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Prescribing Psychotropic Medications at Kuwait Centre for Mental Health (kcmh)- Clinical Audit.

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Introduction

This is a retrospective study, a clinical audit for prescribing the medication chart of inpatient at Kuwait Center for Mental Health(KCMH) during the past 3 months from 1st May 2021 till 30th July 2021.

It is the first clinical audit to be done according to our knowledge that follows a good practice guideline for prescribing and managing medications according to gold standard guidelines such as NICE and GMC guidelines.

With no previous clinical audit done at KCMH and aiming to establish an adequate on-going service for monitoring and prescribing within a clear standard protocol for the present state and future computer produced charts.

Do no harm for patients (primum non nocere), a concept given by Hippocrates that was an important factor in the good and safe practice.

When prescribing psychotropic medications to our inpatients, there are several points should be taken into considerations:

1. When writing the prescription, reviewing the patient to assess for affect, side effects and need to continue or discontinue.

2. Evidence based showed medications prescribing must have: an evidence based prescribing, drug interactions and sensitivity , adverse effects , checking dosages , prescribing within limits of competence , using prescribing formularies , update and following clinical guidelines and responsible delegation for prescribing administration and dispensing.

3. At Kuwait Centre for Mental Health, all inpatients' prescriptions are written by handwriting process, without computer produced prescription system available at the present time.

4. Aiming to improve our service safety, efficiency, and convenience, it is an important to follow international standard guidelines recommendations.

5. This audit will not address the treatment adherence, side effects and concordance but it shows the concerns and difficulties with prescribing, writing and filling the medications chart according to standard guideline including as required and reconciliation list.

Our Standard:

Keeping up to date and following clinical guidelines from national institute for health and care excellence (NICE), British National Formula (BNF), General Medical Council (GMC) as golden standard and also follow the local prescribing guidelines from Ministry of Health(MOH) at State of Kuwait.

Methods

1. Population: our sample population were 188 patients admitted to KCMH during period of 3 months who has diagnosis of mental illness according to DSM V criteria.

2. It was collected from all acute adult admission, forensic, child and adolescent and old age wards.

3. They were males and females with age range from 13 years -70 years old.

4. There were three researchers: one pharmacist, and two psychiatrists who collected data and were not involve in the patients care plan.

5. The collected 188 sample were recorded from 1st May 2021 till 30th July 2021. The process started on 1st November 2021 and ended on 30th January 2022, it took about 3 months, and it was done in File dept. (at KCMH) all the time to ensure confidentiality.

6. The sample was belonged to 188 inpatient medications chart after excluding 5 DAMA charts due to lack of information's and did not fil the criteria of the research. All the charts were prescribed by their treating doctor.

7. The sample was collected and recorded by using our assessment tool (appendix 1), mainly looking at inpatient file that include prescribing chart, present and previous reconciliations list included.

8. The collected forms presented old and new medication charts, old and new reconciliation charts.

9. The assessment tool (appendix 1) include: prescribing and administration of inpatient medication chart. It contains screening questioners for patient data such as full name, demographic data, diagnosis, age, date of admission, ward and hospital number, doctor signature, date, time, written in capital letters, dose in metric units, written in ink, clear and a readable, state the dose, route of administrations, allergies, rewrite, as required medication (min. and max dose, indications, cancel after 2 weeks).

10. Also medication reconciliation list was reviewed and recorded (developed by our pharmacy sector), included the date, the list of medication on discharge and the pharmacy signature.

Results

All 188 charts and clinical notes for each patient were reviewed and documented.

The outcome showed:

A. There were less than 150 reconciliations charts which being unable to allocate in the file or missing from the patients' files.

B. All data were analyzed using SPSS ver. 26, using descriptive approach looking at the number and the percentage of each criterion in our Audit tool.

