

Paediatric IV Fluid Audit Improvement Tool

PIVFAIT

Paula Forrest

Julian Johnston

Jennifer Lamont

Medical Leaders Forum

- ❖ Adult and Paediatric chart designed → CMO - April 2012

Daily Fluid Balance & Prescription Chart **Adult**

Patient Name: _____ Date: _____
 Hospital: _____ Ward: _____
 Special Instructions: _____
 For Use by: General Practitioner / Nurse / Doctor

FLUID INPUT (ml)

Time	Oral	Enteral	IV	Subcut	Rectal	Other	Total
0800							
0900							
1000							
1100							
1200							
1300							
1400							
1500							
1600							
1700							
1800							
1900							
2000							
2100							
2200							
2300							
2400							
0100							
0200							
0300							
0400							
0500							
0600							
0700							
0800							

FLUID OUTPUT (ml)

Time	Urine	Stool	Vomit	Other	Total
0800					
0900					
1000					
1100					
1200					
1300					
1400					
1500					
1600					
1700					
1800					
1900					
2000					
2100					
2200					
2300					
2400					
0100					
0200					
0300					
0400					
0500					
0600					
0700					
0800					

INTAKE (Oral, Enteral, IV, Subcut, Rectal, Other) **OUTPUT** (Urine, Stool, Vomit, Other)

Grand Total IN **Grand Total OUT** **24 hour Fluid Balance (ml)**

Daily Fluid Balance & Prescription Chart **Child**

Patient Name: _____ Date: _____
 Hospital: _____ Ward: _____
 Special Instructions: _____
 For Use by: General Practitioner / Nurse / Doctor

FLUID INPUT (ml)

Time	Oral	Enteral	IV	Subcut	Rectal	Other	Total
0800							
0900							
1000							
1100							
1200							
1300							
1400							
1500							
1600							
1700							
1800							
1900							
2000							
2100							
2200							
2300							
2400							
0100							
0200							
0300							
0400							
0500							
0600							
0700							
0800							

FLUID OUTPUT (ml)

Time	Urine	Stool	Vomit	Other	Total
0800					
0900					
1000					
1100					
1200					
1300					
1400					
1500					
1600					
1700					
1800					
1900					
2000					
2100					
2200					
2300					
2400					
0100					
0200					
0300					
0400					
0500					
0600					
0700					
0800					

INTAKE (Oral, Enteral, IV, Subcut, Rectal, Other) **OUTPUT** (Urine, Stool, Vomit, Other)

Grand Total IN **Grand Total OUT** **24 hour Fluid Balance (ml)**

CHILD

Write in CAPITAL LETTERS or use addressograph

Surname: _____
 First names: _____
 Consultant: _____ Ward: _____
 Hospital no: _____ DOR: _____
 Health and Care no: _____ *check identity*

Yesterday's Date

Grand total in	Grand total out	Balance

Recent Weight _____ kg Weighed ☐ / ☐
 Estimated ☐ / ☐

Date	Time	Weight (kg)	Na (mmol/L)	K (mmol/L)	Urea (mmol/L)	Creatinine (micromol/L)	Glucose (mmol/L)	Chloride (mmol/L)	Bicarbonate (mmol/L)

Clinical signs of dehydration

Degree of Dehydration	Signs are ordered in each column by severity
Moderate, 5%	Dry mucous membranes (be wary in the mouth/breath) Diminished skin turgor (pinch test 1-2 sec) Altered neurological status (drowsiness, irritability) Deep (addictive) breathing
Severe, 8%	Decreased peripheral perfusion Cool/mottled/pale peripheries Capillary refill time > 3 sec Circulatory collapse

Do not use more than 8% dehydration in calculations.

Calculation guidance for intravenous therapy for children over 4 weeks & under 16 years

based on Parenteral Fluid Therapy Wadchart for children and young people - May 2014

RESUSCITATION = B

Fluid bolus volume for shocked patients = I Given over less than 15 minutes.

Required bolus volume (ml) = body weight (kg) x 20 = I ml
 but if the setting is trauma or DKA x 10 = I ml

Record this bolus volume I (ml) in prescription box below and identify this fluid bolus volume with letter B

Use only sodium chloride 0.9% - repeat if necessary - REASSESS - call for senior help

For DKA / neonates, use separate prescription protocols.

REPLACEMENT: REDISTRIBUTION

Fluid deficit calculations (maximum 8%) = D

% of dehydration _____ x bodyweight in kg _____ x 10 = I ml

Amount given as fluid bolus volume = I ml

Residual deficit (I minus I) = III ml

Give residual deficit over 48 hours (III divided by 48) = IV ml/hr

Prescribe the calculated Maintenance and Deficit fluids individually.

