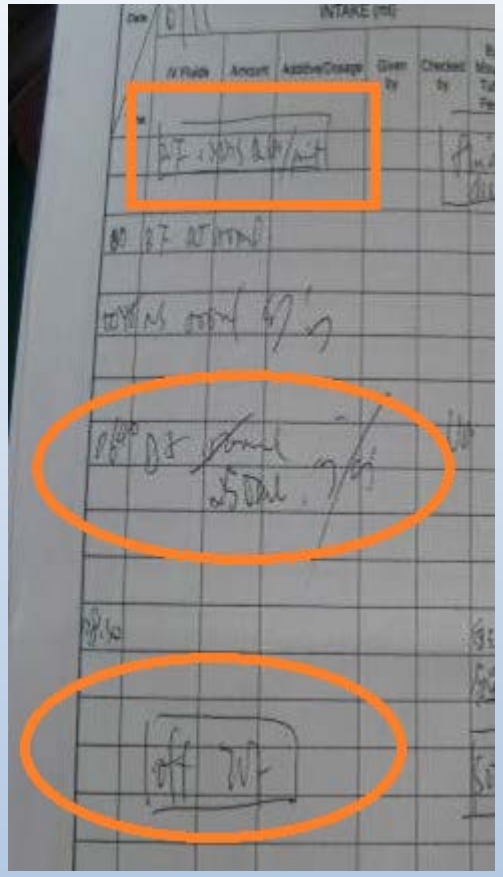
# Standardized Charting System in Enhancing the Accuracy & Compliance of Documentation on the Fluid and Balance Sheet

**APN Wong Hsiao Wah**

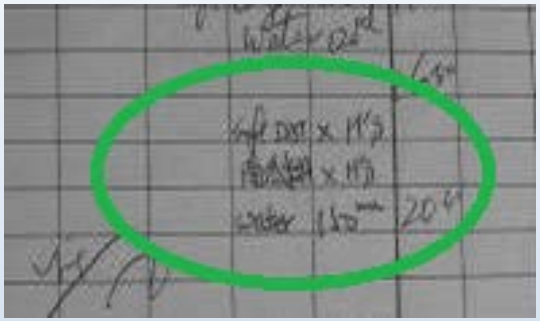
Department of Orthopaedics and Traumatology/ Gynaecology,
Tseung Kwan O Hospital

7 May, 2018

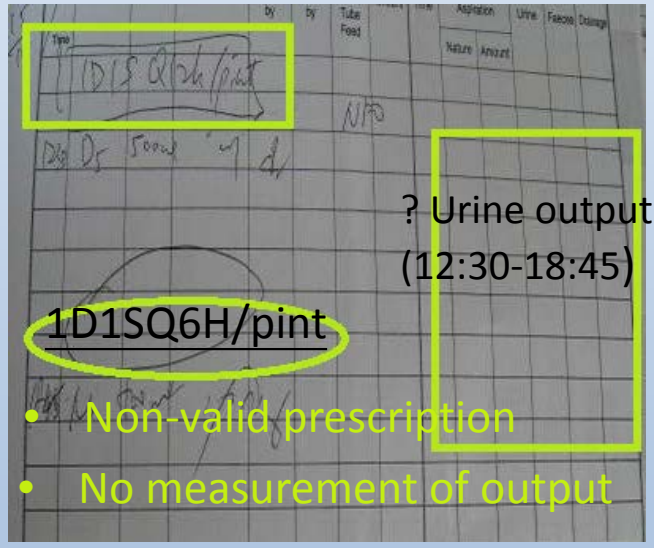
# Common Errors on intake & output recording



