

Unique Patient Identification

The Pioneer experience in NTEC

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NTEC Quality & Risk Management

11 May 2010



Hospital Authority

New Territories East Cluster



Quality Effective Health Care

USA
Joint Commission
on Accreditation of
Healthcare Organisation (JCAHO)

National Patient Safety Goals
2008, 2009, 2010

Hong Kong
Hospital Authority
Patient Care
Related Risks
2009

Goal 1	Improve the accuracy of patient identification.
Goal 2	Improve the effectiveness of communication among caregivers.
Goal 3	Improve the safety of using medications.
Goal 7	Reduce the risk of health care-associated infections.
Goal 8	Accurately and completely reconcile medications across the continuum of care.
Goal 9	Reduce the risk of patient harm resulting from falls.
Goal 13	Encourage patients' active involvement in their own care as a patient safety strategy.
Goal 15	The organization identifies safety risks inherent in its patient population.
Goal 16	Improve recognition and response to changes in a patient's condition.

1. Misidentification	<ul style="list-style-type: none"> • Patient • Specimen
2. Medication	<ul style="list-style-type: none"> • High risk drugs / process • Drug reconciliation on admission / discharge
3. Infection	<ul style="list-style-type: none"> • HAI- MRSA • HAI- Surgical site infection
4. Patient's condition	<ul style="list-style-type: none"> • In-Patient suicide • Patient fall
5. Patient Care process	<ul style="list-style-type: none"> • Patient assessment (identify critical ill patient) • Communication between caregivers • Safe Surgery

Safe Culture

Safe Design

Safe Practice

1. Protect **our patients**
from adverse incident
2. Protect **our staff**
from making error



A = B

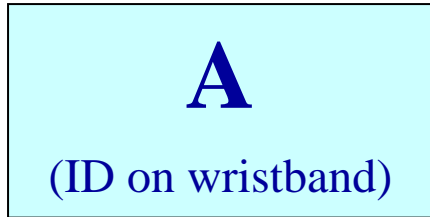


C

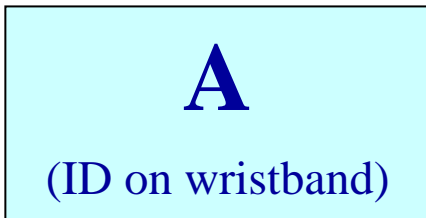
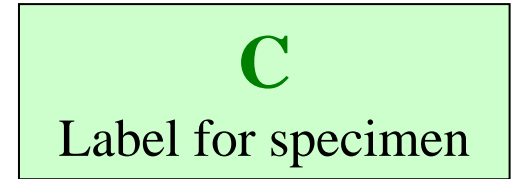
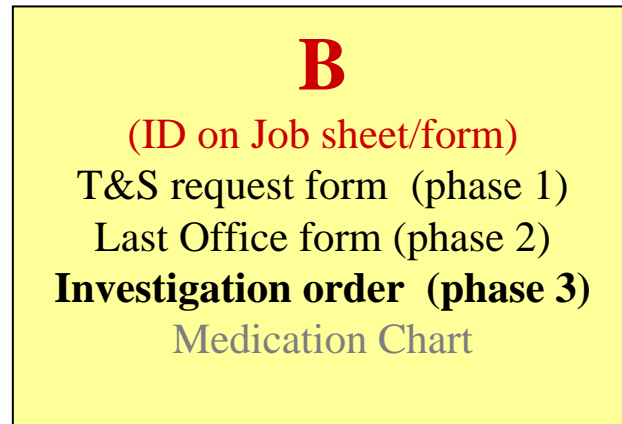
Scan ID# on A and B,

if match

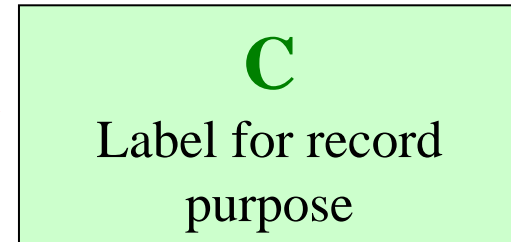
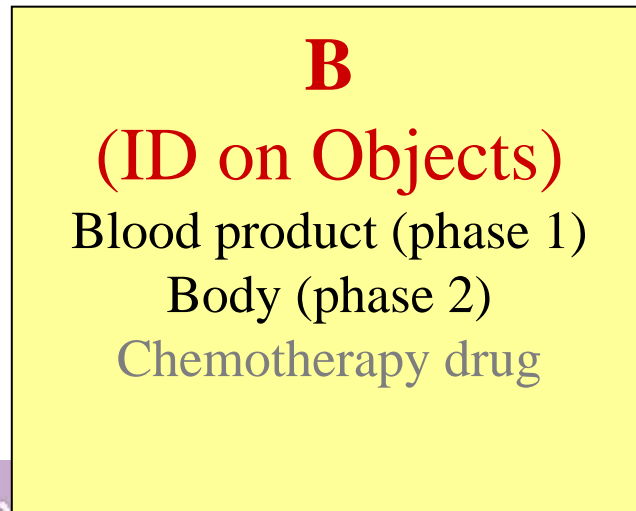
produce a label (C)



