KK Women's and Children's Hospital
SingHealth

Singapore Healthcare ERM Congress 2013

The Awakening – From Adversity to Opportunity: Lessons Learnt

Ms Irene Quay
Chief Pharmacist
Pharmacy Department

21 AUGUST 2013

care
education
research

Partners in Academic Medicine

SingHealth DUKE NUS GRADUATE MEDICAL SCHOOL SINGAPORE

PATIENTS. AT THE HEART OF ALL WE DO.

Members of the SingHealth Group

Singapore General Hospital | KK Women's and Children's Hospital | National Cancer Centre Singapore | National Dental Centre Singapore | National Heart Centre Singapore | National Neuroscience Institute | Singapore National Eye Centre | Polyclinics SingHealth

Recap Chemo Overdose Error in Nov 2009

- 2 KKH adult oncology patients on ambulatory chemotherapy pumps
  - IV Doxorubicin continuous infusion over 72 hours
  - IV 5-Fluorouracil continuous infusion over 96 hours
- Errors happened due to pump setting errors
  - Ran out of chemo model pump as 3 pumps were sent for servicing
  - Pharmacists unfamiliar of the different unit of measure (UOM) when substituted pumps were used and overlooked UOM when checking

Immediate Action

- Urgent sourcing of antidote, Vistonuridine, as advised by our Medical Oncologist, who just learnt about the antidote from a recent oncology conference
  - Importance of training as a form of investment in ERM principles
- Establishment of an urgent approval workflow with the Health Sciences Authority (HSA) for approval of urgent unregistered drugs after office hours

Risk Mitigation/ Controls

Risk Avoidance

- Review standardization of different models of pumps in different sections in Pharmacy
  - Oncology: Chemotherapy/ Palliative pumps-Solis SMART pumps
  - Pharmacy Lab: Antibiotic pumps (CADD pumps)
- Discard pumps and checklist with mL/ 24hrs rate
- Keep only pumps with standardize UOM: mL/Hr
- Chemotherapy and Pain pumps are changed to SMART pumps with max dose/ flow rate alert/ limits to prevent accidental wrong setting of pumps
- Establish a multidisciplinary team for future pump evaluation to include all users, BME expert, risk officer, etc

Risk Mitigation

- All pharmacy staff using pumps need to be trained and certified competent and also educated on the delivery rate/UOM
- All oncology pharmacists and subsequent new oncology pharmacists are also trained by vendor since Jan 2010.
- Internal competency check to be done at orientation and yearly via an established checklist
- Training materials cover all possible risks and errors. All staff to read and sign a circular highlighting the common errors in relation to infusion pumps

Training Checklists

CADD®-Solis Competency Checklist

Name
NG CHENG SI

Title
Snr. Pharmacist

Hospital/Dept
KK Women's & Children's Hospital, Pharmacy Department

Expected date of completion
27/7/2011

Competency statement
The participant will demonstrate proper practical knowledge, theory of operation and clinical application of the CADD®-Solis ambulatory pumps.

Signature of Participant
[signature]

Competency checks	Section	Date Completed
CADD®-Solis External Features	1	26/7/2011
CADD®-Solis Operating Features	2	
Programming the CADD®-Solis	3	
Reports and Tasks on the CADD®-Solis	4	
Alarms and Care of the Pump	5	
Administrator settings	6	

KK Women's and Children's Hospital Singapore

JOB/ SKILLS COMPETENCIES CHECKLIST

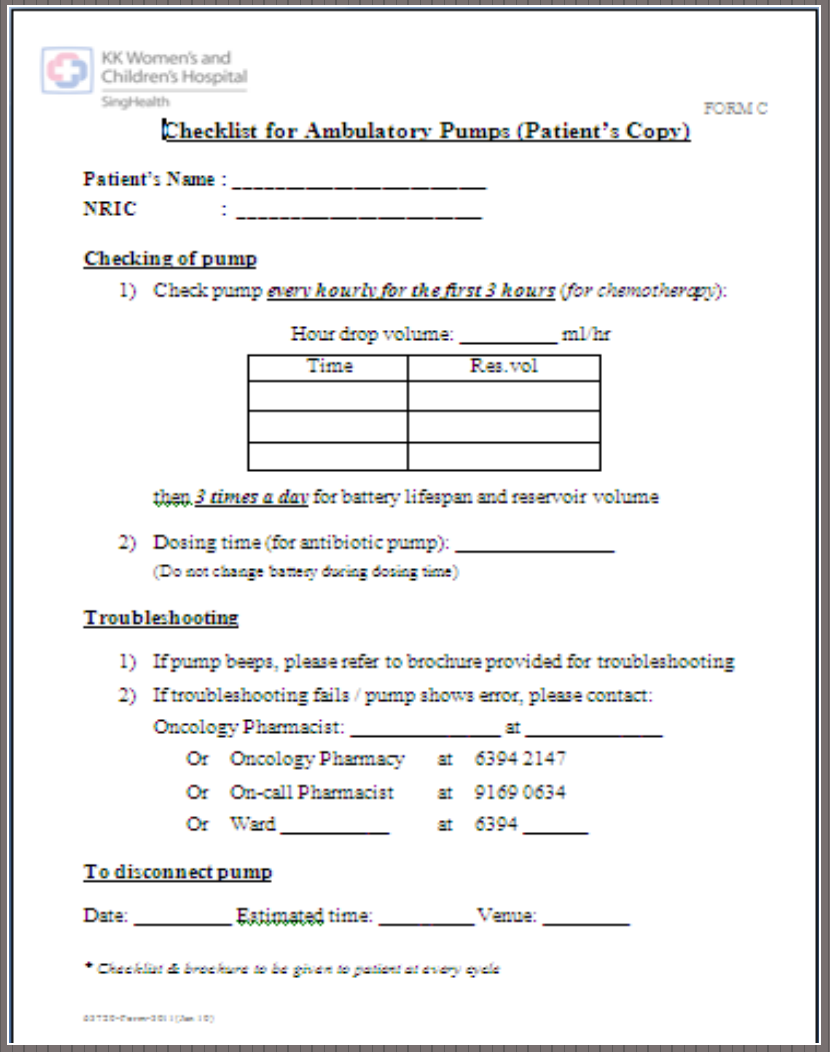
Name of Procedure(s):	Setting Ambulatory Pumps
Target Completion Date:	
Staff Name:	
Employee No:	
Department:	Pharmacy (applicable to Oncology & CIP Pharmacists)

Place a tick (✓) for criteria 'met' and a (X) for 'Not Met' in the column provided for each competency assessment.

S/N	STEPS	COMPETENCY ASSESSMENT (No. of Times) 1	2	3	4	5	DATE ASSESSED COMPETENT	SIGNATURE OF ASSESSOR	NAME OF ASSESSOR
1.	Identify the correct pump to use for different uses a) CADD Solis for chemo and Palliative (different pumps) b) CADD Legacy-plus for antimicrobial								
2.	Understand the differences among the pumps.								
2.1	Different modes of administration: a) CADD Solis – Continuous – PCA b) CADD Legacy-plus – Continuous and intermittent								
2.2	Rate of infusion: a) CADD Solis – ml/hr (To use this) – mg/hr – mcg/hr b) CADD Legacy-plus – ml/hr c) Note the TGA News Issue 49 – Medical device incident and ISMP Canada Safety Bulletin								

Patient Education

- Educate patients on troubleshooting of pumps
- Patient information pamphlet to check for earlier than intended completion of infusion
- Provide hotline number and mobile number of Oncology pharmacist on call for pumps support



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FORM C

Checklist for Ambulatory Pumps (Patient's Copy)

Patient's Name : _____
NRIC : _____

Checking of pump

1) Check pump *every hourly for the first 3 hours* (*for chemotherapy*):

Hour drop volume: _____ ml/hr

Time	Res. vol

then *3 times a day* for battery lifespan and reservoir volume

2) Dosing time (for antibiotic pump): _____
(Do not change battery during dosing time)

Troubleshooting

1) If pump beeps, please refer to brochure provided for troubleshooting
2) If troubleshooting fails / pump shows error, please contact:
Oncology Pharmacist: _____ at _____
Or Oncology Pharmacy at 6394 2147
Or On-call Pharmacist at 9169 0634
Or Ward _____ at 6394 _____

To disconnect pump

Date: _____ Estimated time: _____ Venue: _____

* *Checklist & brochure to be given to patient at every cycle*

Risk Mitigation

- Develop a chemotherapy overdose manual/ antidote booklet, in collaboration with National Cancer Centre (NCC)
- Setting up a centralized antidote centre at macro level
  - Worked with hospital pharmacies and MOH CPO on stock piling of critical chemotherapy antidotes

Risk Mitigation

- Establish as a hospital policy to use only mL/ hr pumps
- All equipment for servicing must be replaced with same type
- Use of substitute should be avoided. If really cannot be avoided, to inform prescribing Doctors and HOD. Users have to be adequately trained
- Purchase service contracts for pumps with provision for replacement units

System Engineering and Human Factors

- Space constraint in Oncology Pharmacy
- Interruptions and Distractions
- Lighting and Noise control
- Conducive environment for checking of drugs and rotation of pharmacist checkers
- Oncology expansion in FY2013
- Future plans for IV Compounding automation and electronic orders interface

Photos of Old and New Oncology Pharmacy

OLD

NEW

Old and New Oncology Pharmacy

OLD

NEW

Opportunities Arise from Crisis

Pharmacy Department

Medication Safety Initiatives

Need for Hospital to have a Strategic Plan for Medication Safety

- Hectic pace of healthcare
- Forces immediate patient needs and priorities over long-term planning for patient safety
- Balance Short Term needs of patients and Long Term plans for patient safety
- Safe Medication use requires careful planning and resources
- Errors involving medication use make up largest single cause of medical errors in hospitals[1]

1. To Err is Human: Building a Safer Health System, eds. Linda T.Kohn, Janet M. Corrigan, and Molla S. Donaldson (Washington: National Academy Press, 2000)

ISMP Model Strategic Plan for Medication Safety

Goal #1:

Create, communicate and demonstrate a leadership-driven culture of safety

Pharmacy Medication Safety Subcommittee – Formed since 2010

Committee Members	Role
Irene Quay	Chairperson
Isabella Sim	Secretariat Support
Lim Kae Shin/ Jamie	Medication Safety Officer/ Drug Information Services Pharmacist
Natalie	Medication Safety PT
Valerie Seah/ Ellen Joy	CIP Champion
Santhi/ Go Hui Jia	WIP Champion
Siti Fatimah	IPAS Champion
Alan Chui	Admin/ OP Rep
Ng Cheng Li	Oncology Champion
Noelle Crista	TPN Champion
Monika/ Foziah	OP Champion
Lucita Dejucos	EP Champion
Mohammed Nazri	Purchasing/ Pharmacy Store Champion
Seow Meow Kwei	IT Champion

Note: Members appointed on a bi-annual, rotational basis

Medication Safety Activities/ Contests

- **"Do Not Interrupt"**
  - Poster Design
  - ThankYou for Not Interrupting

I'm Working

Do Not Disturb!