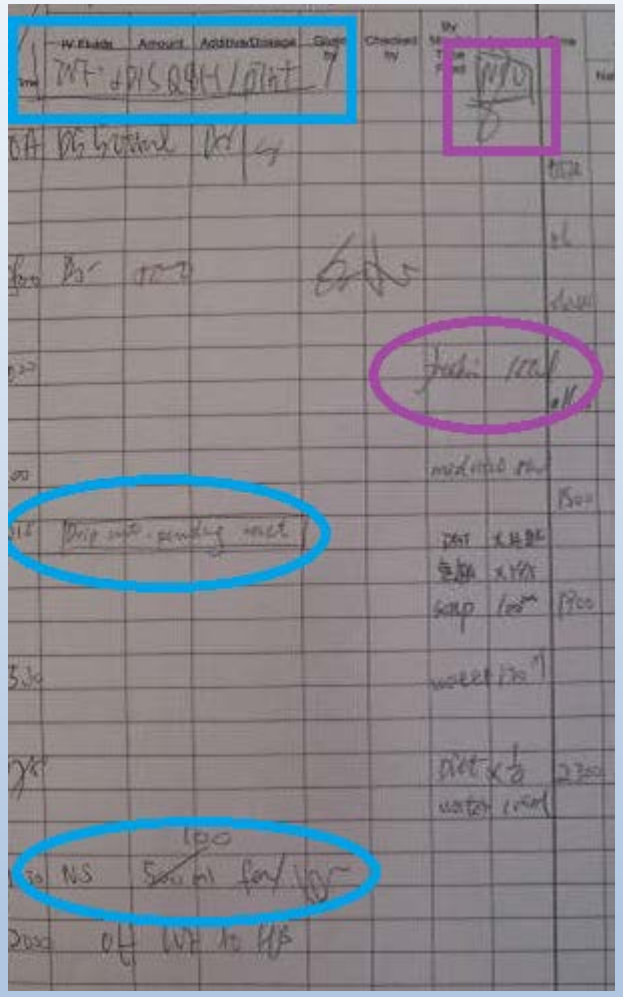
- Missing Record

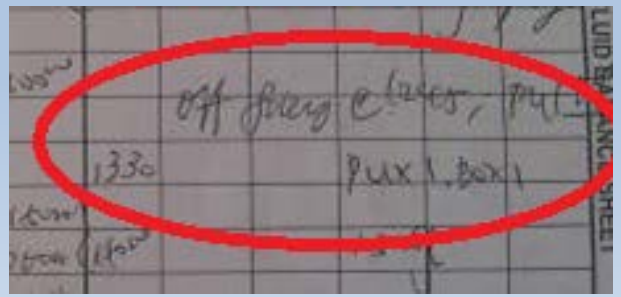


- No measurement of intake




- Non-valid prescription
- No measurement of output





- Usage of Non-standardized abbreviation
- No nature record of output

- Inaccurate calculation of infused fluid
- Non-clear instruction

# Milestones of Standardized Charting System

## 1st Phase: Data Analysis & Action

- Identify variation on intake & output recording
- Collect data and perform analysis
- Revise Guideline on Intake & Output Recording with tailor-made Conversion Tables (Chinese, English & Photos)
- Perform staff briefing, sharing and promulgation
- Implement pilot on standardized charting system in one ward

## 3rd Phase: Audit & Action

- Implement audit on compliance of standardized charting system
- Show unsatisfactory result
- Perform on-site coaching & ward-based sharing


- Receive comments & feedback from staff
- Identify non-standardized abbreviation
- Revise Guideline on Intake & Output Recording with unified abbreviation
- Perform briefing, sharing and promulgation
- Implement the system in three wards

## 2nd Phase: Review & Action

- Repeat audit on compliance of standardized charting system
- Show significant improvement

## 4th Phase: Outcome

# Standardized Charting System

Implement
Data Collection
& Analysis
(Fluid & Balance Sheet)

Tailor –made
Conversion Tables with its Documentation
(Chinese, English, Photos)

Revise
Guideline on Intake & Output Recording

Tailor-made
Unified Abbreviation & Symbol List
(Fluid & Balance Sheet only)

Perform
Briefing,
Sharing &
Promulgation

---

TSEUNG KWAN O HOSPITAL
DEPARTMENT OF ORTHOPAEDICS & TRAUMATOLOGY / GYNAECOLOGY

Topic: Abbreviation on Fluid Balance Worksheet (Intake and Output Charting)