=



=



Equipment

Wristband printer

Approx. HK\$4600



2D Barcode Scanner Bedside Printer

1 set per 10 beds

Scanner @ HK\$5600 each
Printer @ HK\$3200 each



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September 2004



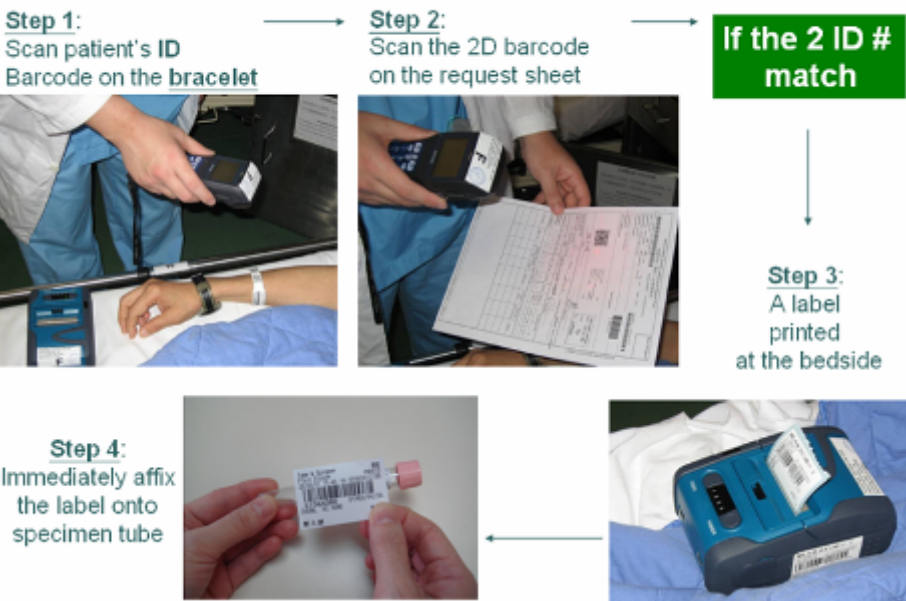
Blood sampling for cross-match was taken from the wrong patient



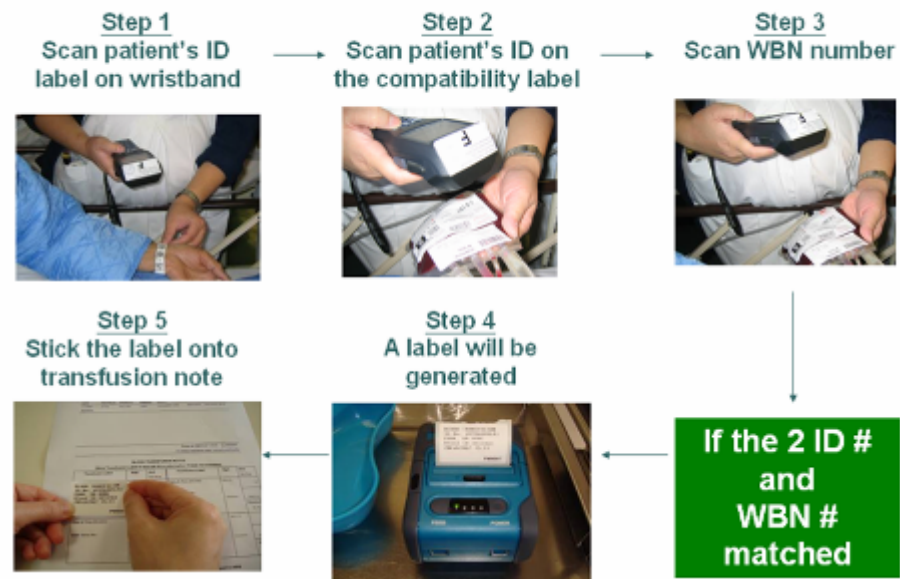
Hence blood of the wrong blood group was given to the patient



(1) Blood taking process for T&S



2. Blood administration (verify patient's identification)



Phase 1: April 2007

Started at NTEC

X-match and Blood transfusion

	Pre	Post
Misidentification during blood taking for cross match	6 cases in 6 months	0 cases * (4 cases) in 4 years
Blood administration to wrong patient	0	0

* 4 cases of error where 2D barcode scanning not used (3 A&E, 1 Ward follow up)

** 10 T&S specimens arrived at lab without label !!!!

屍體燒還遺領

日新

12

2000萬

長者認屍 應予協助



April 2007

發揭家屬 誤失職員 屍兩格一

威院 混帳

火化遺體錯領



一家燒錯屍 一家領不到屍

威院問題



禮喪的體遺沒有

屍錯取威院 屍兩放格

職停忽疏 帶手對核沒工房殮



Phase 2: October 2007 implemented in NTEC

Body identification for Last office from ward to mortuary

3a. LAST OFFICE PROCEEDURE (WARD)



12

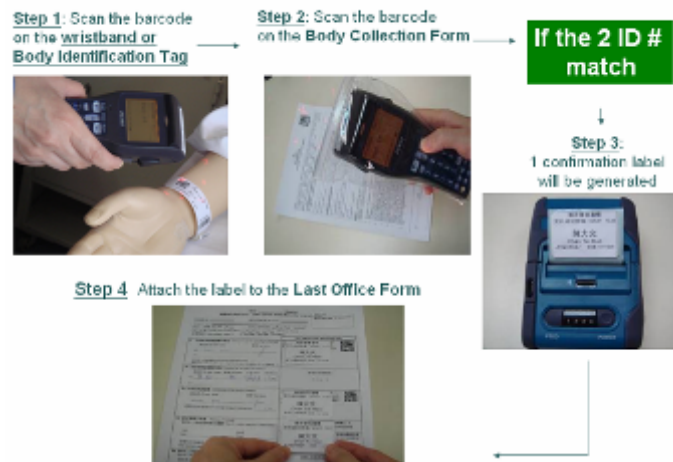
	Pre	Post
Misidentification of dead body leading to wrong body released	2 cases in 4 years	0 cases in 4 years

3b. BODY IDENTIFICATION AT MORTUARY (at arrival)



14

3c. BODY IDENTIFICATION AT MORTUARY (body release)