Wait.. Do not interrupt, Interruption can cause errors

I'm glad to assist you but please wait till I'm finished.

This Card Belongs to:	Employee Number	Card Number

CONTEST - "THANK YOU FOR NOT INTERRUPTING"

"Thank you for your patience in allowing me to complete my task before attending to you." Get rewarded for practising patient safety

RULES AND REGULATIONS:

1) Contest is open to ALL pharmacy staff.
2) Every staff will be issued a card with a unique number. You can get additional cards from your section's med safety sub-committee representative.
3) On the back of this card are 20 BLUE, 1 YELLOW and 1 RED box. Get OTHER pharmacy staff to STAMP AND SIGN in the appropriate box (your own stamp on the back of this card is not valid) :-

BLUE	YELLOW	RED
If you allow your colleague to complete their task (eg. typing, packing,checking,dispensing, verifying,receiving,answering a phone call etc) before attending to your query/request, remember to leave your card for them to stamp at their convenience.	If you interrupt your colleague during their course of work, they are to stamp and sign in this yellow box on your card. 5 signatures would be deducted from your total score as **PENALTY.**	After receiving a stamp in the yellow box, if you interrupt someone again, he will stamp and sign in this red box on your card and this means **GAME OVER** for you

4) All cards (including empty ones) are to be dropped into the contest box located in main pharmacy pantry by the closing date. If you have more than one card, please staple and submit them together. Token prizes will be issued along the way (1 prize for every 10 signatures)
5) Closing date of contest: 5pm, Monday 2 APRIL 2012.

Signature & Name Stamp 1	Signature & Name Stamp 2	Signature & Name Stamp 3	Signature & Name Stamp 4	Signature & Name Stamp 5
Signature & Name Stamp 6	Signature & Name Stamp 7	Signature & Name Stamp 8	Signature & Name Stamp 9	Signature & Name Stamp 10
TOKEN PRIZE	Signature & Name Stamp 11	Signature & Name Stamp 12	Signature & Name Stamp 13	Signature & Name Stamp 14
Signature & Name Stamp 15	Signature & Name Stamp 16	Signature & Name Stamp 17	Signature & Name Stamp 18	Signature & Name Stamp 19
Signature & Name Stamp 20	**TOKEN PRIZE**	**PENALTY**	**PENALTY**	GAME OVER

- “Crossword Puzzle”

The puzzle below contains the 6 Packing Rights..
Can you locate them?

Y	V	L	N	Q	S	H	K	M	Y	J	Z
E	Y	P	F	J	H	O	E	F	U	P	D
K	O	W	A	B	T	D	X	B	Y	M	I
T	R	A	P	W	I	R	P	T	I	W	S
Z	E	X	P	A	T	R	I	E	V	R	P
B	T	O	T	O	T	T	R	O	F	E	E
Q	U	I	J	G	N	I	Y	M	D	R	N
M	O	K	O	A	J	C	E	D	P	K	S
N	R	V	U	B	Y	Z	R	N	V	W	I
R	E	Q	U	E	S	U	P	I	T	A	N
A	U	S	W	F	G	C	H	L	J	Z	G
D	D	O	S	E	C	T	I	O	N	M	S

Dose
Drug
Expiry
Patient
Quantity
Route

- **“Jigsaw Puzzles”**

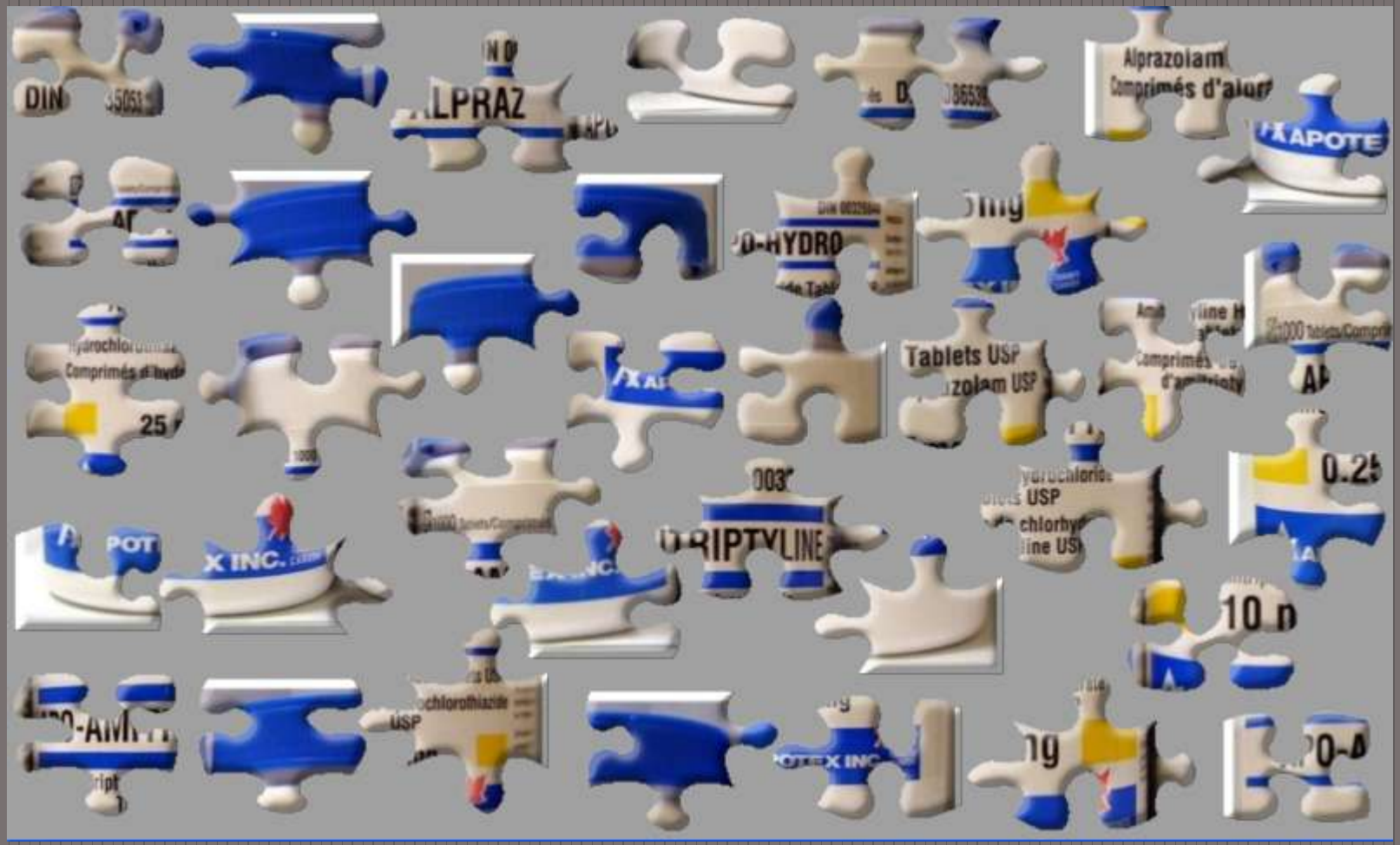
APO –Warm Up (4pcs)
Nitrofurantoin 50mg
Sulfatrim Paed 100-20mg
Trifluoperzine 1mg
Baclofen 10mg
Fluoxetine HCL 10mg
Nifedipine 5mg

APO 5- 36pcs

Alprazolam 0.25mg

Amitriptyline HCL 10mg

Hydrochlorothiazide 25mg



“Pharmacy Amazing Race”

- 5 teams are competing
- Prizes
  - 1st Prize: $30 CapitaLand Mall Voucher for each team member.
  - 2nd Prize: $20 CapitaLand Mall voucher for each team member.
  - 3rd Prize: $10 CapitaLand Mall voucher for each team member.

- **Rewards for “Near Miss Reporting”**

Annual "Pharmacy Idol" Awards

- Criteria – We are focusing on staff that sets example by:
  - Adhering to Pharmacy Department's P&Ps and WIs
  - Displays consistency in learning and sharing drug and safety knowledge
  - Promotes the Pharmacy Safety Culture

Winners of "Best Shelf Contest"


IPAS - Ted


EP - Aina


CIP - Jerlynn


OP – Adabelle & Patricia


TPN - Sharon


WIP - Noraizah

“Drug Returns Contest”

- Download blackboard mobile learn from play store
- Search for Singapore Health Services Pte Ltd
- Login using ADID username and password