C. It showed the following:

months 2021

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	may 2021	55	29.3	29.3	29.3
	June 2021	54	28.7	28.7	58.0
	July 2021	79	42.0	42.0	100.0
	Total	188	100.0	100.0	

Table 1 below showed number of patients admitted to Kuwait Centre for mental health during 1st May to 30th July 2021 The number of inpatients admitted each month were between 54/188 (28.7 %) and 79/188 (42%). The total number was 188.

full patient name

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	131	69.7	69.7	69.7
	no	57	30.3	30.3	100.0
	Total	188	100.0	100.0	

Table 2 below showed the full patient's name was written or not. I131/ 188(69.7%) has full name written on medications chart, 57/188 (30.3%) were not written.

diagnosis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	149	79.3	79.3	79.3
	no	39	20.7	20.7	100.0
	Total	188	100.0	100.0	

Table 3 below showed diagnosis were written or not. It showed the number of written diagnoses on medication charts was 149/188(79.3 %) and not found and not written was 39/188 (20.7 %).

gender , diagnosis , Civil ID

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	168	89.4	89.4	89.4
	no	19	10.1	10.1	99.5
	not all	1	.5	.5	100.0
	Total	188	100.0	100.0	

Table 4 below showed patient demographic data (Civil identity number, gender and diagnosis) were recorded or not. About 168/188 (89.4 %) has full demographic data on medications chart, and only 20 /188(10.6 %) have no complete data written on prescribing charts.

DOB

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	150	79.8	79.8	79.8
	no	38	20.2	20.2	100.0
	Total	188	100.0	100.0	

Table 5 below showed the Date of Birth (DOB). 150/188 (79.8 %) were written and 38/188(20.2 %) were not written on the charts.

unit number

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	186	98.9	98.9	98.9
	11	1	.5	.5	99.5
	no	1	.5	.5	100.0
	Total	188	100.0	100.0	

Table 6 below showed the unit number was written on the charts or not. 186/188 (98.9 %) were written and only 2 chart (1 %) were not.

ward number

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	187	99.5	99.5	99.5
	no	1	.5	.5	100.0
	Total	188	100.0	100.0	

Table 7 below showed the ward number was written or not. 187/188(99.5%) were recorded and 1/188(0.5%) was not.

date of admission

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	182	96.8	96.8	96.8
	no	4	2.1	2.1	98.9
	11.00	2	1.1	1.1	100.0
	Total	188	100.0	100.0	

Table 8 below showed the date of admission was written or not on charts. 182/188 (96.8 %) were written and 6/188 (1.1) are not written.

doctor sign prescription

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	171	91.0	91.0	91.0
	no signuture only stamp	17	9.0	9.0	100.0
	Total	188	100.0	100.0	

Table 9 below showed Doctor Signature being recorded or not. I171/188 (91.0%) of medications were signed by treating doctor and 17/188(9%) were not signed using stamp.

medication written in capital letters

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	175	93.1	93.1	93.1
	no	13	6.9	6.9	100.0
	Total	188	100.0	100.0	

Table 10 below showed the medication list on the charts written in capital letters or not. 175/188(93.1 %) of charts, the medications were written in capital letters and 13 (6.9 %) were not written in capital letters.

dose in metric units not decimal units

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	147	78.2	78.2	78.2
	no	7	3.7	3.7	81.9
	not all	34	18.1	18.1	100.0
	Total	188	100.0	100.0	

Table 11 below showed doses written in metric units. 147/188 (78.2 %) of the medication's doses were written in metric unit and 41 /188 (21.8%) of the medication's doses were written in decimal units.

prescription dated

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	55	29.3	29.3	29.3
	no	133	70.7	70.7	100.0
	Total	188	100.0	100.0	

Table 12 below showed the medications list written in the chart were dated or not. 55/188(29.3 %) were dated and133/188 (70.7%) were not dated. This is a very serious issue that needs to look at in details.

prescription written in ink

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	186	98.9	98.9	98.9
	no	2	1.1	1.1	100.0
	Total	188	100.0	100.0	

Table 13 below showed medications on the chart were written in ink or not. 186/188 (98.9%) of medications were written with ink and 2 (1.1 %) were not written in ink.

prescription clear and readable

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	184	97.9	97.9	97.9
	no	4	2.1	2.1	100.0
	Total	188	100.0	100.0	