| Abbreviation | Meaning |
|---|---|
| ASP | Aspiration |
| BF | Bring Forward |
| BS | Bladder Scan |
| Chart/ Strict I&O | Chart / Strict Intake and Output |
| DAT | Diet As Tolerated |
| DKI Infusion | Glucose Potassium Insulin Infusion |
| FD | Fluid Diet |
| FAMN/FMN | Fast After Midnight |
| FFP | Fresh Frozen Plasma |
| Foley to BSB | Foley to Bed-side Bag |
| FR<__L /Day | Fluid Restriction Less Than__ Litre Per Day |
| HB | Heparin Block |
| IVF | Intravenous Fluid |
| KCl | Potassium Chloride |
| NBO | Not Bowel Open |
| NG Tube | Naso-gastric Tube |
| NBM | Nil By Mouth |
| NPO | Nil Per Os (Nothing By Mouth) |
| NPO except Med | Nil Per Os (Nothing By Mouth) except Medication |
| NPU | Not Pass Urine |
| PC | Packed Cells |
| PEG Tube | Percutaneous Endoscopic Gastrostomy Tube |
| Plt | Platelets |
| PPN | Peripheral Parenteral Nutrition |
| SD | Soft Diet |
| RT | Ryles' Tube |
| RU | Residual Urine |
| UO | Urine Output |

Extra abbreviations and symbols

| Abbreviations and Symbols | Meanings |
|---|---|
| FALB | Fast After Light Breakfast |
| D/S | Docusate |
| H2O | Water |
| PU | Pass urine |
| Pos | Positive |
| Neg | Negative |
| Cont'd | Continued |
| PTO | Please Turn Over |
| W/H | Withhold |
| Symbol "+" | With |
| Symbol " x" | For |
| Symbol " / " | Per |
| Symbol "//" or "#" | Off |

---

| | | |
|---|---|---|
| Tseung Kwan O Hospital | Document No | TKO-ORT-C-567-V02 |
| Guideline on Intake and Output Recording | Effective Date | 1 April, 2017 |
| | Review Date | 1 April, 2017 |
| Department of Orthopaedics and Traumatology | Custodian | Chairperson SNSC Department of O&T |
| | Page | Page 1 of 12 pages |

將軍澳醫院
Tseung Kwan O Hospital

## Guideline on Intake and Output Recording

| Version | Effective Date |
|---|---|
| 01 | 26 March 2015 |
| 02 | 1 April 2017 |
| | |
| | |

| | |
|---|---|
| Document number | TKO-ORT-C-567-V02 |
| Author | Ms Wong Hsiao Wah<br>APN, Department of O&T, TKOH |
| Custodian | Chairperson<br>Senior Nursing Staff Committee (SNSC)<br>Orthopaedics & Traumatology Department (O&T) TKOH |
| Approving Authority | O&T Senior Nursing Staff Committee |
| Signature of Custodian | Signed copy is kept in DOM Office |
| Approval Date | 1 April 2017 |
| Documentation Risk Rating | 2 (Minor) |

---

## Record of Bowel Opening 大便記錄

| Colour顏色 | Character性質 |
|---|---|
| Brownish (B) 啡 | Solid 硬 |
| Yellowish (Y) 黃 | Soft (S) 軟 |
| Greenish (G) 綠 | Loose (L) 稀 |
| Dark Greenish 墨綠 | Watery (W) 水 |
| Tarry 黑 | |