ISMP Model Strategic Plan for Medication Safety

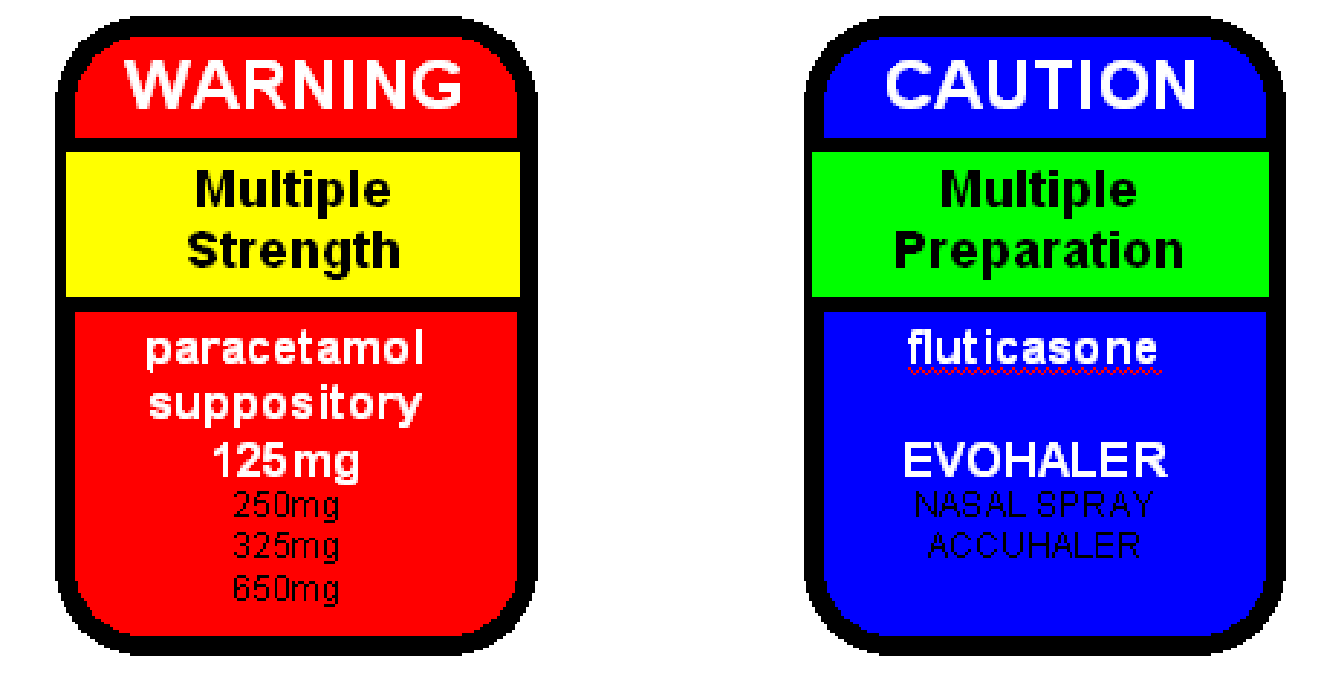
Goal #2:

Improve error detection, reporting and use of information to improve medication safety

Pharmacy Medication Safety Initiatives

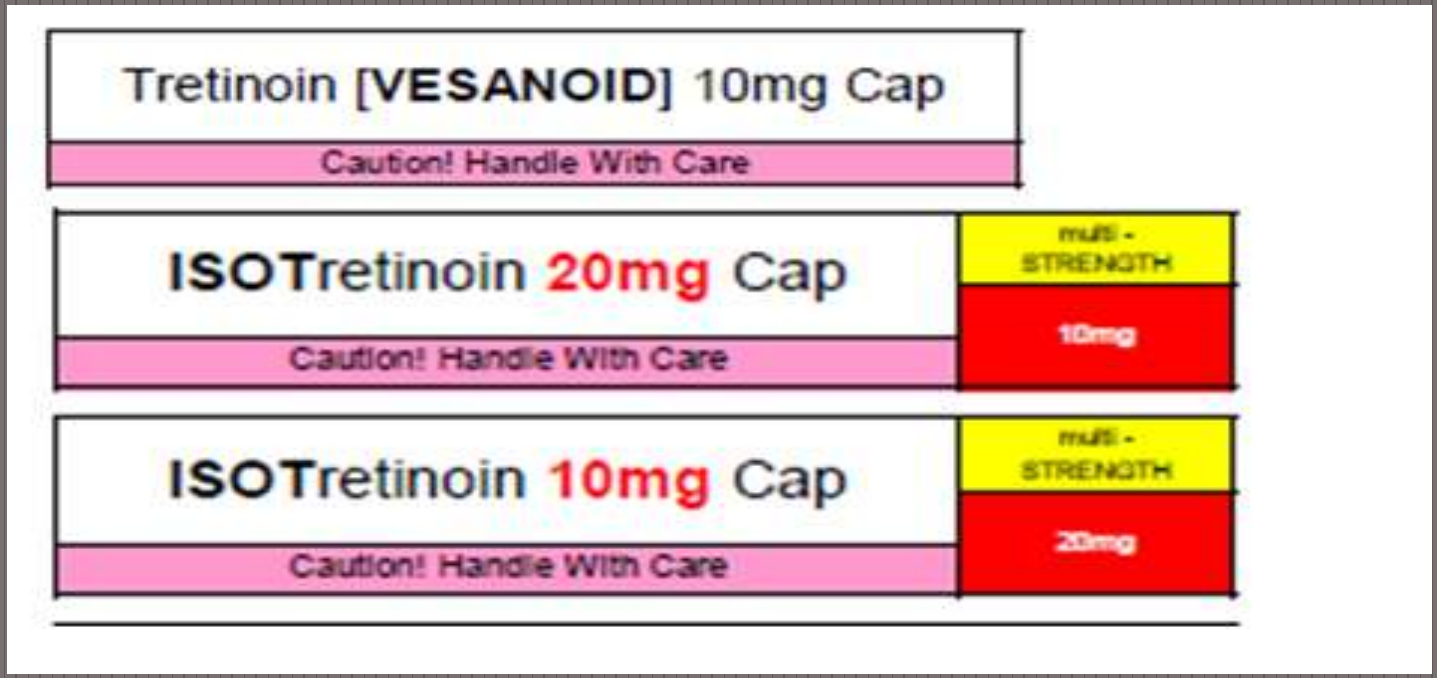
- Near miss presentation by committee reps and action plans on a monthly basis
- Department conduct medication review for all medication errors
- Review action plans and timeline
- Bimonthly audit results shared at roll-call
- Review and align product and label descriptions
- MERP Category D and above error trending

- Alert Tags for Pharmacy Drug Bins




CAUTION
Multiple Preparation
Paracetamol 500mg, CODEINE 8mg Tab
potassium chloride 600 mg
prednisoLONE 5mg Tab
WARNING
Multiple Strength
CAUTION
Multiple Preparation
Paracetamol 450mg, ORPHENADRINE 35mg Tab

- **New Drug Bin Labels**



ORIGINAL

KKH-10-1301

Discharge Time: 1 PM

KK Women's and Children's Hospital Pte. Ltd.
100 Bukit Timah Road Singapore 229899

The original prescription carries a coloured KKH logo

PRESCRIPTION

12-Oct-10 02:39 PM

PAYMENT CLASS : **CLASS B2**

ACCOUNT : 7609000212F

ADMIT DATE : 25 Apr 09 02:27 PM

LOCATION : KKH-W44 / Gynaecology

Weight: 50.0(KG) Weight Entry Date: 30 Sep 10

NRIC : **S4482007B**

NAME : **PATIENTS ON MEDIFUND SCHEME 2**

BIRTH DATE : 01-Jan-21 (89 Yrs) Sex: Male

ADDRESS : Blk/Hse:502,Level/Unit:01-01 JELAPANG ROAD Singapore 670502

Drug Name + Form	Dose and Frequency + Instruction	Duration / Qty	For Pharmacy Use Only
1. Amiodarone HCl Suspension	PO 1 mg - OM Variable Dose And PO 2 mg - BD Variable Dose ** Note: Multiple strengths available >> Non Commercial Item - Drug Needs to be prepared by Pharmacy	1 weeks	
2. Pine Co Inhalation Solution	Inhalation 1 inhalation - OM Variable Dose And Inhalation 2 inhalation - QDS Variable Dose ** Note: Multiple preparations available	1 weeks	
3. Busulfan Suspension	PO 1 mg - Q6H Variable Dose	1 weeks	

FOR PHARMACY USE ONLY

DATE	DRUG	QTY	BALANCE	PACKED BY	COUNSELLED BY

Typed by : _____

Packed by : _____

Checked by : _____

*Counselled by : _____

If educational material given, please state:

- **Introduction of coloured drug labels and changing the colour every quarter**

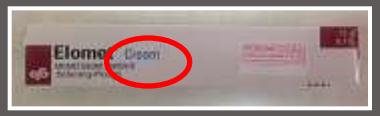

LASA 3
Boostrix
Iliadin
Iliadin
Protopic
Protopic
Protopic
Gyno-Trosyd
Gyno-Travogen
Engerix-B
GONAL-f 450 IU/0.75 ml
GONAL-f 300 IU/0.5 ml
For DEMO Only
Strayed.
1 cartridge in a pre-filled pen
5 needles for administration
For DEMO Only
REFRIGERATE-DO NOT FREEZE
LACTUS
LAXAROL

LASA Poster

TOPICALS

LOOK ALIKE- SOUND ALIKE (LASA)

June 2013

DRUG	INDICATIONS	COMMENTS	PICTURES
Mupirocin	The ointment is used for methicillin-resistant *Staphylococcus aureus* (MRSA) skin infections The **NASAL** ointment is used for elimination of MRSA in the nasal carriage	Patients should test positive for MRSA infection before these medications are prescribed for them	 Mupirocin 2% Ointment (5 g)  Mupirocin 2% **NASAL** Ointment (3 g)
Tacrolimus	Calcineurin inhibitor , used for moderate to severe atopic dermatitis, in patients unresponsive to conventional therapy	Younger children should use the lower strength (0.03%) to avoid increased skin irritation e.g. burning and itch Adults may use either strength	 Tacrolimus 0.03% Ointment  Tacrolimus 0.1% Ointment
Mometasone	Corticosteroid, used in the treatment of dermatoses e.g. eczema and to relieve inflammation	Ointment has a more occlusive effect (compared to cream, which is water-based) and used for a larger limbic area	 Mometasone furoate [*ELOMET®*] 0.1% CREAM  Mometasone furoate [*ELOMET®*] 0.1% OINTMENT

Sharing of Medication Safety Information

ISMP Newsletter Volume 17 Issue 17

Jamie Stephanie (KKH)

Sent: Thu 23/08/2012 11:56 AM

To: Jasper Tong Weng Kong (KKH); **KKH-ANP; KKH-CE; KKH-NA; KKH-NA-Exec; KKH-NMs; KKH-NN; KKH-O&G; KKH-PAME; KKH-PHARM; KKH-SURG**