Table 14 below showed the chart were clear and readable Table 14: showed the in 184/188(97.9 %) and 4/188(2.1 %) were not clear and not readable.

prescription sate the dose

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	175	93.1	93.1	93.1
	no	9	4.8	4.8	97.9
	not all	4	2.1	2.1	100.0
	Total	188	100.0	100.0	

Table 15 below showed the medications on the chart stated the dose or not. 175/188(93.1%) showed prescription stated the dose for each drug and 13/188 (6.9 %) showed none and not for all medications written in the chart.

route of administration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	100	53.2	53.2	53.2
	no	67	35.6	35.6	88.8
	not all	21	11.2	11.2	100.0
	Total	188	100.0	100.0	

Table 16 below showed the route of drug administration.100/188(53.2 %) the route of administration were recorded and 88/188(46.8%) were not and written not for all medications on the chart.

allergies and sensitivies is recorded

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	24	12.8	12.8	12.8
	no	164	87.2	87.2	100.0
	Total	188	100.0	100.0	

Table 17 below showed allergies were recorded or not. 164/188(87.2 %) of the charts did not record allergies and sensitives and 24/188(12.8 %) were recorded.

It is very clear there are lack of awareness and knowledge for the importance of reporting clinical data such as allergies and sensitives.

rewrite prescription date and sign

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	4	2.1	2.1	2.1
	no	123	65.4	65.4	67.6
	no stamp signiture date	59	31.4	31.4	98.9
	on discharge	2	1.1	1.1	100.0
	Total	188	100.0	100.0	

Table 18 below showed the medications rewritten on the prescribing charts.

From above table, it showed:

1. 4/188 (2.1 %) were presented correctly with stamp, signature and date.
2. 61/188 (32.5%) were recorded without signature, stamp or date.
3. 123/188 (65.4 %) has no medications needed to be rewritten again.

as requried

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	160	85.1	85.1	85.1
	no	26	13.8	13.8	98.9
	not all	2	1.1	1.1	100.0
	Total	188	100.0	100.0	

Table 20 below showed as required medications (PRN) recorded.160/188(85.1 %) were documented, 26/188(13.8 %) were not recorded on chart and 2 (1.1 %) were written incomplete (not all).

It includes indications, mini and max dose and cancel after 2 weeks below as **Table A, B and C**.

indicatioin for prn is written

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	7	3.7	3.7	3.7
	no	177	94.1	94.1	97.9
	not all	4	2.1	2.1	100.0
	Total	188	100.0	100.0	

Table A below showed indication for prn medications written or not. Only 7/188 (3.7%) were recorded and 177 /188 (94.2 %) with 4/ 188 (2.1 %) were not documented and indication was written incomplete (not for all).

mini and max dose of prn is written

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	1	.5	.5	.5
	no	183	97.3	97.3	97.9
	not all	4	2.1	2.1	100.0
	Total	188	100.0	100.0	

Table B below showed the mini. & max. does of prn medications written or not. 1/188 (0.5%) recorded the min. and max. dose were recorded. 183/188(97.3 %) were not recorded and 4/188 (2.1 %) were incomplete.

cancel after two weeks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no , not cancel after 2 weeks	185	98.4	98.4	98.4
	not clear	3	1.6	1.6	100.0
	Total	188	100.0	100.0	

Table C showed if prn medications were cancelled after 2 weeks or not if it was not used. 185/188 (98.4%) cancelations were not recorded and only 3/188 (1.6 %) cancelations were recorded but not dated or signed.

using new form

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	138	73.4	73.4	73.4
	old form / outpatient/ wrong written	33	17.6	17.6	91.0
	not found/ no form	17	9.0	9.0	100.0
	Total	188	100.0	100.0	

Table 20 Showed new form of medications reconciliation being written or not. 138/188(73.4%) were recorded using new form. 33/188 (17.6%) were recorded in an old form or using an outpatient form or wrongly written. 17/188 (9%) were not allocated and no form was recorded on discharge.