16

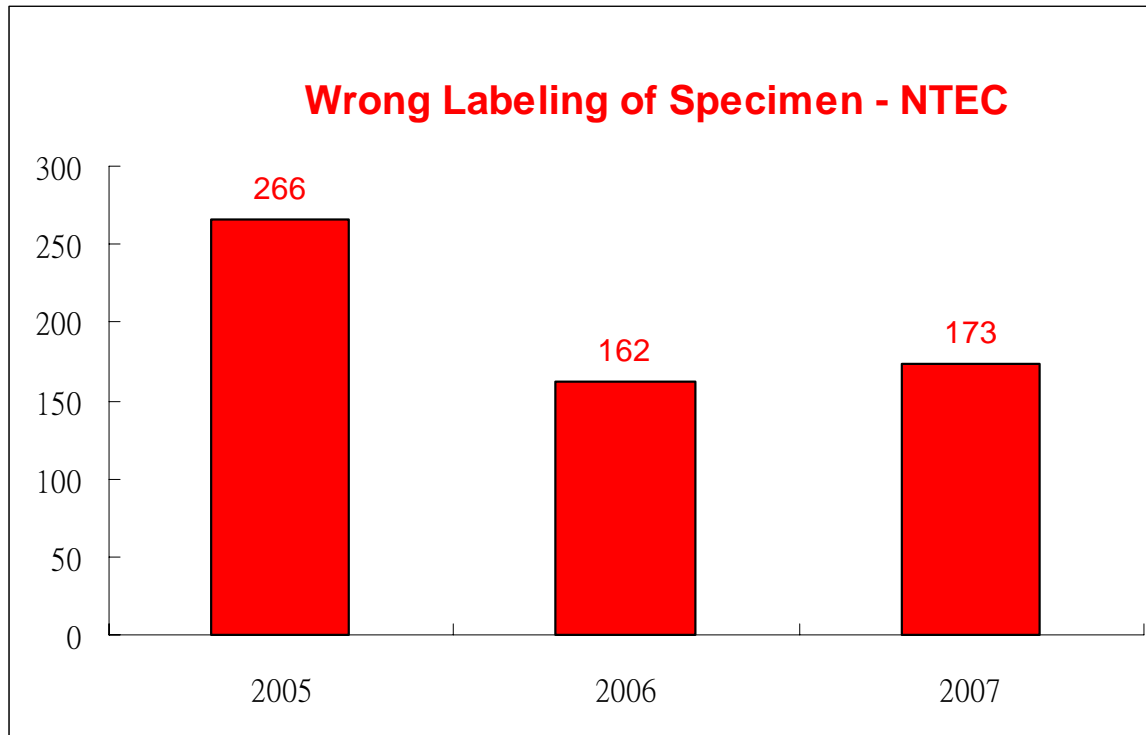
Phase 3 – started in June 2008 at PWH


Risk reduction program for a not uncommon error


- Misidentification of patient
- Using wrong label


Potential consequence +++


Wrong Labeling of Specimen - NTEC




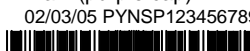
RLAS* **C**
Clotted blood (yellow cap)*
02/03/05 PYNISP1234567891A31

UG006002(8) IP/MED/A4/14
CHAN, TAI MAN M/33y
陳大文 Heparin if urg*

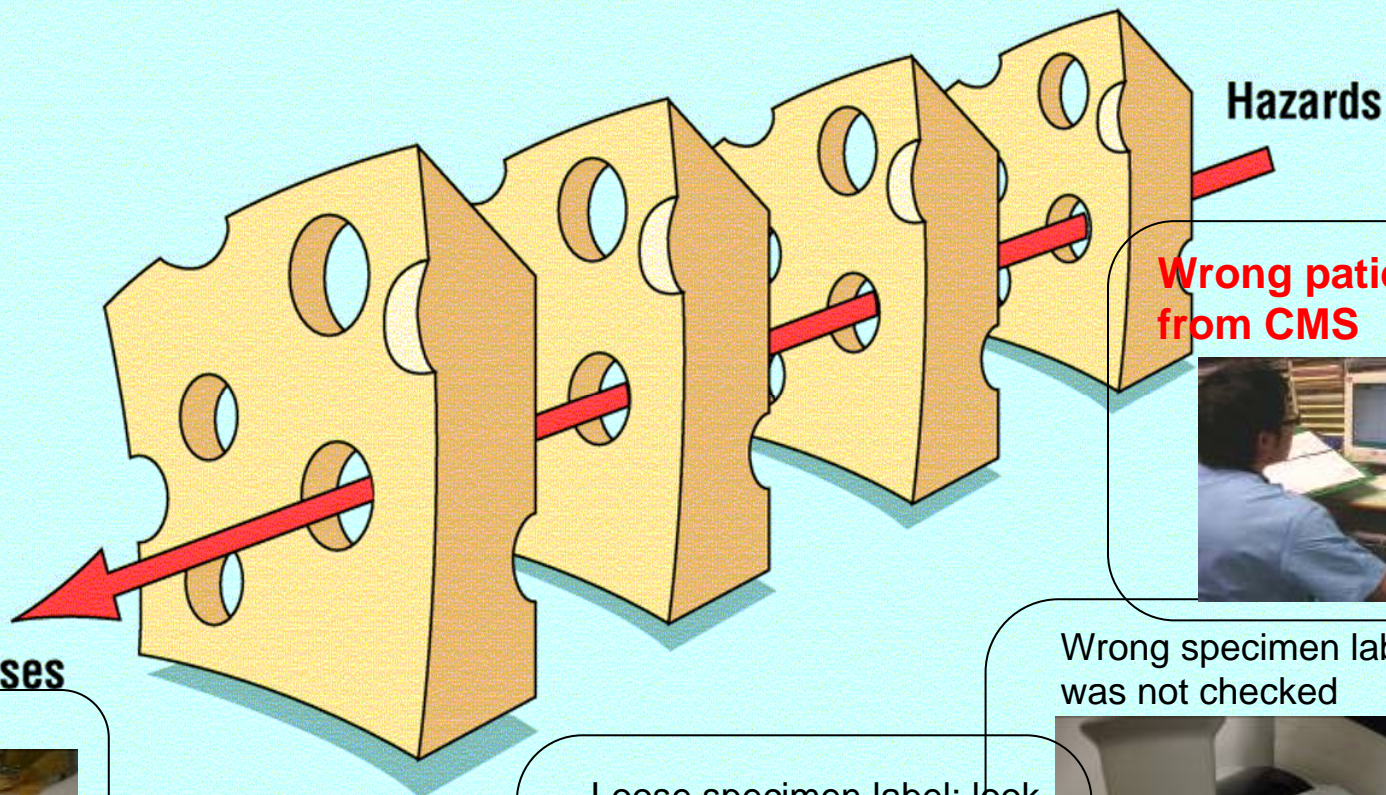
CBP* **H**
Plain (red cap)*
02/03/05 PYNISP1234567892A31