Additional ongoing losses volume (e.g. vomiting, diarrhoea, drainage) = Q

Calculate at least every 4 hours (unless otherwise instructed)

Replace lost volume with an equal volume of fluid (usually 0.9% saline *) = V ml

ROUTINE MAINTENANCE = M

Maintenance Fluid - In females > 40kg max 2000 ml/day, in males > 60kg max 2500 ml/day (equivalent to 80 & 100 ml/hour respectively)

First 10kg: 4ml/kg/hr = VI ml/hr

Second 10kg: 2ml/kg/hr = VII ml/hr

For each kg over 20kg: 1ml/kg/hr = VIII ml/hr

Maintenance total (VI + VII + VIII) = IX ml/hr

Consider reducing maintenance volume to 2/3 if risk of hyponatraemia is high.

Prescribe the calculated Maintenance and Deficit fluids individually.

Indications - all that apply: Fluid B, Bolus volume, Deficit, Ongoing loss volume, Maintenance, Drug P, Prescription

* Medicines must be recorded in Drug Kardex

** Model name, Serial number.

Date	Time	Volume	Infusion Fluid/Type	Additives *	Rate ml/hr Range	Prescriber's Signature	Administered By	Checked By	Batch/Lot No. & Expiry Date	Pump Details **	Start Time	Finish Time	Volume given
			a										
			b										
			c										
			d										
			e										
			f										
			g										
			h										
			i										
			j										

REASSESSMENT

Date	Time	Is infusion prescription still suitable?	Doctors Signature
12 hour Reassessment		Yes or No	
		Yes or No	

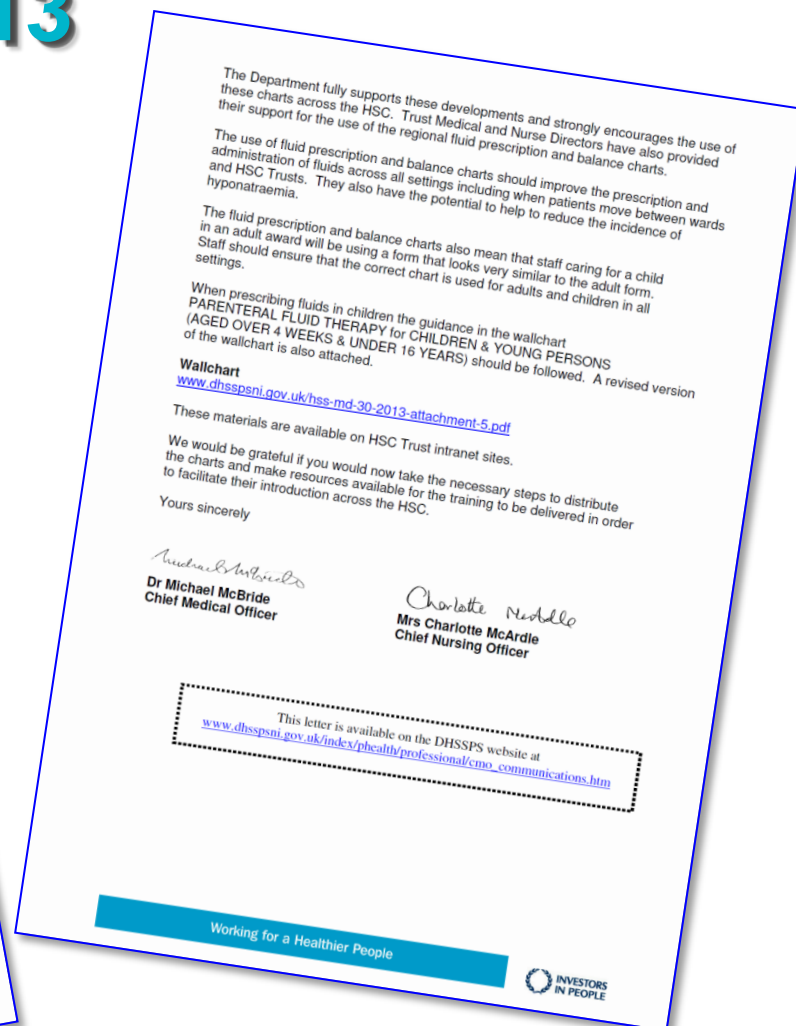
Is patients hydration improving?
 Are oral fluids now appropriate?
 Is potassium needed?
 What about Urine output?

