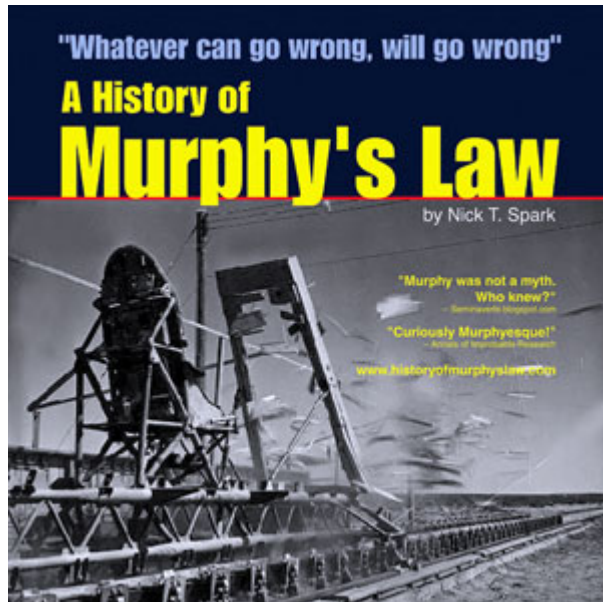


From “Time-out” to “123 Surgical Safety 123”

Lai PBS, Chan DTM, Wong J, Ng SSM, Tam PYH, Lam DWL

Department of Surgery,
Department of Anaesthesia & Intensive Care,
Prince of Wales Hospital,
Hong Kong





Murphy's Law -

"if anything can go wrong, it will."

"If there's more than one possible outcome of a job or task, and one of those outcomes will result in disaster or an undesirable consequence, then somebody will do it that way."

http://en.wikipedia.org/wiki/Murphy's_law

Time out



- Initiate from Dept of Surgery, PWH in Jan 2008
(Task force by Dept Q & RM Coordinators)
- To prevent:
 - Wrong **patient**
 - Wrong **side**
 - Wrong **site**
 - Wrong **surgical procedure**
- Final verification before surgery
- Good practice – reminder to surgeons

Time Out!

等一等...



病人、左右對清楚!
手術、安全又穩妥!

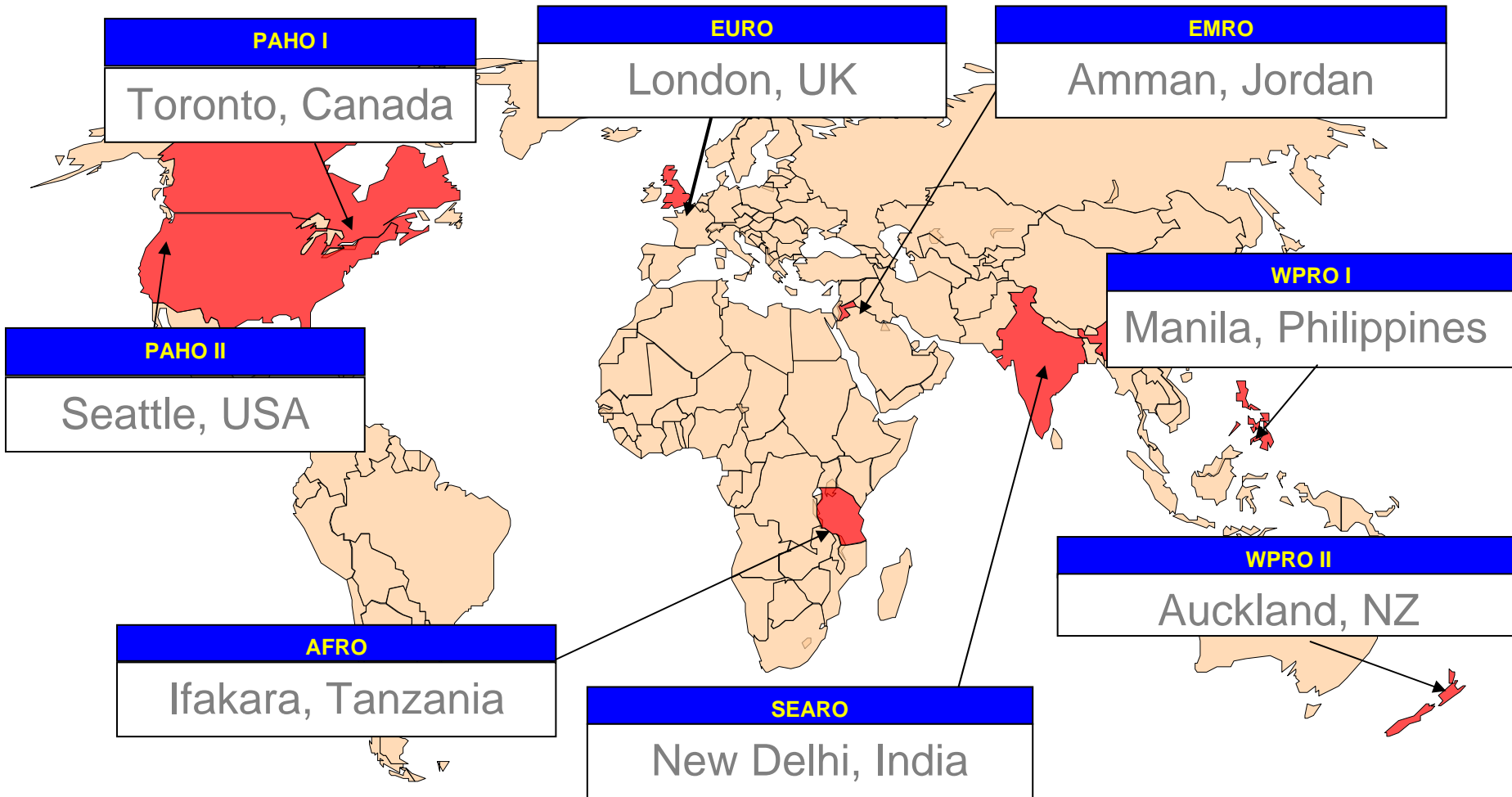
Time-Out Checked-Correct Form Prince of Wales Hospital