UG006002(8) IP/MED/A4/14
CHAN, TAI MAN M/33y
陳大文 Heparin if urg*

APTT* **H**
Plain (purple cap)*
02/03/05 PYNISP1234567893A31

UG006002(8) IP/MED/A4/14
CHAN, TAI MAN M/33y
陳大文 Heparin if urg*

RLAS* **C**
Clotted blood (yellow cap)*
02/03/05 PYNISP1234567891A31

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Plain (purple cap)*
02/03/05 PYNISP1234567893A31

UG006002(8) IP/MED/A4/14
CHAN, TAI MAN M/33y
陳大文 Heparin if urg*



Wrong specimen label was not checked



Loose specimen label; look alike name; etc. put in a tray



Blood taking from wrong patient

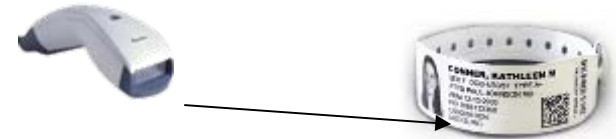


Wrong labeling



Phase 3 - Generating specimen labels at bedside

1 Scan 2D barcode on patient wristband



2 Scan 2D barcode(s) on job sheet

- Repeat scanning (if more than one test)
- When finished scanning all the job barcodes press [ENT]

Sample of GCRS Job Sheet for other blood specimens

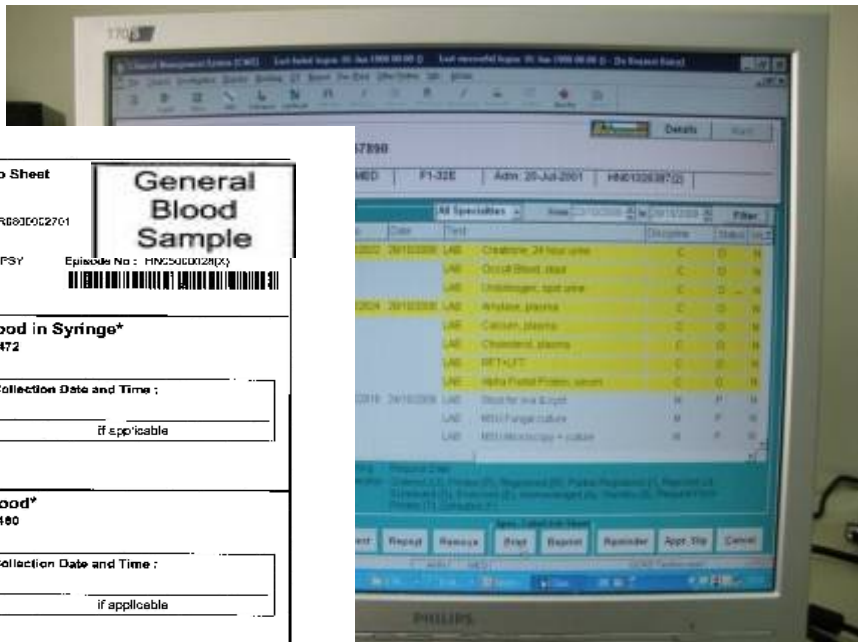
Vernal Hospital - Laboratory Job Sheet	
醫院管理處醫院 - 檢驗工作表	
Name: LEUNG CHING YEE (8883)	
Request Number: VH OR600002483	
MRID: M64148(8)	DOB: 03/05/1968
Age: 47	Episode No.: HV05000197
Request Date: 03/07/2006	Specialty: RAE
Sex: F	
Requester Loc.: VH100	Requested By: CTM1123 (Chan, Tai Man)
Specimen 1 (VH SP0600007570)	
- HCL Cholesterol	
- LDL Cholesterol	
- Liver Function Test	
- Renal Function Test	
HCLDLUFT/RT* C	
U1100001	
03/07/2006 09:00 VH SP0600007570	
M641488 IP#AE/VH/ISB	
LEUNG CHING YEE	
F 47	
+	
Specimen 2 (VH SP0600007588)	
- Random Glucose	
RGLU* C	
PUMBB B004	
03/07/2006 09:00 VH SP0600007588	
M641488 IP#AE/VH/ISB	
LEUNG CHING YEE	
F 47	
+	
Specimen 3 (VH SP0600007591)	
- Urinary WBC	
DC/CBC* C	
CTM11004	
03/07/2006 09:00 VH SP0600007591	
M641488 IP#AE/VH/ISB	
LEUNG CHING YEE	
F 47	
+	
Specimen 4 (VH SP0600007602)	
- PT/INR & APTT	
SC1* H	
CINTEK B002 201	
03/07/2006 09:00 VH SP0600007602	
M641488 IP#AE/VH/ISB	
LEUNG CHING YEE	
F 47	
+	
Printed by: Chan, Tai Man	
Printed at: 03/07/2006 09:00am	