Special Instructions:

Medical Leaders Forum

- ❖ Adult and Paediatric chart designed → CMO - April 2012
- ❖ Regional charts launched by CMO & CNO - August 2013
- ❖ CMO MLF Fluid Prescription Chart - September 2013

Launched August 2013



Medical Leaders Forum

From the Chief Medical Officer
Dr Michael McBride



Department of
Health, Social Services
and Public Safety
www.dhssps.nhs.uk

By email
Dr Julian Johnston

Castle Buildings
Stormont
BELFAST
BT4 3SQ
Tel: 028 9052 0563
Fax: 028 9052 0574
Email: michael.mcbride@dhssps.nhs.uk
Your Ref:
Our Ref:
Date: 17 January 2014

Dear Dr Johnston

The Department has made assurances however to the Inquiry into Hyponatraemia Related Deaths (IHRD) that an **audit will be placed** as part of the process of assurance that guidance is followed effectively and so it is essential that your group completes its review of the charts by **30 April 2014** in order for the GAIN audit to commence as early as possible this year.

as possible this year.

I appreciate the challenge of such a tight deadline, however, given the importance of this matter I trust you understand the necessity. The Department remains committed to the regional fluid prescription and balance charts and views its effective implementation as a vital step in improving patient safety in relation to IV fluid use. In order that your group is given the necessary support to undertake this work, I am copying this letter to Trust Chief Executives.

Yours sincerely

DR MICHAEL McBRIDE
Chief Medical Officer

cc	Trust Chief Executives	Dr Paddy Woods
	Prof Ian Young	Dr Jariath McAloon
	Fergal Bradley	Karen Campbell
	Jennifer Lamont	

Working for a Healthier People



GAIN – Paediatric IV Fluid audit 2014



GUIDELINES AND AUDIT
IMPLEMENTATION NETWORK

Regional audit of the 5 Health and Social Care Trusts
Specialty/Service of audit: Paediatric

Audit of Parenteral Fluid Therapy for Children and Young Persons (aged over 4 weeks & under 16 years)

AUDIT REPORT VOLUME 1

Audit report

Volume 1	Audit Methodology, Discussion and Recommendations
Volume 2	Audit Findings (Data tables and audit proformas)

Project Team

Dr Julian R Johnston	Assistant Medical Director	Belfast HSCT
Dr Jarlath McAloon	Consultant Paediatrician	Northern HSCT
Dr Damien Carson	Consultant Anaesthetist	South Eastern HSCT
Dr Tom Trinick	Chair of the Guideline and Audit Implementation Network (GAIN) Strategic Committee	GAIN

Dalrene
Data pe
Report

8th August 2014



GUIDELINES AND AUDIT
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AUDIT REPORT VOLUME 2

Audit report

Volume 1	Audit Methodology, Discussion and Recommendations
Volume 2	Audit Findings (Data tables and audit proformas)