	Verified	Inconsistency	N/A
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Patient Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
HKID	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Diagnosis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Side	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Site / Operation type	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Signature _____ Nurse _____ Surgeon _____
Name _____
Date _____
Final Decision (in case of inconsistency) _____

Surgeon's Signature

The Checklist was piloted in 8 cities... a variety of economic circumstances & diverse populations



Global movement

The NEW ENGLAND JOURNAL of MEDICINE

SPECIAL ARTICLE

A Surgical Safety Checklist to Reduce Morbidity and Mortality in a Global Population

Alex B. Haynes, M.D., M.P.H., Thomas G. Weiser, M.D., M.P.H.,
William R. Berry, M.D., M.P.H., Stuart R. Lipsitz, Sc.D.,
Abdel-Hadi S. Breizat, M.D., Ph.D., E. Patchen Dellinger, M.D.,
Teodoro Herbosa, M.D., Sudhir Joseph, M.S., Pascience L. Kibatata, M.D.,
Marie Carmela M. Lapitan, M.D., Alan F. Merry, M.B., Ch.B., F.A.N.Z.C.A., F.R.C.A.,
Krishna Moorthy, M.D., F.R.C.S., Richard K. Reznick, M.D., M.Ed., Bryce Taylor, M.D.,
and Atul A. Gawande, M.D., M.P.H., for the Safe Surgery Saves Lives Study Group*

ABSTRACT

BACKGROUND

Surgery has become an integral part of global health care, with an estimated 234 million operations performed yearly. Surgical complications are common and often

From the Harvard School of Public Health (A.B.H., T.G.W., W.R.B., A.A.G.), Massa-

RESULTS

The rate of death was 1.5% before the checklist was introduced and declined to 0.8% afterward ($P=0.003$). Inpatient complications occurred in 11.0% of patients at baseline and in 7.0% after introduction of the checklist ($P<0.001$).

CONCLUSIONS

Implementation of the checklist was associated with concomitant reductions in the rates of death and complications among patients at least 16 years of age who were undergoing noncardiac surgery in a diverse group of hospitals.

Both mortality and complication rates were reduced with implementation of the checklist !