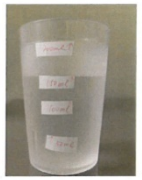
e.g. BSS = Brownish Soft Stool 啡色軟大便

e.g. Tarry Stool = Tarry Stool 黑大便

---

## Conversion Table for Oral Fluid Measurements (Intake) 換算圖


Kettle水壺= 2000ml/毫升

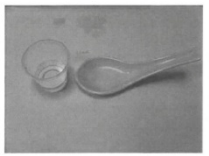

Glass水杯=200ml/毫升


Oral supplement 補充品= 120ml/150ml/250ml/毫升


Rice Water粥水/ Congee粥 (3/4 Bowl/碗) =500ml/毫升

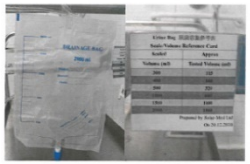

•Soup Bowl湯碗 = 250ml/毫升


Chinese Bowl飯碗=200ml/毫升


Chinese Soup Spoon湯匙 =10ml/毫升

---

## Conversion Table for Fluid Measurements (Output) 換算圖


Urine Scale/ Volume reference 尿袋容量參考表

**Report (urine) 報告小便異常--**
Abnormal Colour異常顏色
e.g. Haematuria如帶紅

Abnormal Nature異常
e.g. Cloudy如混濁

Abnormal Amount異常量
e.g. <30ml/ hour如少於30毫升/小時


淨重Net weight =175g克

**Nasal Gastric Tube drainage : 胃管引流**

Greenish Fluid with _____ml
綠色液體___毫升

**Tubal Drain管狀引流:**

BSF=著紅色的液體
Blood Stained Fluid with __ml/毫升


淨重Net weight =100g克


100g/克=100ml/毫升
1g/克= 1ml/毫升

# Modified Audit Form on Intake & Output Recording (including Multiple Relevant HA Nursing Standards)


**References:**

1. Hospital Authority (2002). Nursing Standards For Patient Care: Intake and Output Recording. Standard no G4.4
2. Hospital Authority (2014). Nursing Standards For Patient Care: Naso-gastric Tube Feeding. Standard no. S5.7
3. Hospital Authority (2014). Nursing Standards For Patient Care: Whole Blood/ Blood components (Plasma, platelets, red blood cells) Transfusion. Standard no. G6.10
4. Ling, W.W., Ling, L.P., Chin, Z.H., Wong, I.T., Wong, A.Y., Nasef, A. & Zainuddin, A. (2011). Improvement in Documentation of Intake and Output Chart. *International Journal of Public Health Research Special Issue, 152-162.*
5. NSD TKOH (2014). Nursing Standards For Patient Care- Audit form: Indwelling Urethral Catheter Care. Standard no. S11.3
6. NSD TKOH (2012). Nursing Standards For Patient Care- Audit form: Intravenous infusion Standard no. G6.5
7. NSD TKOH (2014). Nursing Standards For Patient Care- Audit form: Intravenous Medication Standard no. G6.6
8. NSD TKOH (2011). Nursing Standards For Patient Care- Audit form: Nursing Documentation, Standard no. M 2.1.
9. Wong, H. W. (2015). *Guideline on Intake and Output Recording.* Department of Orthopaedics and Traumatology. TKO-ORT-C-552-V01.


TSEUNG KWAN O HOSPITAL
DEPARTMENT OF ORTHOPAEDICS & TRAUMATOLOGY

**Audit of Intake & Output Recording**

**Standard Statement: Client's intake and output are monitored and recorded accurately**

Date and Time: _____ Sample No: _____

***Please '✓' in the appropriate column***

| Item | Standard Criteria | Source of Information | Yes | No | N/A | Remarks |
|---|---|---|---|---|---|---|
| 1 * | Identify right patient for right record | AN / AP / AF/ O / CR | | | | |
| 2 | Documentation clear, concise, complete and correct | AN / AP /AF/ O / CR | | | | |
| 3 | Use approval languages e.g. Chinese and English | AN / AP /AF/ O / CR | | | | |
| 4 | Use standardized and approval abbreviations or symbol only | AN / AP /AF/ O / CR | | | | |
| | **Record of on and off of intake and output charting** | | | | | |
| 5 | Record the initial date and initial time of the first implementation in "Left upper corner" of designated area of the Worksheet. | AN / AP /AF/ O / CR | | | | |
| 6 | Record of date and time of intake and output accordingly | AN / AP /AF/ O / CR | | | | |
| 7 | Record the off time of intake and output charting | AN / AP /AF/ O / CR | | | | |
| 8 | Document and "square" the indicated instructions according to prescription in In-patient Medication Order Entry (IPMOE) and clinical management sheet (CMS). | AN / AP /AF/ O / CR | | | | |
| | **Record of Intake** | | | | | |
| 9* | Check the valid prescription | AN / AP /AF/ O / CR | | | | |
| | **For intravenous infusion:** | | | | | |
| 10.1 | Specify the type of fluid, volume. | AN / AP /AF/ O / CR | | | | |
| 10.2 | Counter-checked and signed by 2 qualified nurses | AN / AP /AF/ O / CR | | | | |
| | **For intravenous fluid infusion with medication or medication infusion:** | | | | | |
| 11.1 | Type of fluid, volume, in additional specify additive medication and dosage as prescribed | AN / AP /AF/ O / CR | | | | |
| 11.2 | Counter-checked and signed by 2 qualified nurses | AN / AP /AF/ O / CR | | | | |
| | **For blood products transfusion:** | | | | | |
| 12.1 | Verify transfusion prescription against patient's record e.g. blood component, rate of transfusion | AN / AP /AF/ O / CR | | | | |
| 12.2 | Specify number of unit, serial number, | AN / AP /AF/ O / CR | | | | |