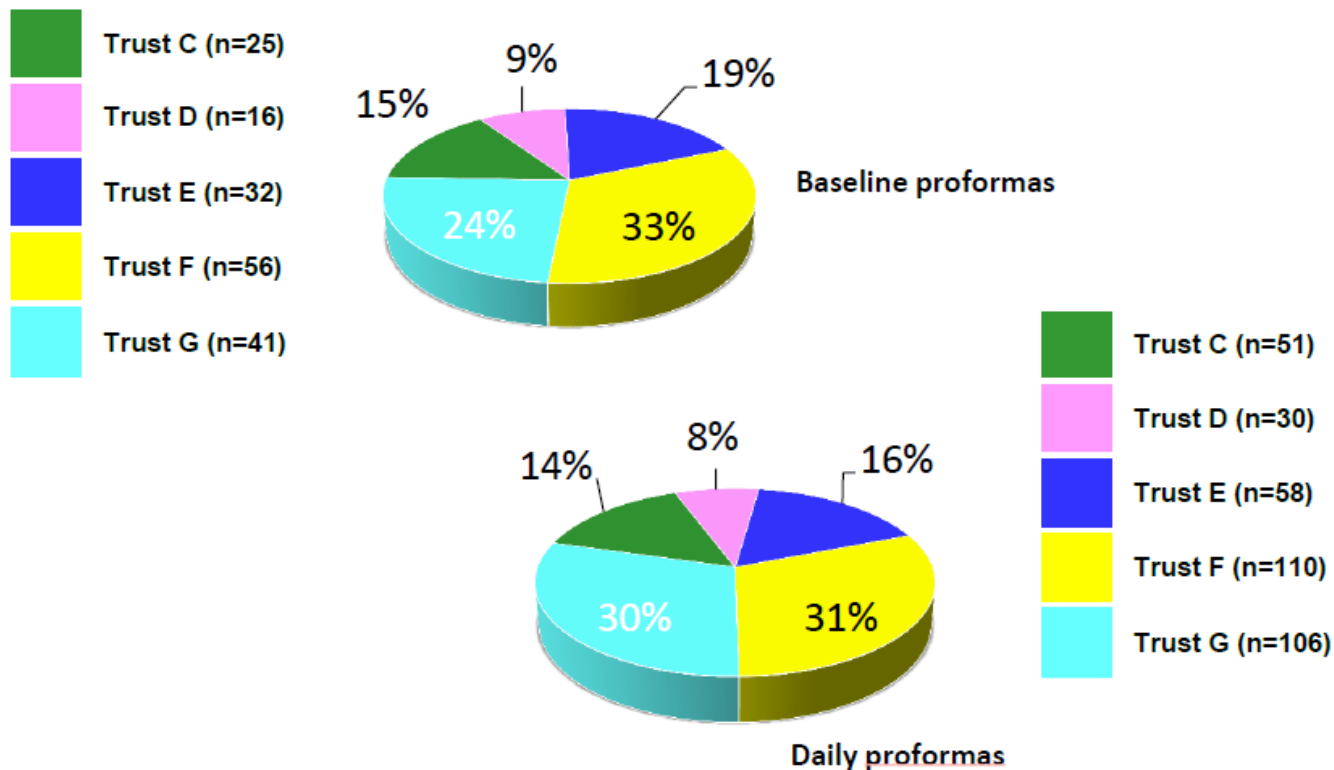
Project Team

Dr Julian R Johnston	Assistant Medical Director	Belfast HSCT
Dr Jarlath McAloon	Consultant Paediatrician	Northern HSCT
Dr Damien Carson	Consultant Anaesthetist	South Eastern HSCT
Dr Tom Trinick	Chair of Guidelines and Audit Implementation Network (GAIN) Strategic Committee	GAIN
Dalrene Masson	Regional Clinical Audit Facilitator	GAIN
Data period	24 th March 2014 to 27 th April 2014 (5 weeks)	
Report completion	8 th August 2014	

Medical Leaders Forum

- ❖ Adult and Paediatric chart designed → CMO - April 2012
- ❖ Regional charts launched by CMO & CNO - August 2013
- ❖ CMO MLF Fluid Prescription Chart - September 2013
- ❖ CMO MLF GAIN fluid chart audit - September 2014

170 children - 5 weeks period March/April 2014



355 Daily FP&B charts

GAIN – Paediatric IV Fluid audit 2014

Topic		Compliance %
Patient identification		97
Appropriate Prescription		100
Fluid totaling	Input	76
	Output	65
	Balance	43
Monitoring E&U	Commencement	92
	Throughout	94
	Hyponatraemia	95
Monitoring Blood Glucose	Recording	62
	Recording Rx	poor
Reassessment		92

GAIN – Paediatric IV Fluid audit 2014

Primary recommendations

- 1*. Health and Social Care Trusts (HSCTs) must ensure that **patients are identified** on fluid balance charts, using at least their name, date of birth and hospital identification number.
- 6*. HSCTs must ensure that **cumulative totalling** of fluid input and output, with the calculation of a 24 hour balance figure, is performed daily.
- 9*. **Blood glucose monitoring** must be performed on all children as recommended in the Paediatric Wallchart**.
- 10*. Confirmed **hypoglycaemia** must be treated and a record made of the treatment.

GAIN – Paediatric IV Fluid audit 2014

Action Plan

GAIN should:

- Publish this report and seek widespread circulation to all staff involved in administering IV fluids in children.

- Produce a modified and simplified Paediatric IV Fluid Audit Improvement Tool (PIVFAIT)* based on the lessons learned from this audit, for internal use in all clinical areas where this age group is treated.

- Review the PIVFAIT over time and modify it as additional lessons are learned.
 - Highlight to the HSCTs, items that were agreed by the clinical experts to be acceptable as standards but which are not yet enshrined in HSCT policy documentation.
- HSCTs should:**
- Promote the presentation of the key findings of this audit to all relevant staff and ensure the recommendations are implemented.
 - Ensure that there is a continuing training programme to ensure staff are trained and up to date in all aspects of fluid therapy.
 - Regularly audit practice using the PIVFAIT; forward results to GAIN as requested.

*Paediatric IV Fluid Audit Improvement Tool (PIVFAIT) – monthly audit of

1. Patient identification.
2. Patient weight.
3. Daily fluid balance chart calculation guidance completed.
4. Electrolyte monitoring.
5. Glucose monitoring.
6. Cumulative input and output totalling and Fluid balance.
7. 12 hour reassessment.