Dear All,

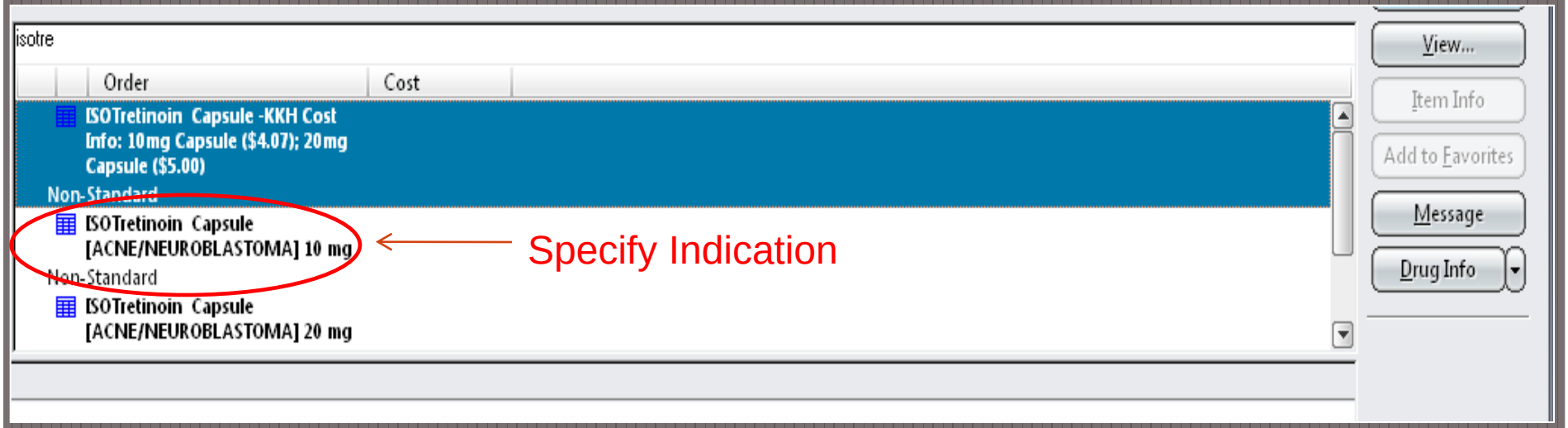
1. Please click here to see the latest ISMP issue.

In this issue :

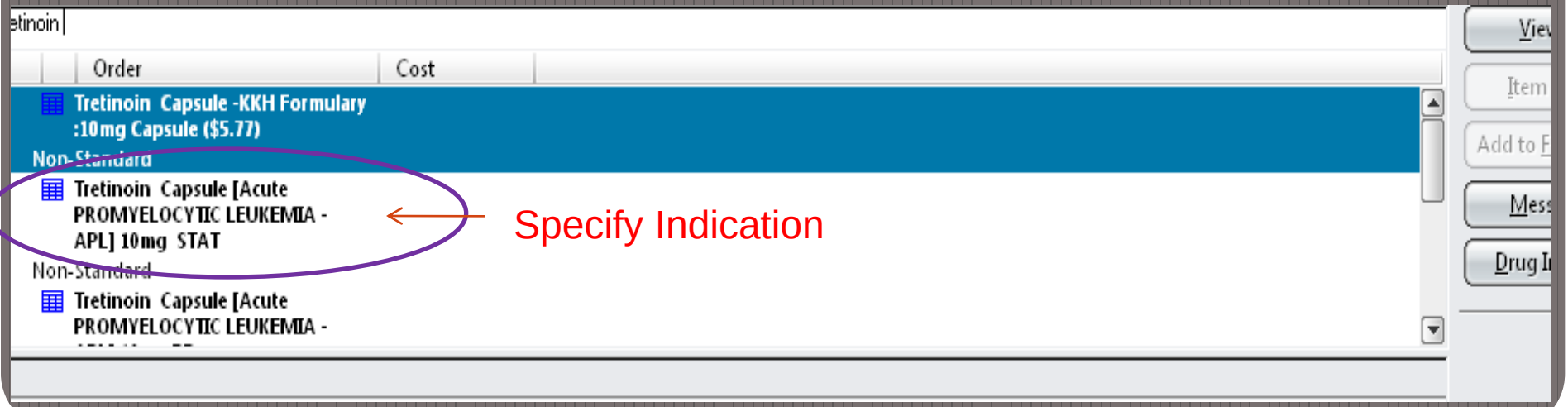
- Avoiding inadvertent ***IV injection*** of liquid drugs that are supposed to be administered ***orally***
- Generic methylergonovine and Engerix-B mix-up due to look-alike vials
- Insulin pen misuse by patient – ***the importance of educating patients on how to use their insulin pens!***
- Diluent vial looks like the drug vial
- ON-Q pump with bupivacaine attached to IV

Sincerely,
Jamie Stephanie
Drug Information Services

Mixed Up ONE – Tretinoin or ISOtretinoin ??



Tall Man Lettering



SOUND-ALIKE(Caution Drugs)

ISOtretinoin vs Tretinoin

MULTIPLE STRENGTH

ISOtretinoin ≠ **Tretinoin**

Isotretinoin 10mg & Isotretinoin 20mg (Roaccutane/Oratane)	**ATRA (Tretinoin Capsule) Vesanoid**
Acne/Neuroblastoma	Acute Promyelocytic Leukemia – APL

Mixed Up TWO – Amphotericin Everywhere….

ISMP CANADA

ALERT: Mix-ups between conventional and lipid formulations of amphotericin B can be extremely dangerous

WorthRepeating...

Preventing mix-ups between various formulations of amphotericin B

Mixed Up TWO – Amphotericin Everywhere….

FRIDGE

≠

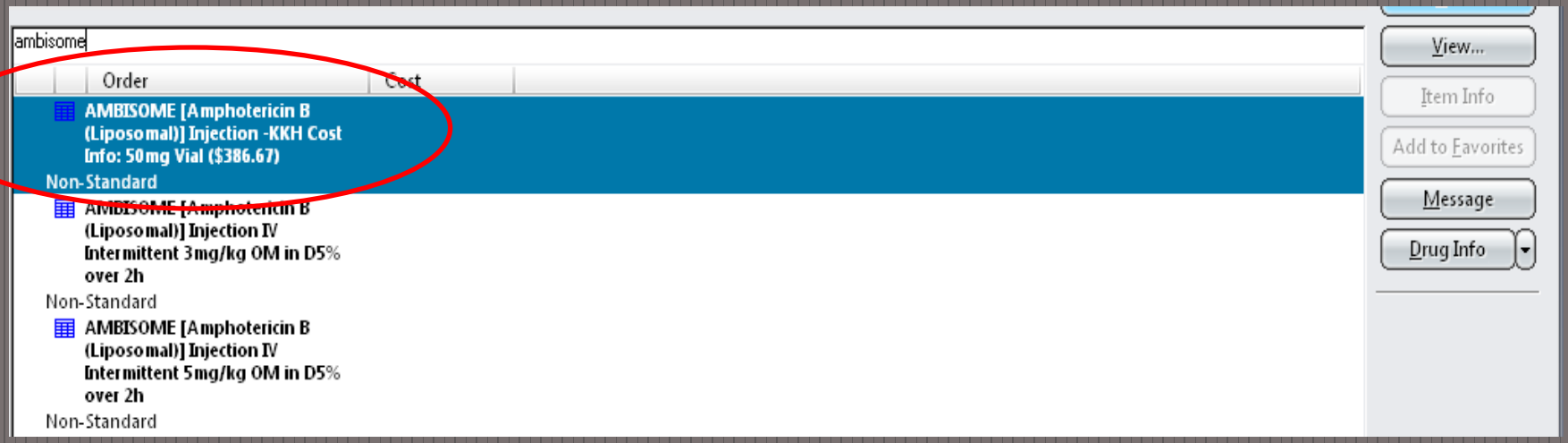
FUNGIZONE® [Amphotericin B] 50 mg Injection

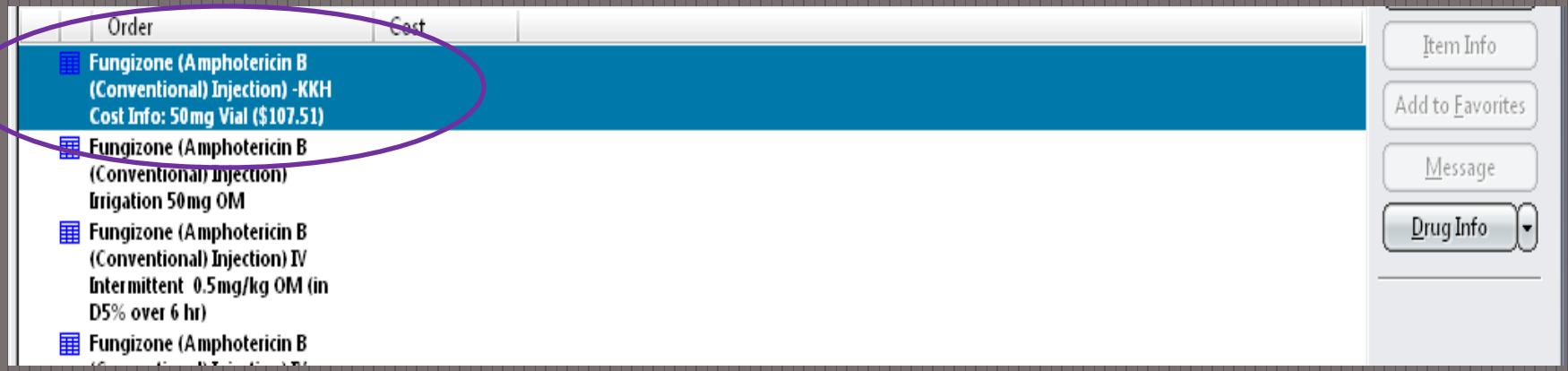
AMBISOME® [Amphotericin B (Liposomal)] 50 mg Injection

Pharmacy Bin Label

	FUNGIZONE [Amphotericin B] 50mg Inj
	AMBISOME [Amphotericin B (Liposomal)] 50mg Inj

Mixed Up TWO – Amphotericin Everywhere….