TSEUNG KWAN O HOSPITAL
DEPARTMENT OF ORTHOPAEDICS & TRAUMATOLOGY

| | | | | | | |
|---|---|---|---|---|---|---|
| | blood group volume of infused of each pint. | | | | | |
| 12.3 | Counter-checked and signed by 2 qualified nurses | AN / AP /AF/ O / CR | | | | |
| | **For naso-gastric tube feeding or patient with proprietary supplements** | | | | | |
| 13 | The feed as specified in the feeding regimen | AN / AP /AF/ O / CR | | | | |
| 14 | Implemented "fluid restriction", "strict intake and output" accordingly | AN / AP /AF/ O / CR | | | | |
| 15 | Appropriate interventions provided according to needs of patient e.g. encourage fluid or food | AN / AP /AF/ O / CR | | | | |
| 16 | Measure and record all fluid such as oral proprietary supplement, water, soup, juice, milk and soft drink | AN / AP /AF/ O / CR | | | | |
| 17 | Record other fluid or food ingested between meals | AN / AP / AF/ O / CR | | | | |
| 18 | Record if patient refused diet, proprietary supplement, or other appropriate interventions | AN / AP /AF/ O / CR | | | | |
| 19 | Record the off time of intravenous infusion and calculate the infused volume accurately | AN / AP /AF/ O / CR | | | | |
| 20 | Total the measurement at 24 hours from 00:00, calculated and record the infused and bring forward fluid accurately if indicated. | AN / AP /AF/ O / CR | | | | |
| | **Record of Output** | | | | | |
| 21 | Record urine in milliliter (ml) /weight diaper in grams (g). | AN / AP /AF/ O / CR | | | | |
| 22 | Record any other output e.g. tube aspiration, vomiting, faeces, drain fluid: specify the time, nature and amounts if indicated. | AN / AP /AF/ O / CR | | | | |
| 23 | Record the nature and report of abnormalities e.g. haematuria, cloudy urine, tarry stool | AN / AP /AF/ O / CR | | | | |

* Critical item

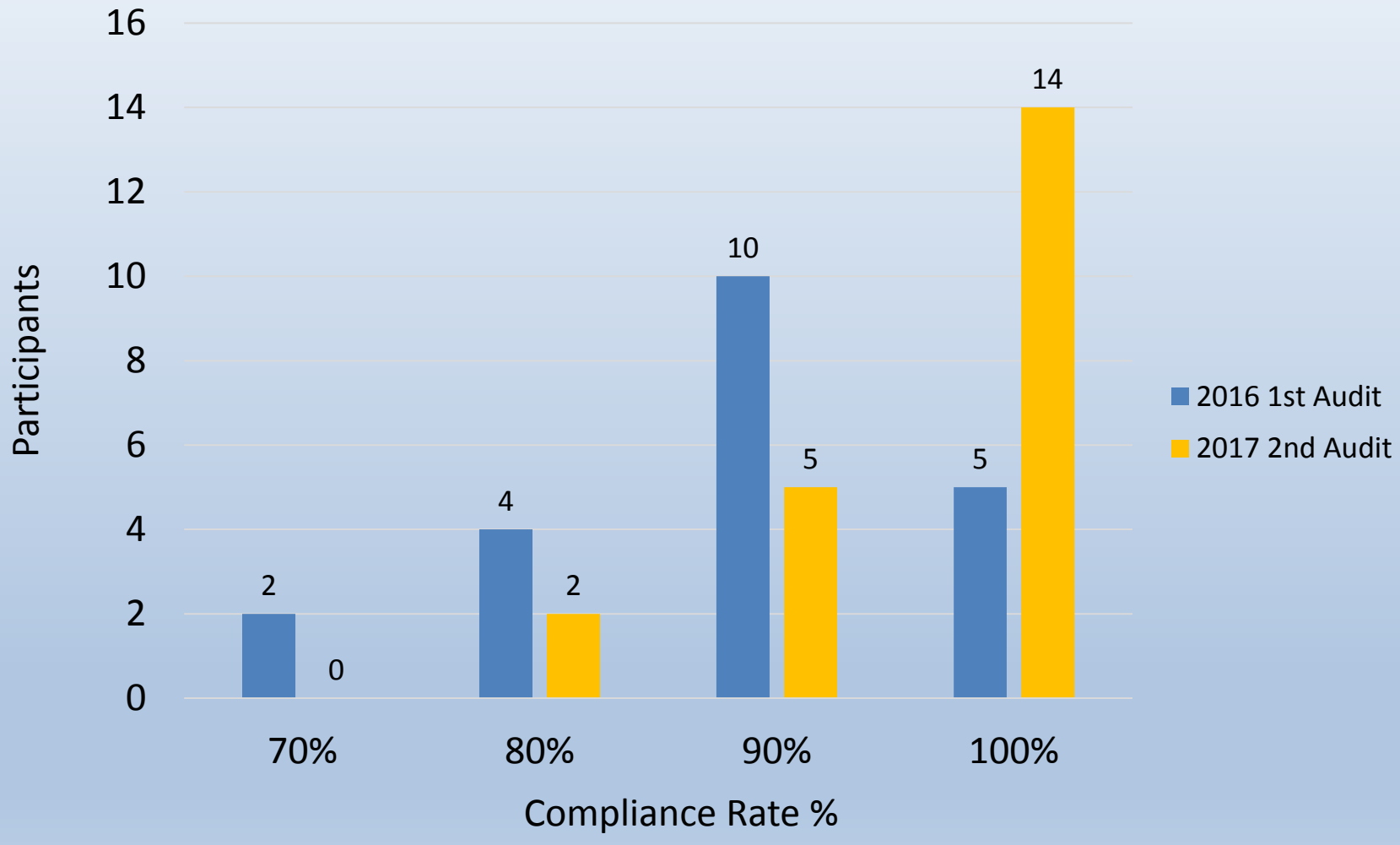
**Source of Information @:** ***Please circle the appropriate Source of Information.***