PIVFAIT - Original

FLUID PRESCRIPTION/BALANCE CHART AUDIT

Date		Ward/Dept						
	Is the patient clearly identified on ALL fluid prescription sheets?	Is the patients weight recorded?	Is the U&E documented?	Is the input and output documented accurately?	Has the IV fluid prescription been reviewed 12hrly whilst on IV fluids? (Record 1 if NA)	Was the guidance for intravenous therapy completed?	Was the blood glucose recored?	Full Compliance
Record Yes-1 No-0								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
TOTAL AUDITS			0		TOTAL COMPLIANCE			

Paediatric IV Fluid Audit Improvement Tool

- ❖ PIVFAIT
- ❖ Ward based
- ❖ Weekly audit by Ward staff.
 - ❖ Patient identification.
 - ❖ Patient weight.
 - ❖ Daily fluid calculation guidance
 - ❖ Electrolyte monitoring.
 - ❖ Glucose monitoring.
 - ❖ Cumulative input and output totalling and Fluid balance.
 - ❖ 12 hour reassessment.

PIVFAIT questions - original

Patient identification.

Is the patient clearly identified on ALL fluid prescription charts?

Patient weight.

Is the patient's weight recorded?

Electrolyte monitoring.

Is the U&E recorded?

Cumulative input and output totalling and Fluid balance.

Is the input and output documented accurately?

12 hour reassessment.

Has the IV fluid prescription been reviewed 12hrly whilst on IV fluids? (record 1 if NA)

Daily fluid balance chart calculation guidance completed.

Was the guidance for intravenous therapy completed?

Glucose monitoring.

Was the blood glucose recorded?

PIVFAIT questions – modified

Questions*

1. Patient identification.

Are the following identifiers provided on both sides of the FP&BC?

- i. full name,
- ii. date of birth,
- iii. hospital number?

2. Glucose monitoring.

Is there a Blood Glucose result recorded on the FP&BC, in accordance with the Paediatric Therapy Wallchart (May 2014) i. e. at least 12 hourly?

3. Cumulative input and output totalling and Fluid balance.

Are all of the following amounts (in mls) recorded on the FP&BC?

- i. Day & night totals, (if possible)
- ii. Oral/IV amounts, (if possible)
- iii. Grand Total IN,
- iv. Grand Total OUT,
- v. 24 hour Fluid Balance?

4. Patient weight.

Is there a weight, in kgs, given on the FP&BC?

5. Daily fluid balance chart calculation guidance completed.

Is the Calculation guidance for IV therapy completed?

6. Electrolyte monitoring.

Is there an Electrolyte and Urea result recorded on the FP&BC, in accordance with the Paediatric Therapy Wallchart (May 2014)?

7. 12 hour reassessment.

Is there a 12 hour Reassessment box completed with an answer to the question "Is the infusion prescription still suitable?" followed by a doctor's signature?

*Based on the recommendations of the
GAIN Audit of Parenteral Fluid Therapy for Children and Young Persons (August 2014)
and the
Parenteral Fluid Therapy for children & young people Wallchart (May 2014).

PIVFAIT – first version

FLUID PRESCRIPTION/BALANCE CHART

Date				Ward/Dept			
Q	1	2	3	4	5	6	7
	Patient identification	Glucose Monitoring	Cumulative input and output totalling and Fluid balance.	Patient weight	Daily fluid balance chart calculation guidance completed.	Electrolyte monitoring	12 hour assessment.
Chart	Are all the following identifiers provided on both sides of the FB&PC:	i. While the child is receiving IV fluids, is there a Blood Glucose result recorded on the FP&BC,	Are all of the following amounts (in mls) recorded on the FP&BC?	Is there a weight in kgs, given on the FP&BC?	i. Are the appropriate Calculation guidance sections for the IV therapy completed?	Is there an Electrolyte and Urea result recorded on the FP&BC,	When IV fluids are administered for longer than 12 hours,
	i. Full Name ii. Date of birth iii. Hospital number	in accordance with the Paediatric Therapy Wallchart (May 2014) i.e. at least 12 hourly?	i. Day and night totals, (if child on IV fluids for longer than 12 hours)		ii. Was a coded indication for the fluid administration provided?	in accordance with the Paediatric Therapy Wallchart (May 2014)?	Is there a 12 hour reassessment box completed with an answer to the question:
		ii. Were there any episodes of Blood Glucose < 3mmo/L? If answer = Yes; enter Hospital Number for audit department to check for treatment.	iii. Oral/IV amounts, (all administered types of intake to be recorded) iv. Grand Total IN v. Grand Total OUT vi. 24 hour Fluid Balance?				Is the infusion prescription still suitable? followed by a doctors signature
Record Yes = 1 , No = 0							
1							0
2							0
3							0
4							0
5							0
6							0
7							0
8							0
9							0
10							0
Total Audits			0				0