Name: Ward/Bed:
PRN:

AMPHOTERICIN B LIPOSOME (AMBISOME®) INFUSION GUIDELINES

Brand : AmBisome®
Content : 50mg Amphotericin B / Vial
Appearance : Yellow powder

Brand Specific: This product is **NOT INTERCHANGEABLE** with FUNGIZONE (Conventional Amphotericin B)

Reconstitution Steps (IV infusion only):

1. To each 50 mg vial, add 12 mL of Water for Injection (WFI).
2. Shake vial vigorously for 30 sec to form a yellow translucent suspension.
3. Concentration of reconstituted vial = **4 mg/mL**

Dilution Guide & Dosage:

Patient's Dose : _____

1. Withdraw _____ mL (_____ mg) of solution from vial.
2. Attach the 5-micron filter that is provided, to the syringe. Use only 1 filter per vial.
3. With the filter attached, inject the contents of the syringe, through the filter into _____ mL of **Dextrose 5%.** (Total volume = _____)
4. Final concentration of infusion = _____ mg/mL
   *Max. Concentration for infusion = **1 mg/mL**
   *Max. Concentration for Infusion (Fluid restricted) = **2 mg/mL** [1,2]
   *Min. Concentration for infusion = 0.2 mg/mL - 0.5mg/mL [2]
5. Infuse over _____hours (recommended **2 hours**, may be reduced to 1 hour if well tolerated) [1, 3, 5]

Stability :

Unopened vials to be stored at temperatures ≤25°C.
Reconstituted vial may be stored for up to 24 hours at 2-8°C.

Special Precautions :

1. Visually inspect the reconstituted vial for particulate matter and shake till completely dispersed.
2. Administer using a separate line or flush line with Dextrose 5% before infusion. An in-line filter (≥1 micron) may be used.
3. **DO NOT** reconstitute with Saline Solution or other electrolyte solutions. [3]

Compatibility : (with reference to patient's own medication)
Compatible with :

Incompatible with :

Filled by : _____

Checked by : _____

References:

1. Pediatric Dosage Handbook
2. Pediatric Injectable Drugs 8th Edition
3. Handbook of Injectable Drugs. 13thEdition
4. Product Insert, Ambisome Revised May 2009
5. 2001 Intravenous medications 17th edition

63710-Form-2005 (Aug 10)
Revised on Nov 2012

KK WOMEN'S & CHILDREN'S HOSPITAL
CHILDREN'S SATELLITE PHARMACY
Claire Seet & Jess Toon

- Update of Infusion Guide to include Non Interchangeable
- Restricting Ward Stock to Oncology Wards Only
- Change of drug naming

- **Announcements by Drug Information Services Pharmacist & Medication Safety Officer**
  - Changes in medication appearances
  - Inclusion/Deletion in Hospital Formulary
  - HSA/ISMP alerts
  - Safe Handling of Cytotoxics / Caution drugs

MEMORANDUM

Date : 25th March 2013

To : All Doctors/Nurses

Thru' : Irene Quay, Chief Pharmacist

cc : Phua Kong Boo, Chairman of P&T Committee

From : Jamie Stephanie, Drug Information Pharmacist

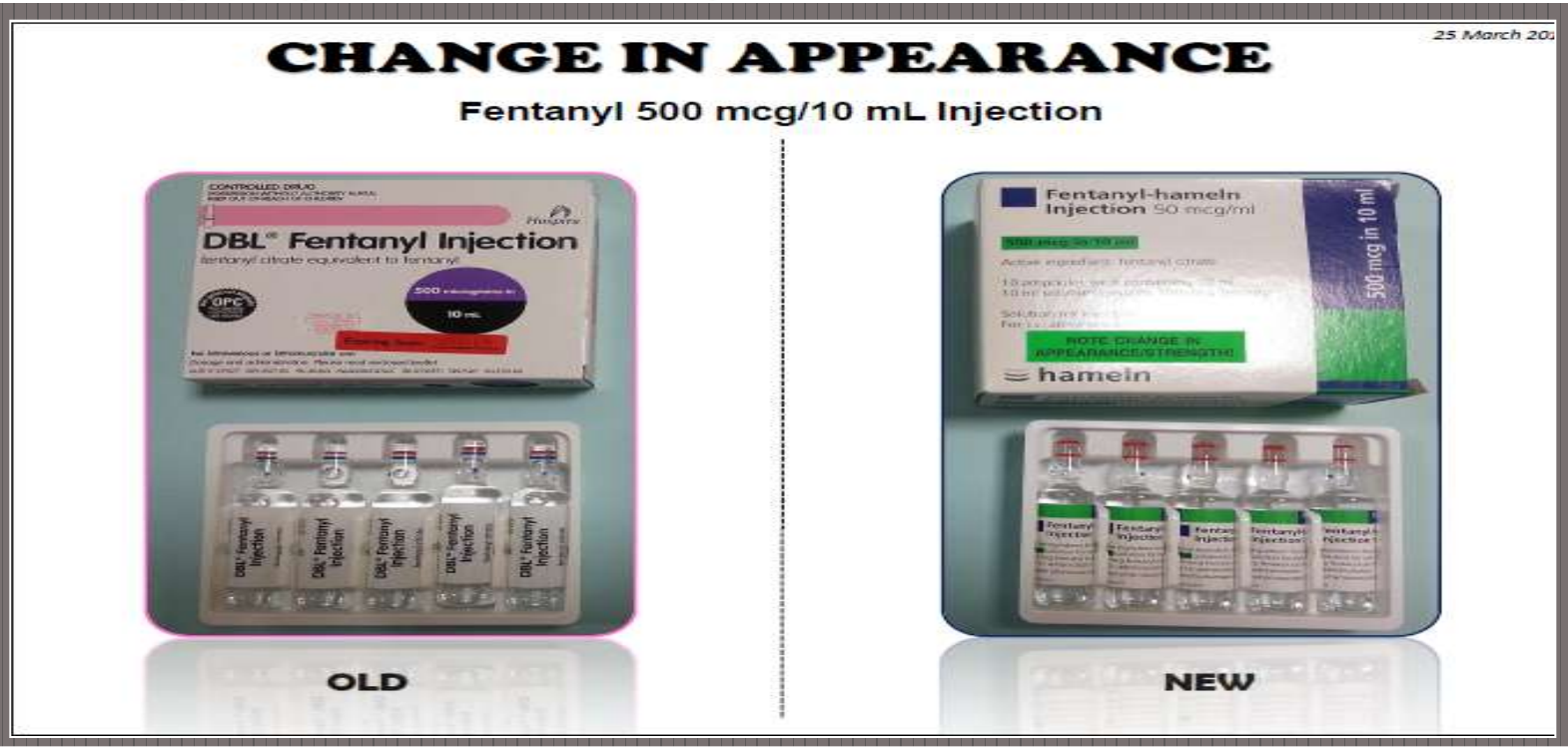
Change in Appearance of Fentanyl 500 mcg/10 mL Injection

Please be informed that there will be a change in appearance of **Fentanyl 500 mcg/10 mL Injection**.

Please click here to view the new appearance and the look-alike sound-alike with the smaller vial size, Fentanyl 100 mcg/2 mL Injection.

We regret for any inconveniences caused.

All Nurse Managers, kindly disseminate this information to your staff.

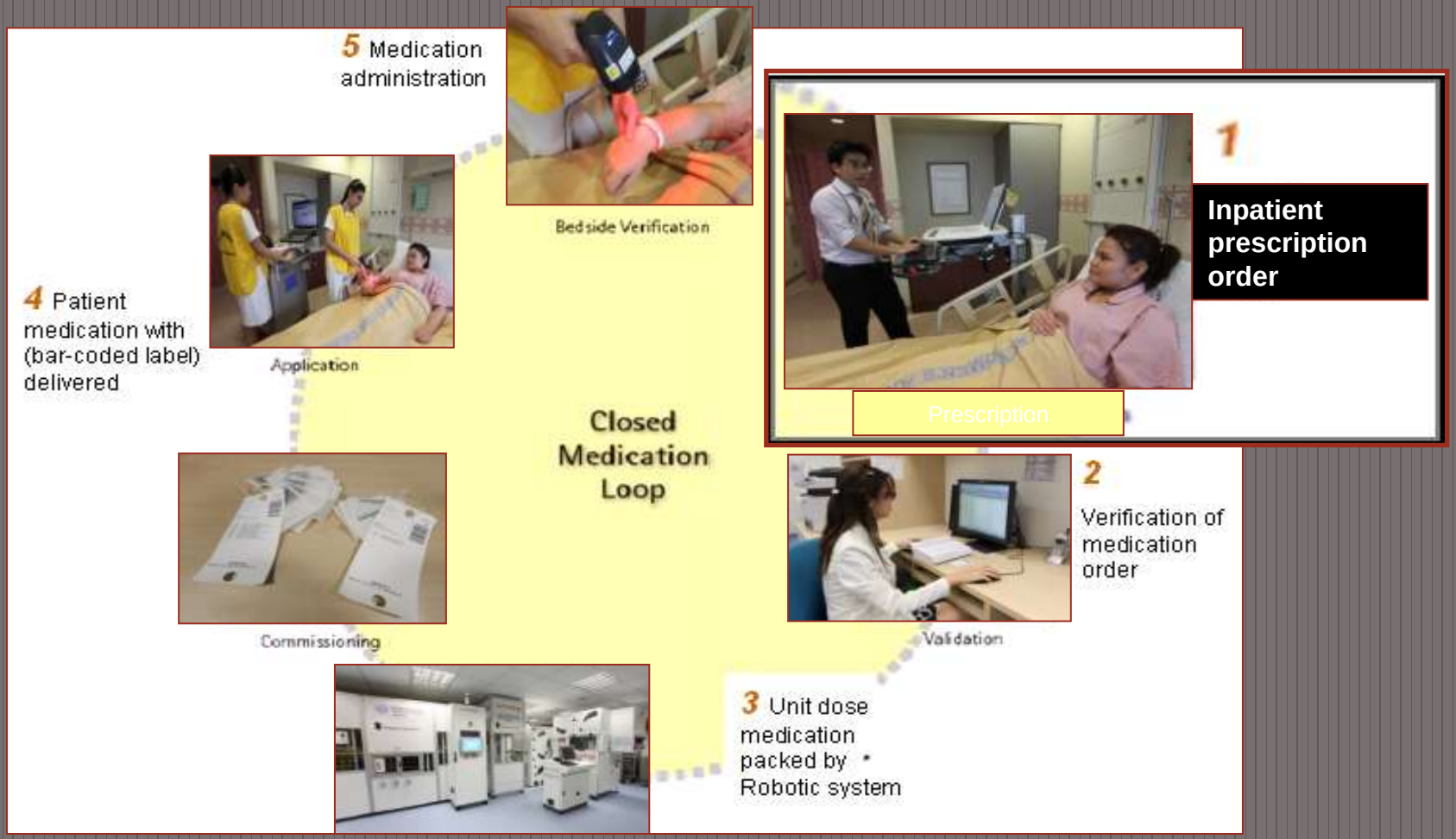


ISMP Model Strategic Plan for Medication Safety

Goal #3:

Evaluate where technology can help reduce the risk of medication errors

Closed Loop Medication Management



IPAS System

KKH Swisslog machine

Patient Therapy Production

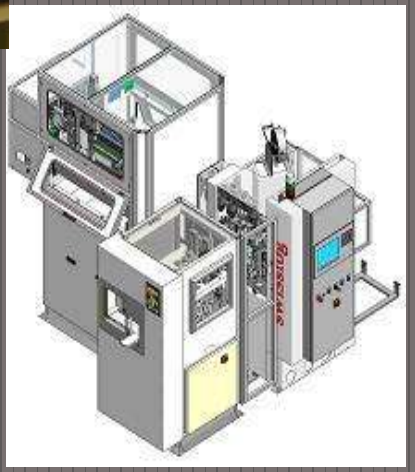
BoxStation

Pill Box

Phial Box

Drugs – Manual Load

PickRing



PillPicker

UD bags dispensed according to patient order

DrugNest

Unit Dose Bags

Results achieved:

- **Reduction of serious errors** (MERP Cat D and above) by 63%.
- **24-Hour Drug Verification** by pharmacists– Reduction in the median pharmacist verification turnaround time from 51 to 7 minutes and improvement in drug interventions after office hours. Translate to total cost savings of S$74,475.93 annually.
- **Ensure Prompt Supply of Medication to the Wards** through machine prioritization.
- **Reduced Stock Variance and Improved Billing**
  - Improvement in ward stock inventory and 86% reduction in pharmacy manpower to perform manual billing.
  - Reduction in stock variance from 22% in 2009 to 2.2% due to more accurate billing and better inventory management,

    Translate to at least S$40,205 cost savings annually.

Coming Up..

Automated Dispensing machines with light-guided technology in Operating rooms – MOH Funding

Ampoule Labeling

Guided topping up

Tamper-proof metal, Locking bins for control drugs

Matrix Bins with Guiding Lights Technology for accurate withdrawal

MOH Funding for Emergency Pharmacy Automation System

Doctor orders prescription in CPOE system

Orders flow into Pharmacy system

Patient arrives at Pharmacy with hardcopy prescription

Pharmacy staff verifies prescription with interfaced orders and confirm the order

Prescription placed inside container

Drug Labels are generated for manual packing

Drugs are manually picked and packed by Pharmacy Technician from LED guided cabinet matrix, and placed inside container

Containers/ baskets "idling" in conveyor belt until all 3 containers are ready for dispensing

Conveyor Belt

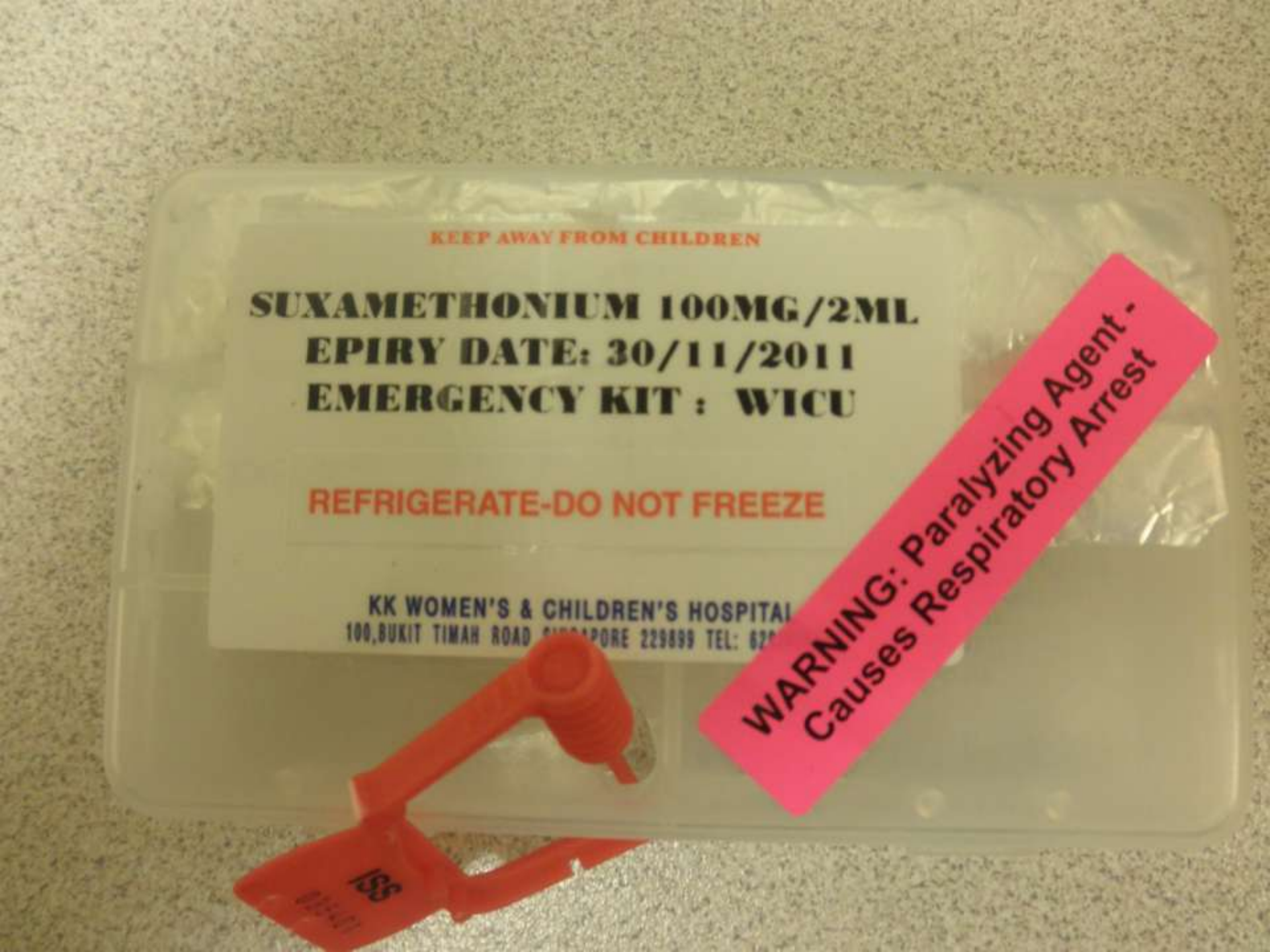
Orders are sent for OPAS packing

Drugs are picked and packed by OPAS, and dropped into container

ISMP Model Strategic Plan for Medication Safety

Goal #4:

Reduce the risk of errors with high-alert medication prescribed and administered


KEEP AWAY FROM CHILDREN
SUXAMETHONIUM 100MG/2ML
EPIRY DATE: 30/11/2011
EMERGENCY KIT : WICU
REFRIGERATE-DO NOT FREEZE
KK WOMEN'S & CHILDREN'S HOSPITAL
100,BUKIT TIMAH ROAD
WARNING: Paralyzing Agent - Causes Respiratory Arrest

CHANGE IN APPEARANCE

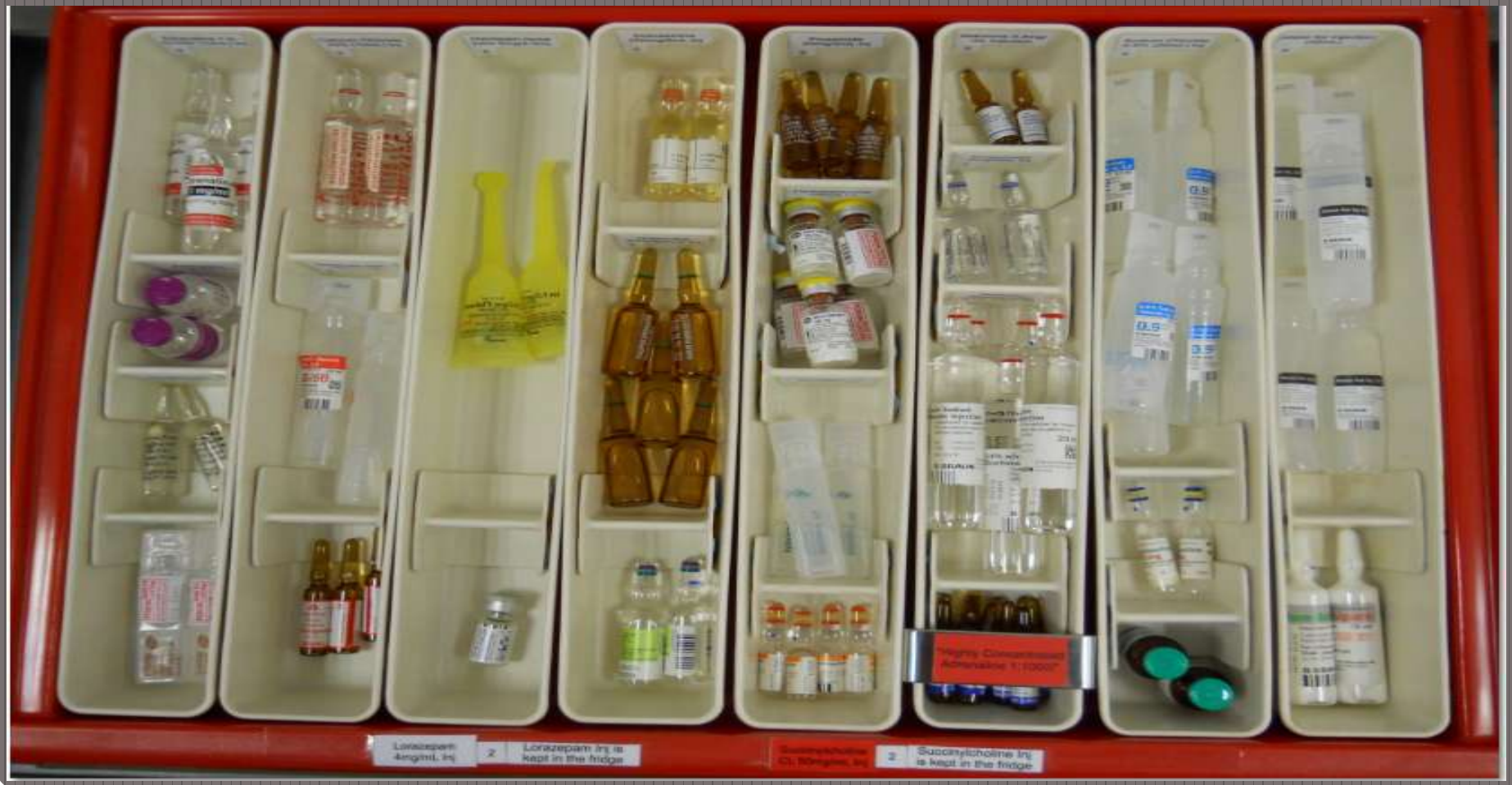
Sodium chloride 20% injection (10mL)

