80%
60%
40%
20%
0%
The chart explains what information I need to collect.
The chart gives me guidelines about the information I'm required to enter.
The chart gives me information about what may be considered abnormal, and if I need to have the patient assessed by someone else.
The chart makes is easy to enter information/data that I need to monitor, assess, and treat my patient.
Once the information/data is entered, it is easy for me to see changes in my patient's condition.

Results

Comments

Generic

- Have A4 version available for patients with less IV lines
- Swap output columns around so urine and vomit columns are visible when chart is folded
- Larger size print for fluid restriction information
- Associate with partogram information
- Add paediatric criterion
- Remove site check columns (adult wards)
- Make chart smaller so folds more easily

4 hourly

- Have A4 version available for patients with less IV lines
- Swap output columns around so urine column is visible when chart is folded
- Make chart smaller so folds more easily
- Include an area for abdominal drains
- Have progressive totals for intake only

Implementation of the Results of Evaluation

Title	Chart Purpose
Fluid Balance Chart Generic A3	Complex adult surgical patients/women's health patients
Fluid Balance Chart 4 hourly A3	Complex adult
Fluid Balance Chart Generic A4	Simple adult surgical patients/women's health patients
Fluid Balance Chart 4 hourly A4	Simple adult medical patients
Fluid Balance Chart Pediatrics A4	Paediatric patients

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