Full Compliance %

Paediatric IV Fluid Audit Improvement Tool

Fluid Balance Results for June 2014

FLUID BALANCE PRESCRIPTION CHART	02.06.14			09.06.14			16.06.14			23.06.14			30.06.14		
	Obs	Com	Total	Obs	Com	Total	Obs	Com	Total	Obs	Com	Total	Obs	Com	Total
Allen Ward	9	9	100	3	2	67	3	2	67	3	2	67	4	3	75
Barbour Ward	8	5	63	8	8	100	7	4	57	5	4	80	6	6	100
Paul Ward	10	8	80	10	7	70	10	7	70	10	10	100	10	10	100
CHU	4	0	0	6	5	83	10	8	80	5	4	80	7	7	100
Belvior Ward	4	4	100	3	2	67	5	5	100	2	2	100	2	1	50
Clarke Clinic	3	3	100	4	4	100	4	2	50	1	1	100	1	1	100
Weekly Total	38	29		34	28		39	28		26	23		30	28	
Monthly Total	167	136													

Paediatric IV Fluid Audit Improvement Tool

Fluid Balance Results for July 2014												
FLUID BALANCE PRESCRIPTION CHART	07.07.14			14.07.14			21.07.14			28.07.14		
	Obs	Com	Total	Obs	Com	Total	Obs	Com	Total	Obs	Com	Total
Allen Ward	6	6	100	NS	NS	NS	3	3	100	7	3	43
Barbour Ward	6	3	50	6	5	83	5	5	100	10	7	70
Paul Ward	10	10	100	10	10	100	10	10	100	10	10	100
CHU	10	9	90	5	5	100	5	3	60	3	0	0
Belvior Ward	2	2	100	1	0	0	3	3	100	3	0	0
Clarke Clinic	2	2	100	1	1	100	NO	NO	NO	NO	NO	NO
Weekly Total	36	32		23	21		26	24		33	20	
Monthly Total	118	97										

PIVFAIT questions – after NI consultation

Questions*

1. Patient identification.

Are the following identifiers provided on both sides of the FP&BC?

- i. full name,
- ii. date of birth,
- iii. hospital number?

Comment [d2]: Not our original audited standard but I believe good to endorse now if all hospitals have a place on both sides of the charts for name etc.

2. Glucose monitoring.

Is there a Blood Glucose result recorded on the FP&BC, in accordance with the Paediatric Therapy Wallchart (May 2014) i. e. at least 12 hourly?

Comment [d3]: ...during the period on IV fluids.

If the fluids come down – we would allow the glucose test to be missed – would we not?

3. Cumulative input and output totalling and Fluid balance.

Are all of the following amounts (in mls) recorded on the FP&BC?

- i. Day & night totals, (if possible)
- ii. Oral/IV amounts, (if possible)
- iii. Grand Total IN,
- iv. Grand Total OUT,
- v. 24 hour Fluid Balance?

Comment [d4]: I wonder if there should also be a question on the management of hypoglycaemia as that was one of the primary recommendations of improvement needed?

Q. Were all hypoglycaemia episodes treated as per PTW (2014)

4. Patient weight.

Is there a weight, in kgs, given on the FP&BC?

Comment [d5]: If possible? – Better definition for the audit needed here.

Trusts will have different definitions for what is possible and will mark themselves differently

5. Daily fluid balance chart calculation guidance completed.

Is the Calculation guidance for IV therapy completed?

Comment [d6]: ... for each section that has been actually prescribed on the FP&BC?

e.g. Do we need the calculation to have been done for bolus if a bolus was never given?

6. Electrolyte monitoring.

Is there an Electrolyte and Urea result recorded on the FP&BC, in accordance with the Paediatric Therapy Wallchart (May 2014)?

Comment [d7]: This could be tricky for a single sample FP&BC. Very easy for Trusts to inadvertently mark themselves down here by not having a U and E "recorded" on that particular FP&BC when one was not actually needed as the fluids are coming to an end in the morning.

Additional question – if not "recorded" on FP&BC audited – was there an acceptable reason for this variance?
I.e. was there a previous U and E performed within a suitable time period (4-24 hours) as per the Paediatric Therapy Wallchart Guidance (2014) of the fluids being discontinued?

*Based on the recommendations of the

GAIN Audit of Parenteral Fluid Therapy for Children and Young Persons (August 2014) and the

Parenteral Fluid Therapy for children & young people Wallchart (May 2014).

Comment [d8]: Not necessary if fluids already stopped at 12 hours – acceptable variance.

PIVFAIT questions – after more trialling

Questions*

Patient identification.

1. Are all the following patient identifiers provided, on both sides of the DFBC?
 - i. full name,
 - ii. date of birth,
 - iii. hospital number?

Glucose monitoring.