OLD

NEW

Pilot Ward 46 for IV Infusion Labeling

- Adult and Paediatric E-trolleys review:
  - Update and review infusion guides/charts
  - Standardise location of drugs and labeling
  - Review list of drugs kept in E-trolleys/E-kits

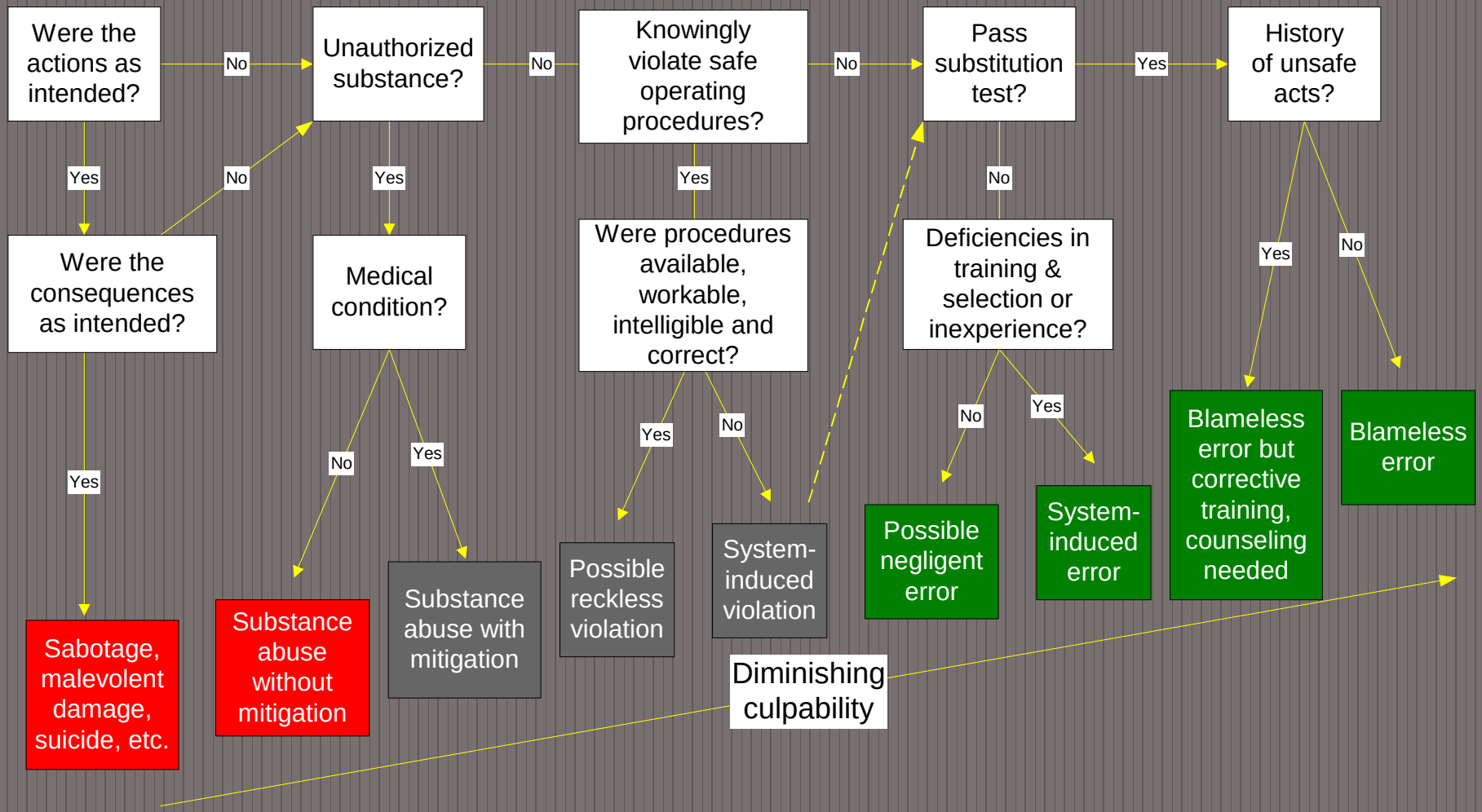


ISMP Model Strategic Plan for Medication Safety

Goal #5:

Establish a blame-free environment for responding to errors

Just Culture



Decision Tree for Determining Culpability of Unsafe Acts

Reason, J., Managing the Risks of Organizational Accidents

ISMP Model Strategic Plan for Medication Safety

Goal #6:

Involve the community in medication safety initiatives and medication self management programs

Flipcharts for Critical Drugs

Have You Heard?

Flipcharts on drugs was introduced for patient education in the clinics.

Pharmacy Medication Safety committee worked with Drs & nurses on the flipchart, which consists of photos and drug info of HIV and Anti-TB drugs.

This facilitates patient education as well as empower patients with more drug knowledge so that they can act as final checks from patient safety point of view.

A joint initiative by
Corporate Planning & Service Quality

Brochure for Patient Education

Vial

Insulin Glargine
[Lantus®]
Vial 100 unit/mL

Insulin Regular
[Actrapid®]
Vial 100 unit/mL

Insulin Isophane
[Insulatard®]
Vial 100 unit/mL

Mixtard® 30 Vial
100 unit/mL
[Insulin Regular 30% /
Isophane 70%]

FlexPen® / SoloStar®

Insulin Glargine **[Lantus®]** SoloStar®
100 unit/mL

Insulin Glulisine **[Apidra®]** SoloStar®
100 unit/mL

NovoMix ®30 FlexPen® 100 unit/mL
[Insulin Aspart 30% / Protaminated Insulin Aspart 70%]

Insulin Detemir **[Levemir®]** FlexPen®
100 unit/ml

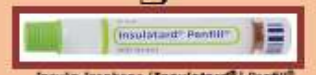
Insulin Aspart **[NovoRapid®]** FlexPen®
100 unit/ml

Penfill®

Insulin Regular **[Actrapid®]** Penfill®
100 unit/mL

Insulin Aspart **[NovoRapid®]** Penfill®
100 unit/mL

Mixtard® 30 Penfill® 100 unit/mL
[Insulin Regular 30% / Isophane 70%]



Insulin Isophane **[Insulatard®]** Penfill®
100 unit/mL

which Insulin are you using?

ISMP Model Strategic Plan for Medication Safety

Goal #7:

Establish a controlled formulary in which the selected medications are based more on safety than cost

Safety Considerations for Drug Inclusion

Established Pharmacy &Therapeutics (P&T) guidelines for inclusion and deletion, with Medication Safety as an important component for consideration

- LASA
- Past medication errors
- Multiple strength/preparations
- Therapeutic duplications
- Availability of Barcode labels on products

To replace Miconazole 2% Cream

NEW IN PHARMACY

Ketoconazole 2% Cream (15g)

Pharmacy Drug Information Service

Bulletin: Deletion of Methylphenidate Sustained-Release...

New Item | Edit Item | Delete Item | Alert Me | Go Back to List

Title: Deletion of Methylphenidate Sustained-Release (Ritalin SR) 20 mg tablet from the hospital drug listing

Body: Please be informed that Methylphenidate Sustained-Release (Ritalin SR) 20 mg tablet is removed from the hospital drug l
number of multiple preparation drugs in the hospital to help prevent confusion that could lead to medication errors.

Alternatives available in the hospital are the following :
1) Methylphenidate 10 mg tablet
2) Methylphenidate long-acting (Ritalin LA) 20 mg capsule
3) Methylphenidate extended-release (Concerta ER) 18 mg tablet
4) Methylphenidate extended-release (Concerta ER) 36 mg tablet

Expires:

Folder: Deletion from Hospital Drug Listing

Sub-folder:

Pharmacy Drug Information Service

Bulletin: Deletion of Paracetamol 250mg Suppositories...

New Item | Edit Item | Delete Item | Alert Me | Go Back to List

Title: Deletion of Paracetamol 250mg Suppositories from the Hospital Drug Listing

Body: Please be informed that Paracetamol 250mg Suppositories will be deleted from the hospital drug listing once our curre
a month's time. This is due to the relatively low usage and availability of other strengths of suppositories.
Strengths of suppositories that will still be available in the hospital:

1. Paracetamol 125mg Suppository
2. Paracetamol 325mg Suppository
3. Paracetamol 650mg Suppository

Expires:

Folder: Deletion from Hospital Drug Listing

Sub-folder:

Hospital Level-Patient Safety Leadership Commitment

- Patient Safety Rounds – regular rounds conducted by CMB with Director of Nursing and Patient Safety Officer, together with other members of Patient Safety Council
- CEO Patient Safety and Patient/Staff Focus session – KKH senior leadership is committed to safeguard individuals by fully understanding the process of delivery system and develop changes to continuously improve system design
- Appointment of Patient Safety Officer and Medication Safety Officer to take lead in patient safety activities, medication safety and process improvements

Patient Safety Council
- Formed in January 2010

- Headed by A/Prof Tan Kok Hian, Director of Clinical Quality with representation from key divisions and clinical supports of hospital, the role of PSC:
  - To obtain an overview of patient safety indicators for the hospital and oversee patient safety efforts through focus on :
    - Medication Safety
    - Procedure Safety
    - Infection Control
    - Falls Prevention

KKH Patient Safety Campaign Workgroup

Awareness, Reminders and Visibility

- Email, Web Information, Screen Saver
- Notice Board
- Cards
- Memento Souvenirs

Patient Safetv - Medication Safetv Committee

To evaluate drug usage systems and implement strategies in medication error prevention