Surgical checklist 'saves lives'

Using a simple surgical checklist during major operations can cut deaths by more than 40% and complications by more than a third, research has shown.

The National Patient Safety Agency (NPSA) has ordered all hospitals in England and Wales to use it across the board by February 2010.

The checklist, devised by the World Health Organization (WHO), was tested in eight cities around the globe.

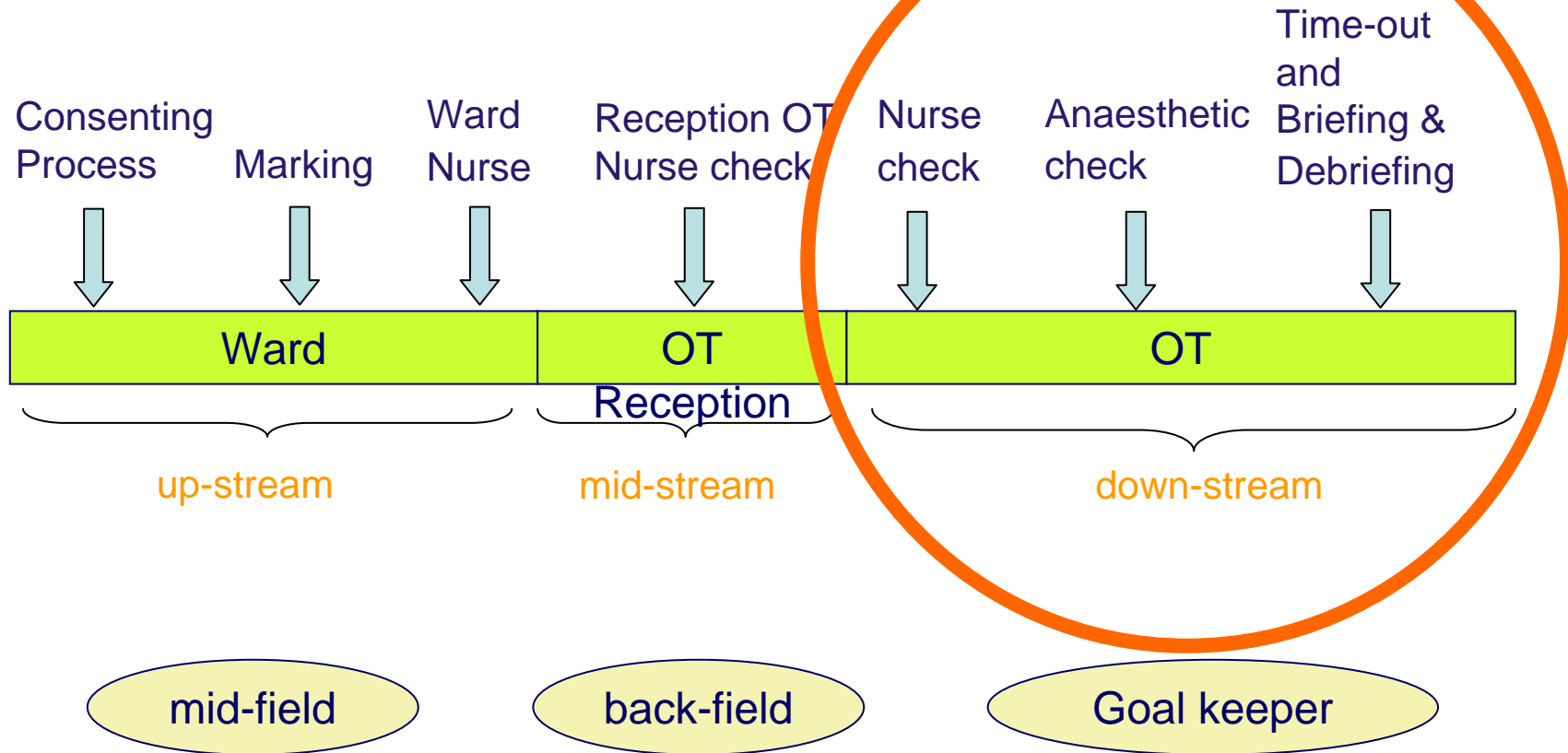
The year-long study features online in the New England Journal of Medicine.

