

Standardising Documentation of Medication Management for Inpatients

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Queensland **Health**

Overview

- Background
- What is a medication chart ?
- Redesigning the medication chart
- Evidence – Queensland
- Key messages
- Conclusion

Background

- Quality in Australian Healthcare study¹
 - 14,179 charts reviewed, 16.6% patients harmed
 - 1.8% of admissions associated with ADE
- Greatest harm associated with:
 - Wrong Drug/ form,
 - Wrong Dose,
 - Wrong Frequency,
 - Re-exposure to a drug having experienced a previous ADR

What is a medication chart?

- A 'paper' Tool
 - Record of patient and medication information
 - Enabler of communication of a prescriber's decision to other members of the medication team
 - Tool for monitoring of response to medication
 - Instruction for and record of medication administration
 - Process to record and enable pharmaceutical review

System failings of previous medication chart systems

- Lack of standardisation
- Multiple and variable systems
- Changes made by ‘individuals with a silo perspective’
- No constructive learning from errors
- Lack of decision support
- Lack of human factor engineering approach to safety
- Lack of appreciation of changing environment – people and technology

Rationale for Change

- Errors and harm result from a breakdown in communication of a Doctors decision to treat to:
 - Other medical staff
 - Nursing staff
 - Pharmacy staff
 - Patients
- Medication management –
 - many individuals involved
 - high pressure & error prone
 - steep authority / hierarchal gradient

Redesigning the medication chart

Reduce opportunities for medication harm by:

1. Introducing human factor engineering functions to improve completeness of prescriptions
2. Reducing ambiguity in interpretation of the prescribers' intentions
3. Providing relevant medication information at the point of prescribing
4. Standardising within and across sites

Aim: Improving Communication of Decisions to Treat

- Introduction of human factor forcing functions to improve completeness of prescriptions
- Reduce opportunity for ambiguity in other staff's interpretation of the prescribers intentions.
- Provision of relevant patient information at the point of prescribing
- Standardisation across and within sites as a means of reducing opportunities for error

Human Factor Engineering

The Forcing Function

- Right time
- Chart re-write
- Warfarin dose linked to INR



Ambiguity

- Aim to reduce risk of Look-Alike, Sound-Alike (LASA) errors
- Prescribe in Capitals and Generic Drug Name
- Box to emphasise SR formulations
- Indications box to reduce LASA e.g. sotalol/sorbitol

Patient Information

- Right Patient name (write name under label)
- Patient Height and Weight – critical for dose calculation of some medications
- ADR history including nature of reaction and when occurred
- Medication History on Admission

Standardisation

- Standard administration times
- Documentation of Warfarin education
- Standardised list of medication-related abbreviations

National and Statewide Standardisation

- **Benefits of standardisation recognised**
 - **Staff movement between and within healthcare environments**
 - **Staff can be trained prior to exposure in clinical practice**

Method chart development – Queensland statewide program

- Audits of > 15,000 prescriptions
- Observation of > 2000 administrations
- Review of > 2500 medication incidents
- Review of literature
- Focus groups with all levels of staff
- ‘Brisbane’ Collaborative
- Frequent revisions of chart
- In parallel with /incorporated NIMC work

Traditional Charts

SURNAME.....		MEDICATION CHART													
Given Names.....															
D.O.B.....		Age.....												MONTH	
Ward.....		ALLERGIES										YEAR			
REGULAR MEDICATIONS				Date											
				Time											
Drug															
Route	Dose	Dr Bit		Nurses Bit											
Doctor			Stop												

Queensland Health

- Statewide medication chart in all QH inpatient facilities except 2 long stay Mental Health hospitals
- 56/113 sites undertook an audit Medication Chart audits in 2006-7
- Most sites undertake an audit every 1-3 years

Queensland results (5 Sites)

	Pre mean (orders)	Post mean (orders)
Sample size	606 patients 8302 orders	641 patients 8998 orders
Dose unclear or wrong	4.6%	4.3%
Frequency unclear or wrong	11.3%	3.6%
Dose times entered by prescriber	43%	69%
Dose times differ to frequency	1.9%	1.3%

Statewide Audit data

- 37497 orders reviewed in 56 sites in 2006-7
- Identified 8569 opportunities for harm associated with prescribing (represcribed ADR, duplications, unclear dose ,route or frequency) = 268/1000 orders
- Apparent dose omission (or administration not documented) = 165/1000 doses
= 2.18/ patient

Additional charts

- Long stay (40 day) chart
- Paediatric chart
- IV/Subcutaneous infusion chart
- Under development - pending
 - Insulin (IV infusion and Subcutaneous)
 - IV Heparin
 - Palliative care – sub-cutaneous opiates
 - Acute pain – opiate infusion/ epidural

Key Messages

Keys to successful implementation :

- Leadership, support & governance
- Resources - business case
- Data - pre and post change as driver
- Communication, Communication, Comm...
- Education and Awareness raising
- Timing of introduction of change
- Willingness and Opportunity to change

Conclusion

- ‘Not Invented Here’ can be overcome
- Improving safety drives change
- Keeping patient safety ahead of “personal agendas” and moving beyond boundaries
- The chart is just one component in an ongoing program of medication safety
 - An example of success in collaboration on safety and quality improvement – a model for further system changes?