*(AS = Ask Staff; AP = Ask Patient; O = Observe; CR = Check Record; NA = Not Applicable)*

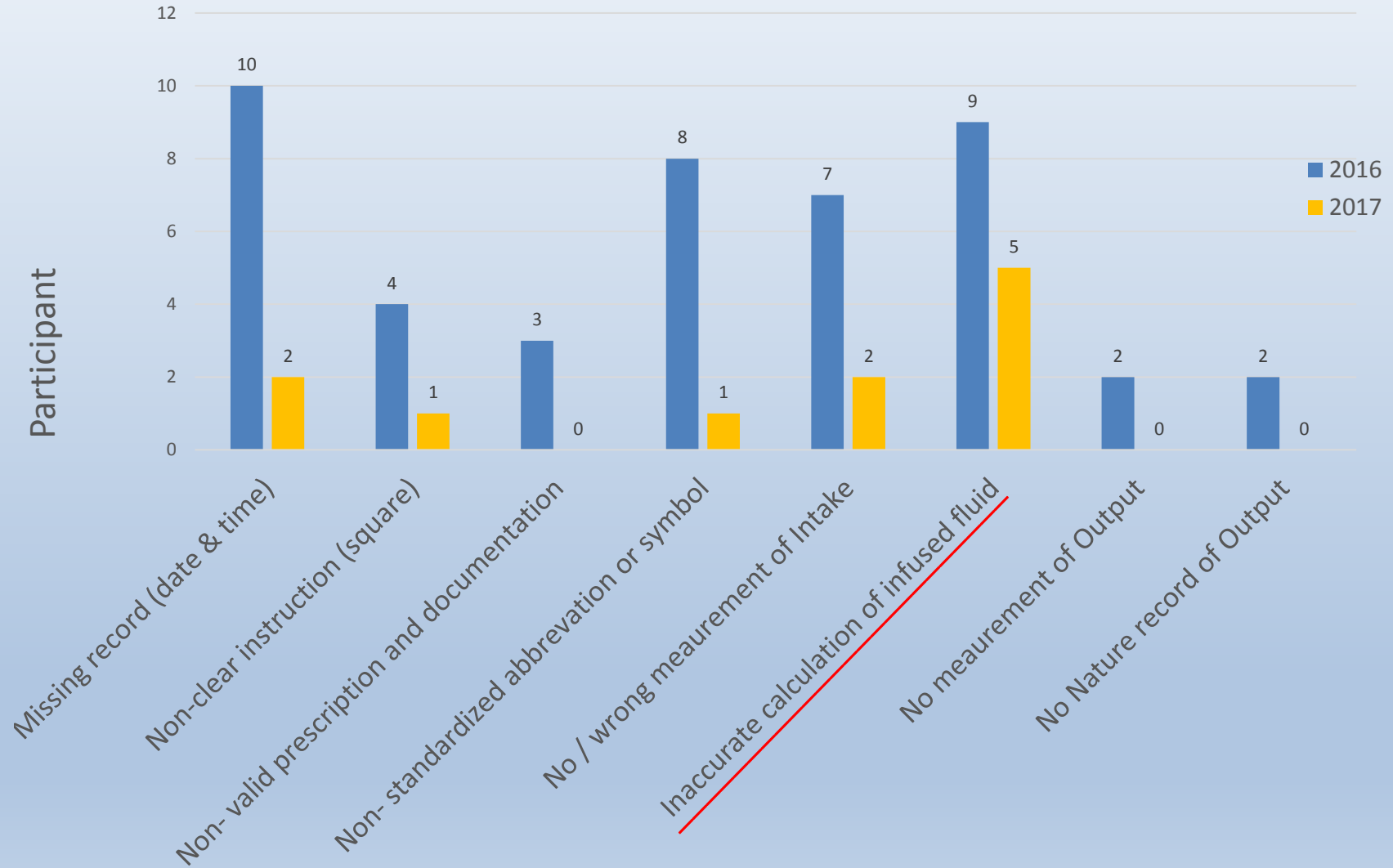