2. While the child is receiving IV fluids, is there a Blood Glucose result recorded on the DFBC, (in accordance with the Paediatric Therapy Wallchart (May 2014)) i.e. at least 12 hourly?
3. Were there any episodes of Blood Glucose < 3 mmol/L?
If answer = Yes; enter Hospital Number for audit department to check for treatment.

Cumulative input and output totalling and fluid balance.

4. Are all of the following amounts (in mls) recorded on the DFBC?
 - i. Oral/IV amounts, (all administered types of intake to be recorded)
 - ii. Day & night totals, (if child on IV fluids for longer than 12 hours)
 - iii. Grand Total IN,
 - iv. Grand Total OUT,
 - v. 24 hour Fluid Balance?

Patient weight.

5. Is there a patient weight, in kgs, given on the DFBC?

Daily fluid balance chart calculation guidance completed.

6. Are the appropriate Calculation guidance sections for IV therapy completed?
7. Are there coded indications for the fluid administration provided?

Electrolyte & Urea monitoring.

8. Is there an E&U result recorded on the DFBC, (in accordance with the Paediatric Therapy Wallchart (May 2014))?


If there is an E&U previously performed within a suitable time period (4 -24 hours) of the fluids being discontinued - as per the Paediatric Therapy Wallchart Guidance (2014) – the answer can be recorded as YES.

12 hour reassessment.

9. When IV fluids are administered for longer than 12 hours, is there a 12 hour Reassessment box completed with an answer to the question "Is infusion prescription still suitable?" followed by a doctor's signature?

*Based on the recommendations of the
GAIN Audit of Parenteral Fluid Therapy for Children and Young Persons (August 2014)
and the
Parenteral Fluid Therapy for children & young people Wallchart (May 2014).

PIVFAIT version v0.10

Paediatric Intravenous Fluid Audit Implementation Tool						Delete	Child 			
Date		Jan-16				Ward/Dept				
Q	1	2	3	4	5	6	7	8	9	
	Patient identification	Glucose Monitoring		Cumulative input and output totalling and fluid balance.	Patient weight	DFBC calculation guidance completed.		Electrolyte monitoring	12 hour assessment.	
Chart	Are all the following patient identifiers provided on both sides of the DFBC? 1. Full Name 2. Date of birth 3. Hospital number	While the child is receiving IV fluids, Is there a Blood Glucose result recorded on the DFBC, (in accordance with the 2014 Paediatric Therapy Wallchart) i.e. at least 12 hourly?	Were ALL Blood Glucose measurements greater than 3mmol/L? If answer = No; Enter Hospital Number of those below 3mmol/L for audit dept. to check for treatment.	Are all of the following amounts (in mls) recorded on the DFBC? 1. Oral/IV amounts, (all administered types of intake to be recorded). 2. Day and night totals, (if child on IV for longer than 12 hours). 3. Grand Total IN 4. Grand Total OUT 5. 24 hour Fluid Balance	Is there a patient weight in kgs, given on the DFBC?	Are the appropriate calculation guidance sections for the IV therapy completed?	Are there coded indications for the fluid administration provided?	Is there an E&U result recorded on the DFBC, (in accordance with the 2014 Paediatric Therapy Wallchart?)	Is there a 12 hour Reassessment box* appropriately completed with an answer to the question: Is the infusion prescription still suitable? followed by a doctors signature. 10 - 14 hours * Can be	
	Record Yes = 1 , No = 0									
	1	1	1	1	1	1	1	1	1	100
	2	1	1	1	1	1	1	1	1	100
	3	1	0	0	1	1	0	1	0	44
	4									0
	5									0
	6									0
	7									0
	8									0
	9									0
10									0	
Total Audits = Obs =		3		Paediatric Version V0.10 September 2015				Total number fully Compliant = Com =		2
Number of Charts completed	3	3	3	3	3	3	3	3	3	
Number of compliant cases	3	2	2	3	3	2	3	2	2	
	100	67	67	100	100	67	100	67	67	

PIVFAIT version v0.10

January 2016



PIVFAIT version v0.10

			Patient identification	Glucose Monitoring		Cumulative input and output totalling and fluid balance.	Patient weight	DFBC calculation guidance completed.		Electrolyte monitoring	12 hour assessment.
January 2016	Obs	Com									
Paul 66%	3	2	3	2	2	3	3	2	3	2	2
Barbour 95%	40	38	40	40	40	39	40	40	40	40	39
Belvoir 100%	5	5	5	5	5	5	5	5	5	5	5
CHU 85%	14	12	14	14	14	14	14	14	14	12	13
CCC 100%	2	2	2	2	2	2	2	2	2	2	2
Allen 87%	16	14	16	16	16	14	16	16	16	16	16
TOTAL	80	73 91%	80/100%	79/ 98%	79/ 98%	77/96%	80/100%	79/ 98%	80/ 100%	77/96%	78/97%

PIVFAIT

consists of,

- ❖ Method and instructions.
- ❖ Data collection page.
- ❖ Data presentation page – weekly/monthly.
- ❖ Overall monthly compliance result page
 - ❖ for forwarding.
- ❖ Paediatric Wallchart.