If IDs matched

3 Label(s) will be generated by the printer at bedside





Virtual Hospital 3 - Laboratory Job Sheet
醫院 - 檢驗工作表

General Blood Sample

Request Number : VH OR683DC2701

Name : CHAN, YING TO (陳穎琪)
 HKID : M180396(0) Sex : F DOB : 16/11/1984 Age : 23y Spac : PSY Episode No : HNG2000028(X)
 Request Date : 01/04/2008 Requested Loc : V-075A
 Requested By : @CMSI (CMS I (PHS)) 2300 0001

Bld gas, venous* Heparin Blood in Syringe*
 Remarks : Venous* VH SP0800002472

Collected By : _____ Collection Date and Time : _____
 Name and Signature : _____ if applicable

> Blood gas, venous

Spot Glu* Fluoride Blood*
 Remarks : Spot Glu.* VH SP0800002480

Collected By : _____ Collection Date and Time : _____
 Name and Signature : _____ if applicable

> Glucose, spot plasma

K/Ca/Cl/Cr/Na/LFT/PO4/RFT* Clotted Blood In Gel Tube*
 Remarks : * VH SP0800002498A

Collected By : _____ Collection Date and Time : _____
 Name and Signature : _____ if applicable

> Calcium, serum
 > Chloride, serum
 > Creatinine, serum
 > Liver function tests
 > Phosphate, serum
 > Potassium, serum
 > Renal function tests
 > Sodium, serum

K/Ca/Cl/Cr/Na/LFT/PO4/RFT* Clotted Blood in Gel Tube*
 Remarks : * VH SP0800002498B

Collected By : _____ Collection Date and Time : _____
 Name and Signature : _____ if applicable

> Sodium, serum
 > Renal function tests
 > Potassium, serum
 > Phosphate, serum
 > Liver function tests
 > Creatinine, serum
 > Chloride, serum
 > Calcium, serum

Printed By : CMS IT (PH) Printed At : 03/04/2008 11:51:31 Page 3 of 2

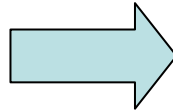
**Order investig
via CMS-GCRS**



A.

at the work station.

Scan patient's wristband 2D barcode



Scan 2D label(s) on job sheet



If the ID numbers match, labels will be printed

Press [Enter]



When a specimen is available, nurse will retrieve the job sheet



Scan Patient wristband 2D barcode



If the ID numbers match, a label will be printed

Scan job sheet 2D job label



Implementation of Phase 3 at NTEC



NDH 2009 Feb

AHNH 2008 Dec



TPH 2009 Jun



140 in-patient wards in NTEC implemented the phase 3 initiative

PWH 2008 June



SH BBH SCH 2009 Sep



Accelerated roll-out across all 7 NTEC hospitals

Supported by purchase of extra 2D scanner and printer from NTEC Annual plan Q&RM program 2008



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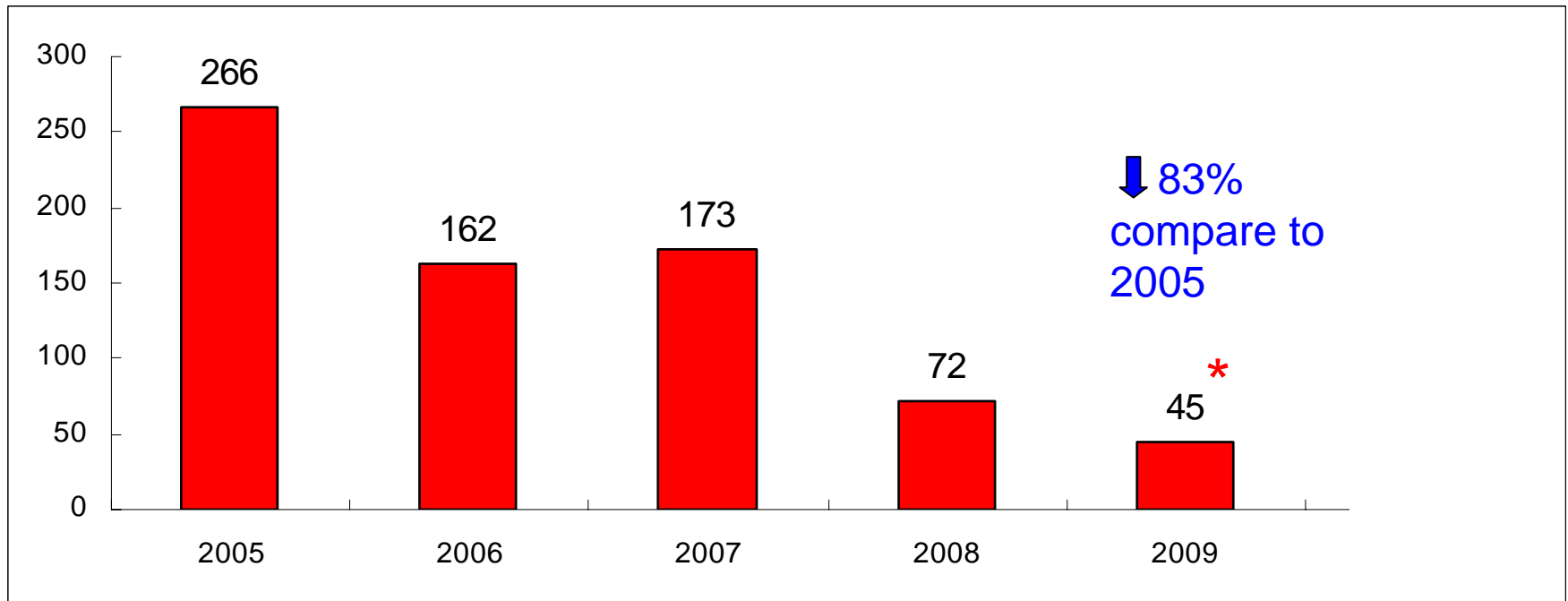