Compliance Percentage: _____

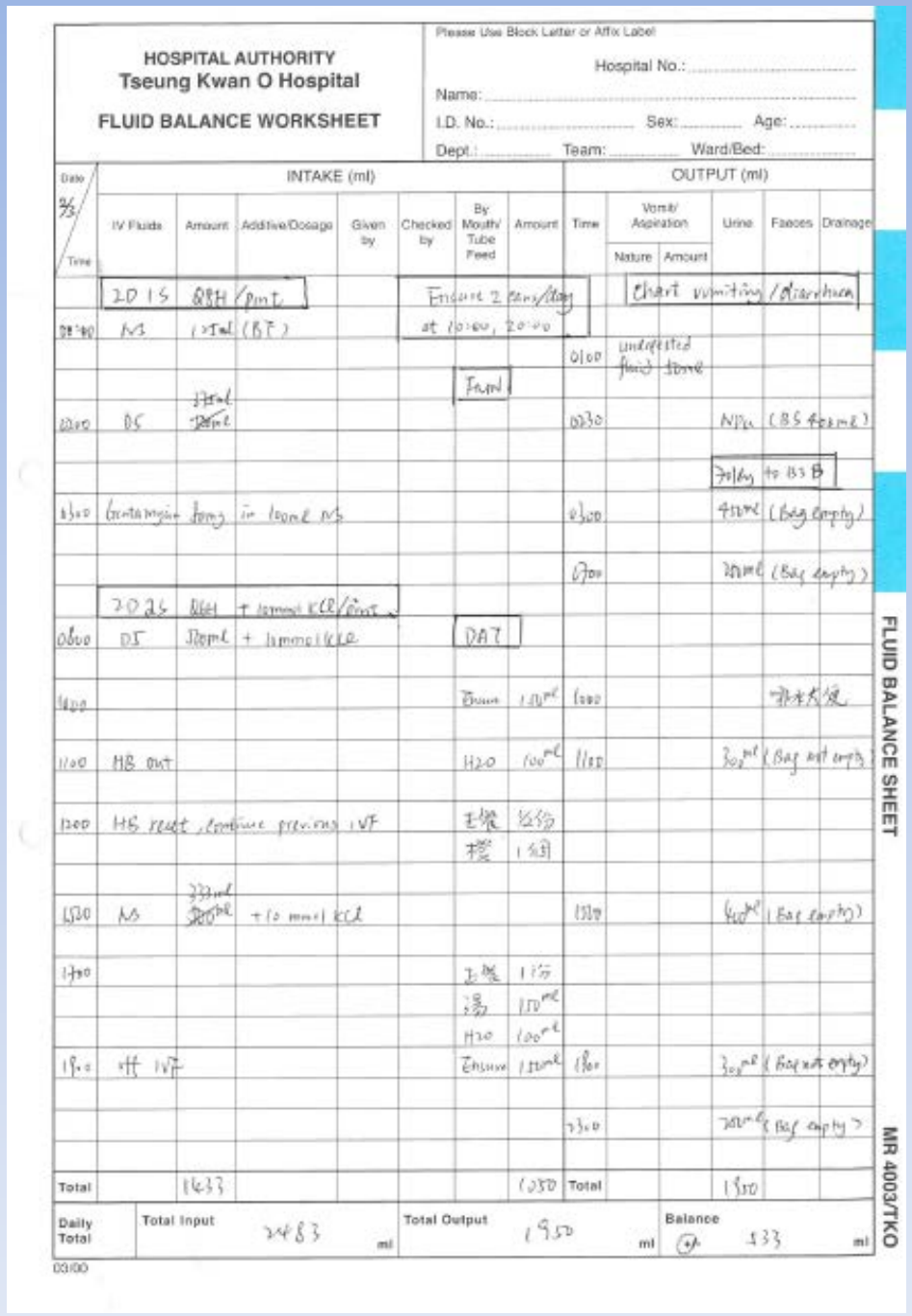
Auditor (In Ward): _____( ) Auditor Signature:_____
Rank/ Name Ward/Unit