The medication reconciliation consists of:

A. list of medications on discharge, B. the date and C. pharmacist signature**.**

list of medication reconciliation on discharge

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	134	71.3	71.3	71.3
	no	51	27.1	27.1	98.4
	wrong form	3	1.6	1.6	100.0
	Total	188	100.0	100.0	

A. The medication listed on reconciliation form on discharge (new and old list). 134/188 (71.3 %) has list of medications recorded, 51 /188(27.1 %) have no record or not found and 3/188 (1.6%) were incomplete.

list of medication dated

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	129	68.6	68.6	68.6
	no	57	30.3	30.3	98.9
	not found / no form	2	1.1	1.1	100.0
	Total	188	100.0	100.0	

B. The medication listed on reconciliation form being dated.129/188(68.6%) were dated, 59/188(31.4%) were not or not found and 2/188(1.1%) were incomplete.

pharamcist signuture

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	1	.5	.5	.5
	wrong form / no doctor or pharamcy sig./ not found	184	97.9	97.9	98.4
	no	3	1.6	1.6	100.0
	Total	188	100.0	100.0	

C. The pharmacist signature written on the reconciliation form. 184/188 (97.9%) has no pharmacist signature recorded , I /188 (0.5%) has pharmacy signature and 3/188 (1.6%) were incomplete.

Discussion

The Audit results draw an important massage: with the increased number of patients in the community admitted to KCMH (only psychiatric facility available in the state of Kuwait) and on the long term, there will not be a placement to accommodate all patients. It is a burden on the government and it's not a cost-effective service.

From 188 charts, there were 5 charts excluded because they did not fill the criteria of the audit research such as being as inpatient for less than 72 hours, no regular medications were prescribed and discharge against medica advice.

There were less than 150 medication reconciliation list on discharge because some list were not found in the files, missing and almost all of them lacking pharmacist signature indicating poor practice and management for patient safety.

The above results showed:

- It is clear the writing of the patient's full name is an issue that can be resolved immedility to avoid any conflict.
- Some charts lack diagnosis because it was missed or not included from the beginning. This issue can be resolved after finalizing the diagnosis on discharge.
- Regarding treating doctor signature, it should be always presented in the medication charts as a good practice. The stamp is not enough.
- Writing medications doses in decimal units is a bad practice, It could be avoided and the metric dose should always be written for all medications listed on the chart.
- Most of the medications written on the prescribing charts presented in this audit were not dated. This showed the lack of awareness, and it should be address immediately.
- The route of medication administration was missed in 35% indicating lack of awareness and safety concerns. It is very important issue to mention in the guideline to avoid further crises.
- There is lack of awareness for the importance of recording allergies and sensitives with 87% of charts is not written. It is emphasizing the importance of recording the patient history of allergies and sensitives to ensure safety and good practice.
- For rewrite prescription including doctor signature and dated, more awareness about recording all details that are needed in the chart.
- For as required medications, it is reported inadequately and showed lack of awareness and importance of following guidelines to ensure good practice, efficacy and management.
- For reconciliation section, it is clear not all wards using the new form, missing from the patients file on discharge and lack of pharmacist signature which can be address and improvement.

- Health care professional need more training and awareness about the above results drawn from the audit to improve safety and management of inpatient service.
- Difficulties that were experience during the Audit process: A. the time spent to find and allocate patients prescription. B. the Time to allocate patients files C. Poor Clinical notes arrangement D. Unable to find the reconciliation list. E. using different medications charts style and reconciliation forms.

Conclusion & Recommendations

- It is time to change our practice.
- With better documentation, training requirement and change in practice to ensure safety and efficacy.
- All doctors should follow the guidelines to ensure good practice in prescribing medications.
- This audit will reaudit in 6-12 months.
- We aim for our results to be introduced in a realistic and achievable way and to look at the reasons behind that and implant a clear action plan.
- In this Audit, personal details were well documented but s lack few datils such as Full name and diagnosis are important, The route of administration , date and signature are important to documented.
- For PRN section that include indications, mini and max dose were not documented. PRN was not discontinued if not used in 2 weeks.
- For reconciliation, there are no pharmacist signature and old form was used on regular basis.
- With clear quality improvement plan that is a fundamental part of an audit I, t should identify the individual responsible for each action with date of next re audit.

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