Quality Effective Health Care

Incident related to misidentification of specimen @ NTEC

(wrong label used or specimen taken from wrong patient)

2005 - 2009



Implementation of phase III	PWH	AHNH	NDH	TPH	SH/BBH/SCH
	June 08	Dec 08	Feb 09	Jun 09	Sept 09

*** 2009: 41 incidents reported from clinical areas not yet using the 2D barcode system**

• A&E 11, OT 1, special clinics 10, Point of care testing 10, wrong CMS request 3, double labeling 1

• extended care hospital (before implementation) 9

Number of misidentification (case) before and after Implementation of 2D barcode scanning



-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	11	10	12
m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Jul 08

PWH 25.06.2008	8	4	8	10	7	4	1	0	1	0	0	0	0	0	0	0	0

Dec 08

AHNH 08.12.2008	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0

Feb 09

NDH 09.02.2009	3	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0

Jul 09

TPH 22.06.2009	1	0	1	0	0	1	0	0	0	0	0	0	0	0			

Sep 09

SH 07.09.2009	2	1	0	0	0	1	0	0	0	0	0	0					

Sep 09

BBH 08.09.2009	0	0	0	0	0	0	0	0	0	0	0	0					

Sep 09

SCH 09.09.2009	0	0	0	0	0	0	0	0	0	0	0	0					

* Error still occurred at clinical areas not yet implemented 2D barcode system, e.g. A&E, point of care testing

Number of misidentification (case) before and after Implementation of 2D barcode scanning



-6	-5	-4	-3	-2	-1	1	2	3	4	5	6	7	8	9	11	10	12
m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m	m

Jul 08

PWH 25.06.2008	8	4	8	10	7	4	1	0	1	0	0	0	0	0	0	0	0	0
								3	5	1	1	1	1		2		6	2

Dec 08

AHNH 08.12.2008	1	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
										1		2		1	1			

Feb 09

NDH 09.02.2009	3	0	0	3	0	3	0	0	0	0	0	0	0	0	0	0	0	0
									1									

Jul 09

TPH 22.06.2009	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0			

Sep 09

SH 07.09.2009	2	1	0	0	0	1	0	0	0	0	0	0	0					

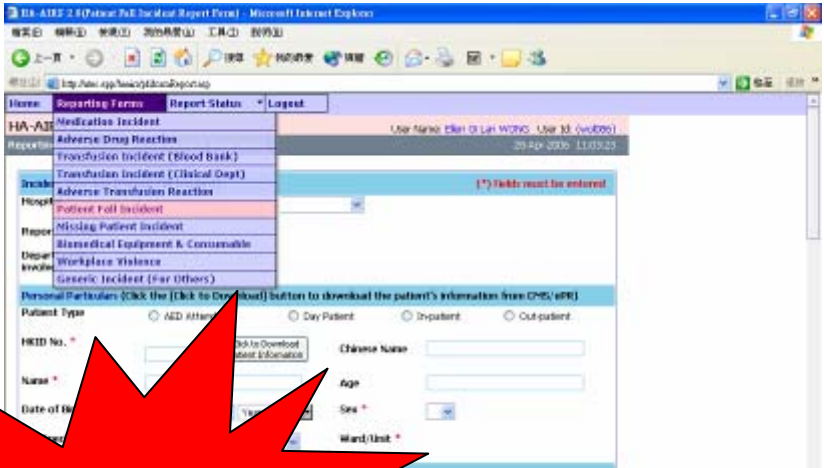
Sep 09

BBH 08.09.2009	0	0	0	0	0	0	0	0	0	0	0	0	0					

Sep 09

SCH 09.09.2009	0	0	0	0	0	0	0	0	0	0	0	0	0					

* Error still occurred at clinical areas not yet implemented 2D barcode system, e.g. A&E, point of care testing



41 incidents reported from area not yet implementing 2D barcode system

45 wrong labeling reported in 2009

4 incidents reported from ward implemented 2D barcode system

11 from A&E (loose label used)

1 from OT (loose label used)

10 from ward while conducting POCT test on site

10 from SOPD / Day follow up

9 from Extended Care Hospitals (before roll out)

3 testing result found discrepancy and discovered that Intern printed job sheet with wrong patient name from CMS and entered wrong ID direct to scanner. Not verifying patient identity with 2D barcode scanner

1 specimen found double labeling – A phlebotomist reused a discarded specimen bottle



A Specimen with



SMART TIPS

Stick specimen label **BEFORE** blood collection



Check specimen label **BEFORE** collection

Wrong Specimen

A doctor intended to print patient sheet for CSF, but selected the wrong job sheet B from CMS. A wrong job sheet was generated.

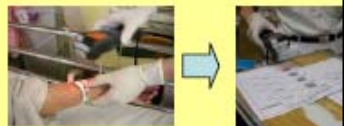
Without scanning the wristband and a doctor key-in the identity number scanner according to the wrong job sheet with the name of patient B was generated.

Without verifying patient's identity, the staff stuck the label to CSF specimen.

Later, the doctor discovered the error and contacted laboratory immediately.

Smart

Scan patient's wristband for correct patient



Staff must not use the scanner except in exceptional circumstances when the wristband is not available.

Wrong H'stix Result @ POCT



A staff scanned patient A's gum label on progress sheet for POCT testing. Right after scanning, the staff found that patient A did not require blood glucose test at POCT, but patient B.....