PIVFAIT - Method and Instructions

Paediatric IV Fluid Audit Improvement Tool

Background

In August 2014, GAIN produced an [audit of Parenteral Fluid Therapy for Children and Young Persons](#) aged over 4 weeks & under 16 years). It had 13 recommendations and, based on the lessons learnt from this audit, advised that GAIN produce a simple Paediatric IV Fluid Audit Improvement Tool (PIVFAIT) which Trusts can use to obtain high and consistent compliance with these recommendations. The results with this audit tool may be asked for by GAIN in the future.

Methodology

This audit tool is

- ward based with data collection by nursing staff,
- performed at an agreed collection interval (weekly or monthly),
- reported monthly,
- performed on children aged from 4 weeks up to their 16th birthday.

The collection interval will depend on the number of children being cared for within each ward and Trust. It is recommended to sample and analyse 10 daily fluid prescription and balance charts (DFBC) from children on intravenous fluids at a time; 10 a week or 10 a month. A majority of daily DFBCs should be audited.

Each chart will be subject to examination using the following questions, answering using 1 = Yes and 0 = No. This will allow calculation of a compliance figure weekly and/or monthly. The aim is for 100% compliance.

There should be assurance of this ward audit by an independent audit review, quarterly, performed by the Trust's corporate (paediatric) management team or the Trust's Audit department, using the PIVFAIT.

Figure 5.
Prototype data collection page

Paediatric IV Fluid Audit Improvement Tool (PIVFAIT) V0.4

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the DFBC?

audit recorded on
(May 2014) i.e.

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1 – the number of

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(2014)

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tool (PIVFAIT) V0.4

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Improvement Tool (PIVFAIT) V0.4

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PIVFAIT - instructions

INSTRUCTIONS FOR COMPLETING PIVFAIT - AUDIT TOOL

Date of the audit

Paediatric Intravenous Fluid Audit Implementation Tool

Delete (button) - When data has been completed and entered into the monthly sheets, press Delete button to clear the sheet, ready for next audit.

Ward/Dept (dropdown) - Ward being audited

Child (icon) - Ward being audited

Chart (dropdown) - Enter 1 (Yes) OR 0 (No) As you answer each question compliance will automatically be completed for you.

Compliance % (dropdown) - the %

Total Audits = Obs = 0 (button) - Total number of patients audited and number fully compliant will be completed automatically as you populate the spreadsheet.

Total number fully Compliant = Com = 0 (button) - Enter these 2 numbers into the monthly spreadsheet - for each ward audited

Fluid Balance Results for January 2015


FLUID BALANCE PRESCRIPTION CHART

	05/01/2015			12/01/2015			19/01/2015			26/01/2015		
	Obs	Com	Total	Obs	Com	Total	Obs	Com	Total	Obs	Com	Total
Allen Ward	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Barbour Ward	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Paul Ward	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
CHU	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Belvoir Ward	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Clarke Clinic	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
Weekly Total	0	0	0	0	0	0	0	0	0	0	0	0
Monthly Total	0	0	0	0	0	0	0	0	0	0	0	0

Automatically completed as you enter data

Adult PIVFAIT

Adult Intravenous Fluid Audit Implementation Tool

Date		Ward/Dept		<div>Adult</div> 			
Q	1	2	3	4	5	6	
	Patient identification	Input and output amounts and balance.	Hourly cumulative totalling	Patient weight	Previous day's Balance	Indications for fluid administration.	
Chart	Are all the following patient identifiers provided on both sides of the DFBC? 1. Full Name 2. Date of birth 3. Hospital number	Are all of the following amounts (in mls) recorded on the DFBC? 1. Oral/IV amounts, (all administered types of intake to be recorded). 2. Day and night totals, (if adult on IV for longer than 12 hours). 3. Grand Total IN 4. Grand Total OUT 5. 24 hour Fluid Balance	If the Hourly cumulative box is ticked, are the fluids input and output amounts totalled hourly?	Is there a patient weight in kgs, given on the DFBC?	Is the previous day's balance carried forward?	Are there coded indications for the fluid administration provided?	
	Record Yes = 1 , No = 0						
	1						0
	2						0
	3						0
	4						0
	5						0
	6						0
	7						0
	8						0
	9						0
10						0	
Total Audits = Obs =		0	Adult Version V0.2 March 2015		Total number fully Compliant = Com =		0

PIVFAIT