## Outcome of Compliance to Standardized Charting System



# Types of Common Errors : Pre & Post Audit





HOSPITAL AUTHORITY
Tseung Kwan O Hospital

FLUID BALANCE WORKSHEET

Please Use Block Letter or Affix Label

Hospital No.:
Name:
I.D. No.: Sex: Age:
Dept.: Team: Ward/Bed:

| Date / Time | INTAKE (ml) IV Fluids | Amount | Additive/Dosage | Given by | Checked by | By Mouth/ Tube Feed | Amount | OUTPUT (ml) Time | Vomit/ Aspiration Nature | Vomit/ Aspiration Amount | Urine | Faeces | Drainage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 26/ | 2015 | 88H/pmt | | | Ensure 2 cans/day | | | | Chart vomiting/diarrhoea | | | | |
| 08:40 | NS | 1xTol (BF) | | | at 10:00, 20:00 | | | | | | | | |
| | | | | | | | | 0100 | Undigested food done | | | | |
| | | 1Tol | | | | Fund | | | | | | | |
| 0200 | D5 | 2Tol | | | | | | 0230 | | | NPU (BS 4times) | | |
| | | | | | | | | | | | Foley to BSB | | |
| 0500 | Gentamycin 80mg in 100ml NS | | | | | | | 0500 | | | 41ml (Bag empty) | | |
| | | | | | | | | 0700 | | | 20ml (Bag empty) | | |
| | 2026 | 88H | + 10mmol KCl/pmt | | | | | | | | | | |
| 0800 | D5 | 2Tol | + 10mmol KCl | | | DAT | | | | | | | |
| 1000 | | | | | | Ensure | 110ml | 1000 | | | | | |
| 1100 | MB out | | | | | H2O | 100ml | 1130 | | | 30ml (Bag not empty) | | |
| 1200 | MS reset, continue previous IVF | | | | | Ensure | 1/2 can | | | | | | |
| | | | | | | Tea | 1 cup | | | | | | |
| 1520 | NS | 2Tol | +10 mmol KCl | | | | | 1510 | | | 40ml (Bag empty) | | |
| 1700 | | | | | | Ensure | 1 can | | | | | | |
| | | | | | | Soup | 150ml | | | | | | |
| | | | | | | H2O | 100ml | | | | | | |
| 1800 | off IVF | | | | | Ensure | 120ml | 1800 | | | 30ml (Bag not empty) | | |
| | | | | | | | | 2300 | | | 20ml (Bag empty) | | |
| Total | | 1633 | | | | | 1050 | Total | | | 1510 | | |

| Daily Total | Total Input | ml | Total Output | ml | Balance | ml |
|---|---|---|---|---|---|---|
| | 2683 | | 1950 | | (+) 733 | |

03/00

FLUID BALANCE SHEET

MR 4003/TKO

# Thank You!