Without cancellation of patient A's data, the staff approached patient B for blood collection and completed the blood glucose test @ POCT

B's high blood glucose result was uploaded to A's profile in CMS. Fortunately, A's wrong result was spotted by doctor and invalidated



Smart Tips

Visually check patient's identity (wristband) against the gum label on blood glucose record at bed side

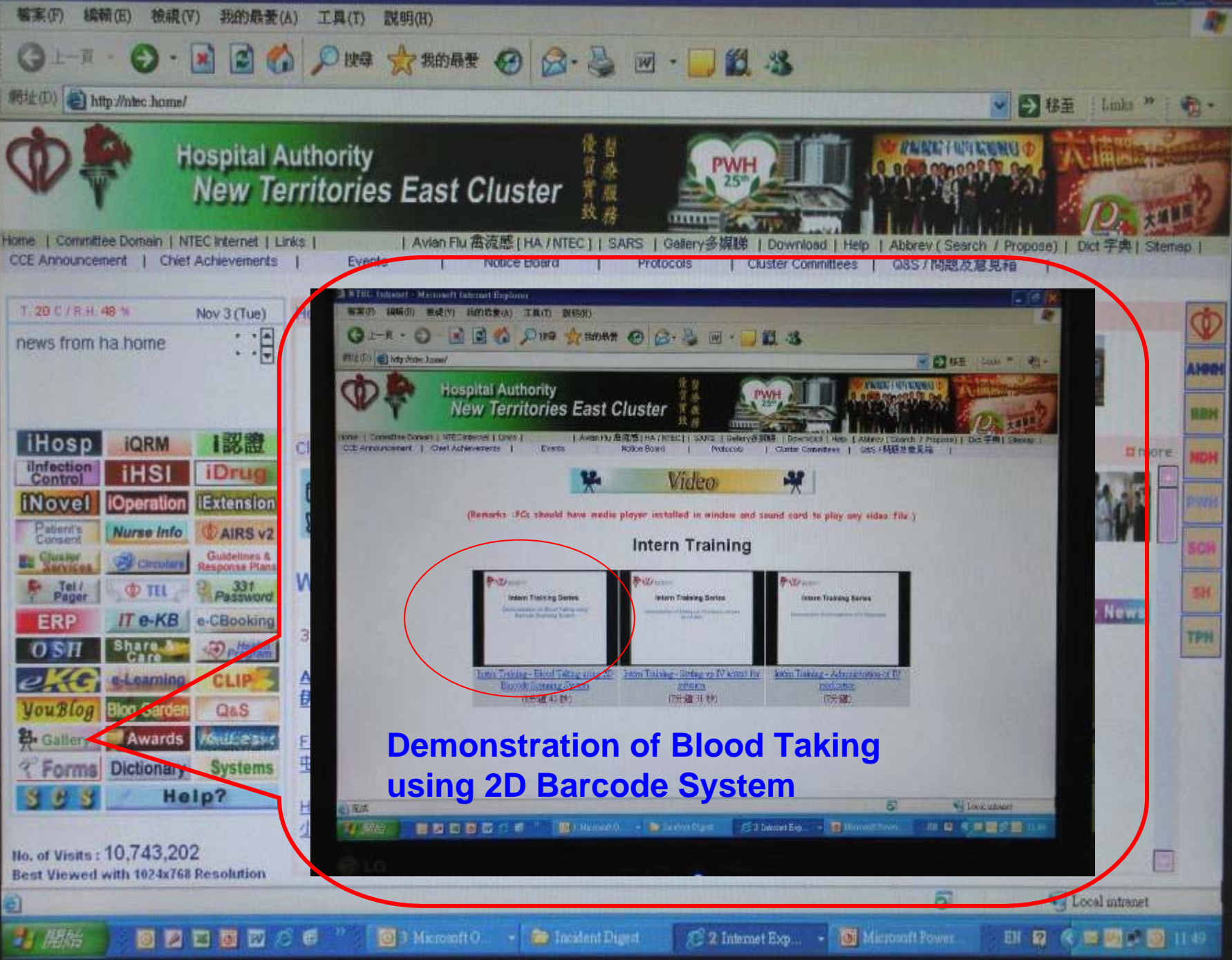


Confirm patient identity by scanning 1D barcode on wristband

Perform testing immediately

If required, press ON/OFF button on the POCT analyser to clear previous memory





Hospital Authority New Territories East Cluster

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T: 20 C / R.H: 48 % Nov 3 (Tue)

news from ha home

iHosp iQRM i認證
Infection Control iHSI iDrug
iNovel iOperation iExtension
Patient's Consent Nurse Info AIRS v2
Cluster Services Circulars Guidelines & Response Plans
Tel / Pager TEL 331 Password
ERP IT e-KB e-CBooking
OSH Share Care
eKG e-Learning CLIP
YouBlog Blog Garden Q&S
Gallery Awards
Forms Dictionary Systems
SOS Help?

Video

(Remarks: PCs should have media player installed in window and sound card to play any video file.)

Intern Training

Intern Training - Blood Taking using 2D Barcode System (10分鐘)	Intern Training - SARS IV Clinical (17分鐘)	Intern Training - Hospital Infection Control (10分鐘)

Demonstration of Blood Taking using 2D Barcode System

No. of Visits : 10,743,202
Best Viewed with 1024x768 Resolution

What have we done?

UPI – pilot in NDH A&E since 1 December 2009

All patient attending A&E service will be put on a wristband with 2D barcode at Triage Station



病人身份辨識
Unique Patient Identification

為加強病人安全，本院於二零零九年十二月一日上午九時始，為每位求診本院急症室人士戴上識別身份之數碼手帶。此手帶有助醫護員工在進行治療護理程序時，確認病人的身份。

病人完成登記後，分流站護士會核對手帶資料正確後再為病人戴上。
病人於院內候診期間請戴上手帶。診症完畢而無需住院者，在離開急症室時，可除下繫於分流站之保密箱內。

你的參與、確保安全
Your Engagement Enhance Patient Safety!