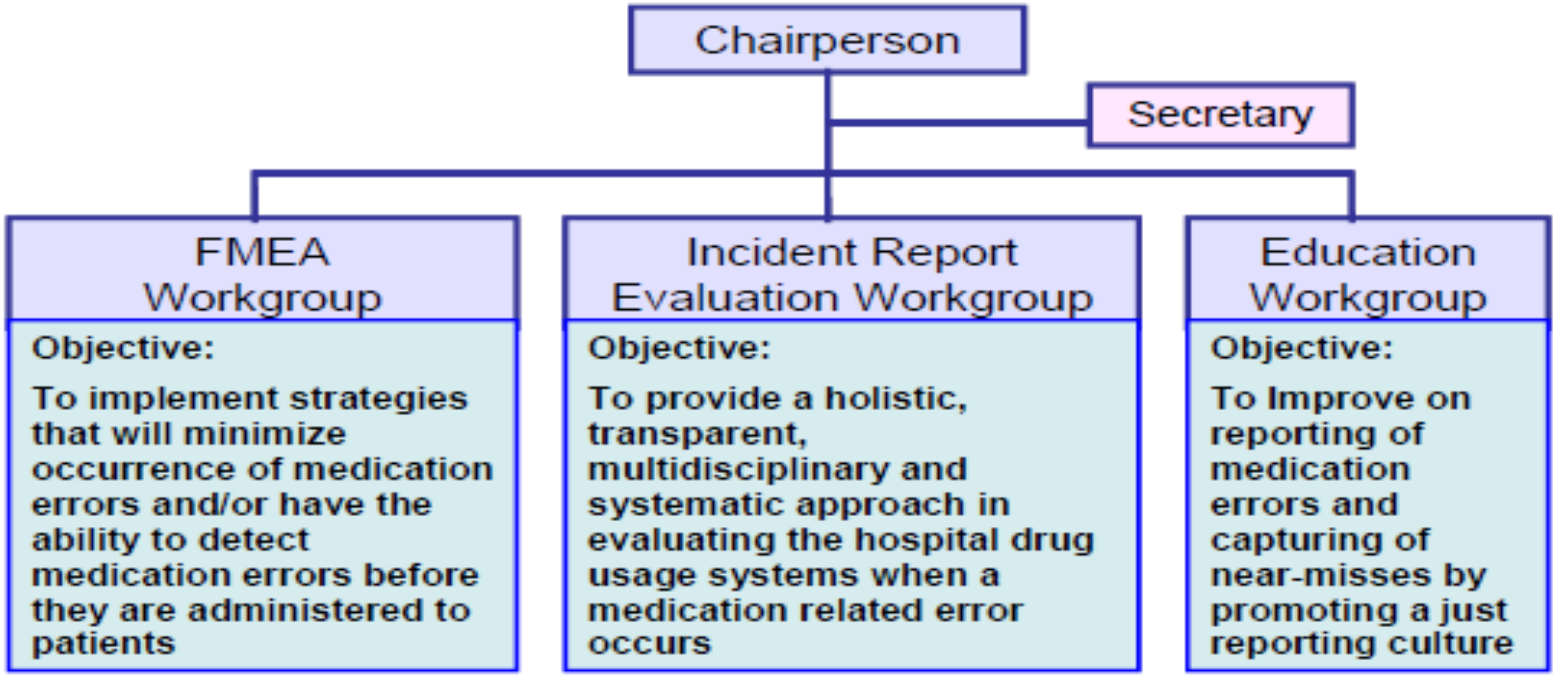
Powers of the Committee:

- Monitor and review medication/near-miss errors and making recommendations to reduce future occurrence.
- Identify and develop policies and procedures relating to drug safety.
- Review new drug-related processes and system.

Responsibility:

- Promote and educate hospital staff on drug safety
- Make recommendations on improvement of system and processes.

Committee Structure:



ISMP Visit in April 2010

Site Assessment by ISMP Team

To enhance medication safety and reduce the potential for patient harm

Institute for Safe Medication Practices

A Nonprofit Organization Educating the Healthcare Community and Consumers About Safe Medication Practices

The Institute for Safe Medication Practices (ISMP), based in suburban Philadelphia, is the nonprofit organization devoted entirely to medication error prevention and safe medication use. The organization is known and respected worldwide as the premier resource for impartial, timely, and accurate medication safety information. ISMP Team was invited to perform site assessment.

Consult Visit Itinerary: April 28-30, 2010

ISMP Recommendations

Assessment Report from the Institute for Safe Medication Practices (ISMP) was received in June 2010. Several rounds of meetings were conducted to appoint workgroups, system owners, medical and clinical support divisions, and committees to follow-up with action plan to resolve issues identified (refer to Annex I for Consult Visit Itinerary)

ISMP Medication Safety Self Assessment Survey

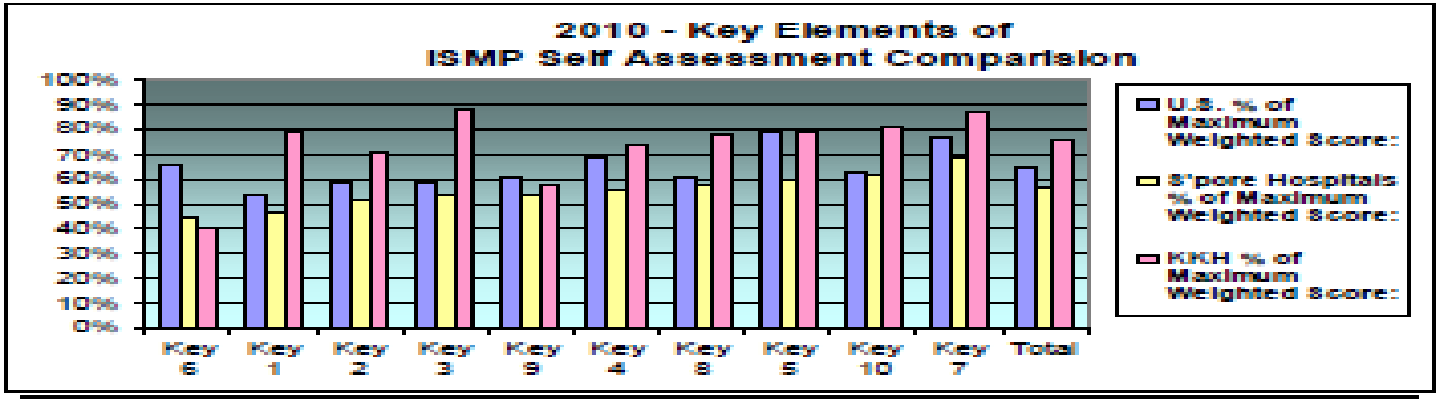
The Institute for Safe Medication Practices (ISMP) provides the KKH with the *2004 ISMP Medication Safety Self Assessment® for Hospitals tool for assessment*. This project represents one of many initiatives created through a strategic partnership between ISMP which initiated by Ministry of Health. The key objective for this assessment is to evaluate the safety of medication practices to enable the facility to identify opportunities for improvement, and compare KKH experiences with the aggregate experiences of demographically similar hospitals in Singapore.

The survey was completed by multidisciplinary team consisting of:

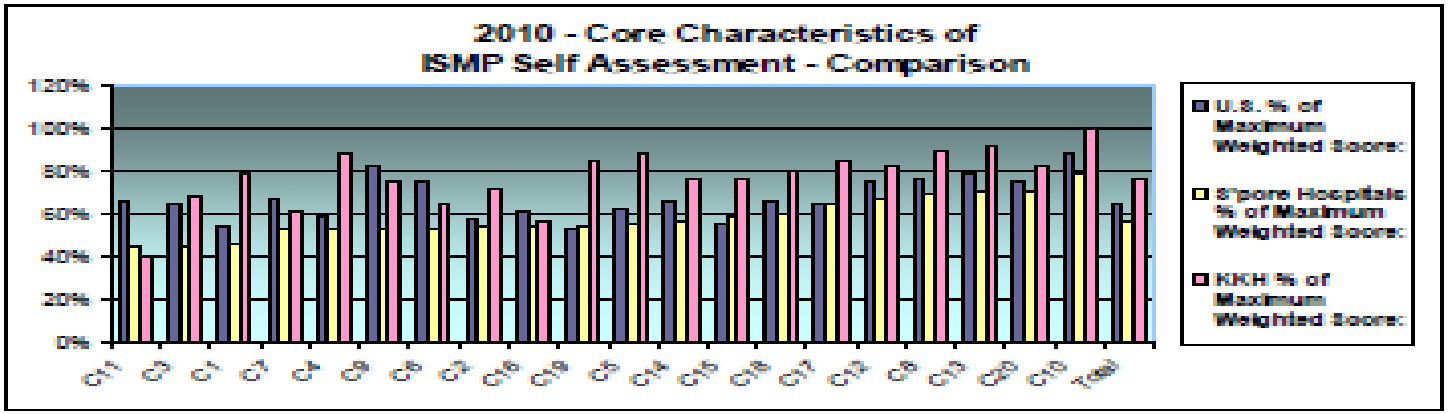
- Chairman of Medical Board
- Director of Clinical Quality
- Deputy Director of Nursing, Nurse Managers
- Chief Pharmacist and Clinical Pharmacists
- Senior Information officers
- Patient Safety Officer
- Senior Physicians

Participation in ISMP Survey

Results of the 2004 Institute for Safe Medication Practice (ISMP) Self Assessment for Hospitals - On-line submission on 22 December 2010



ISMP Medication Safety Self Assessment (2004) - Key Elements	
Key 1	Patient Information
Key 2	Drug Information
Key 3	Communication of Drug Orders and Other drug Information
Key 4	Drug Labeling, Packaging, and Nomenclature
Key 5	Drug Standardization, Storage, and Distribution
Key 6	Medication Device Acquisition, Use and Monitoring
Key 7	Environmental Factors, Workflow, and Staffing Patterns
Key 8	Staff Competency and Education
Key 9	Patient Education
Key 10	Quality Process and Risk Management



Thank you

PATIENTS. AT THE HEART OF ALL WE DO.

ACKNOWLEDGEMENTS:

Ms Pang Nguk Lan
Patient Safety Officer, KKH

Dr Manuel Joseph Gomez
Chairperson, KKH Medication Safety Committee

Pharmacy Medication Safety SubCommittee

KK Women's and Children's Hospital
SingHealth