With effect from 1st December 2009, 9am, a barcode wristband will be applied to each patient attending our Accident & Emergency Department. The purpose of the wristband is to help in verifying patient's identity during the attendance to enhance patient safety.

After registration, the triage nurse will put on a wristband to each patient after verification. Patients are advised to have the wristband always on the wrist during the attendance. If admission is not required, the wristband can be discarded into the confidential box at the triage station while leaving the hospital.

謝謝! Thank You!

NTEC Quality & Risk Management Division 新界東質素及風險管理部



If blood testing is required – staff proceed for testing requirement and verify patient identity with 2D barcode scanner

If admission is not required, the wristband will be discarded while leaving the hospital



~30% wristband discarded as scanning for testing verification were not necessary



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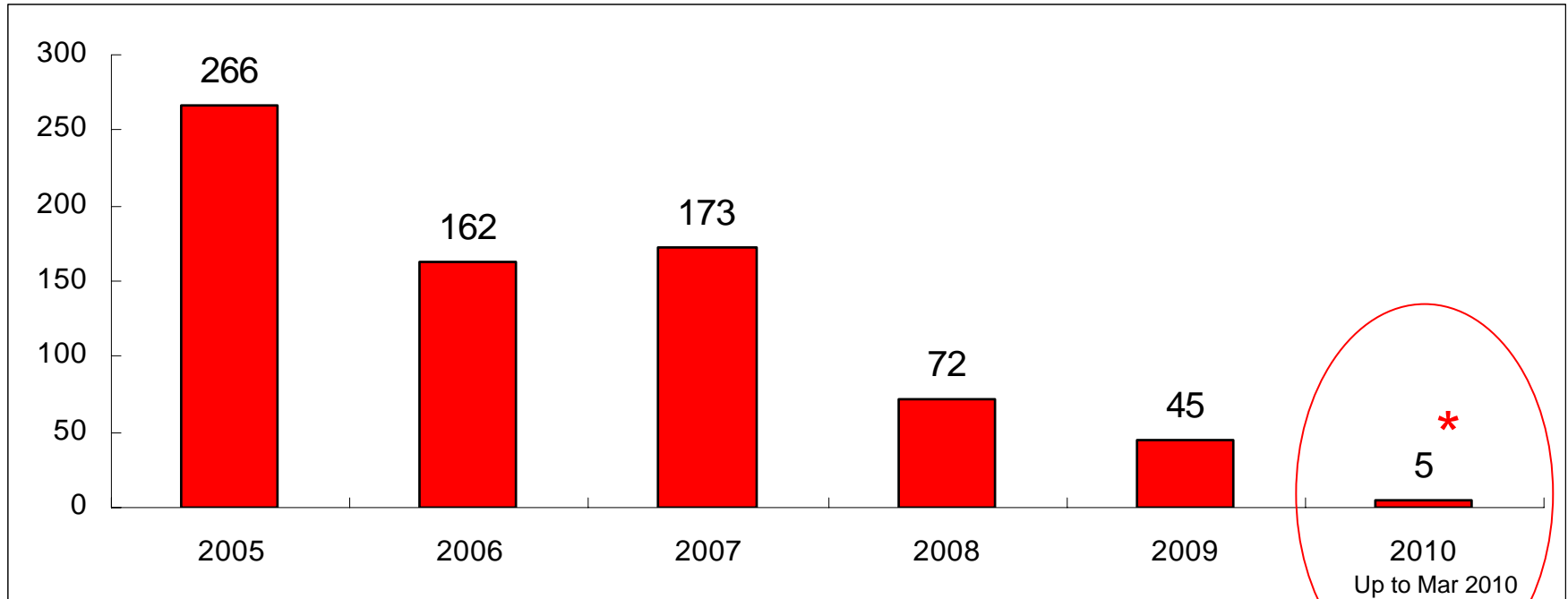


Quality Effective Health Care

Incident related to misidentification of specimen @ NTEC

(wrong label used or specimen taken from wrong patient)

2005 – Q1 / 2010



Implementation of phase III	PWH June 08	AHNH Dec 08	NDH Feb 09	TPH Jun 09	SH/BBH/SCH Sept 09
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*** 2010 (up to March 2010) : 5 incidents reported**

• special clinics 1, Point of care testing 2, **wrong CMS request 1**, mixed up labels 1 (pre-print and mixed up)

Issue

Intern key-in patient's ID direct to 2D barcode scanner, and bypass the process of verification patient's identity at bed side → **at Risk!!!**



After discussion and further consideration (e.g. the frequent turnover of Intern),

the key-in function will be disabled in 2010.



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Quality Effective Health Care

Scanner and printer Repair / replacement

Statistic from April 2007 to September 2009 (30 months)

- No of scanner and printer in use @ NTEC = 477
- No. of scanner reported lost = 2
- No of call for repair / maintenance = 999
 - Average call for repair per set = 2
 - Average call for repair per ward = 7
- No. of printer battery replaced = 15
- No. of scanner battery replaced = 2

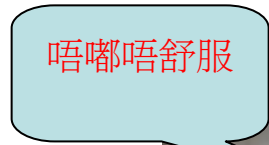


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Quality Effective Health Care

Conclusion



Special Thanks to:

Dr. Fung Hong, CCE, NTEC

HCEs, NTEC

All COSs, DOMs, NTEC

Pathology Department, NTEC

All clinical staff (front line doctors, nurses, phlobotomist), NTEC

Quality & Risk Management Team, NTEC

CMS – NTEC Support Team

HAHO ITS CS7 team

HAHO Patient Safety & Risk Management Team

Thank You!!!



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