The checklist is made up of a single page that requires only a few minutes to complete.

It focuses on basic good practice before anaesthesia is administered, before a patient is cut open, and before a patient is removed from the operating theatre, and is designed to promote effective teamwork and prevent problems such as infection and unnecessary blood loss.

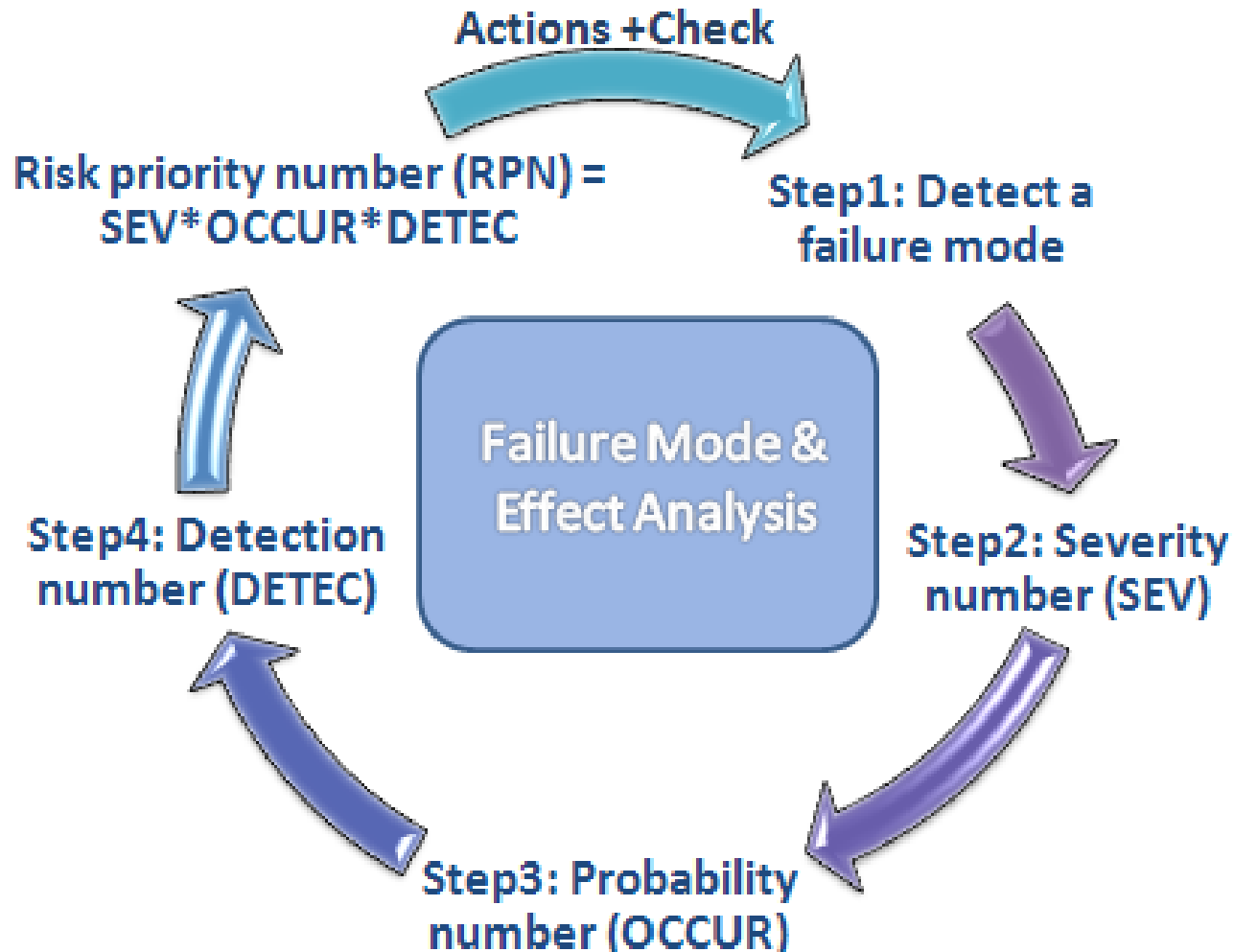
Journey of a Surgical Patient

Covered in current time-out



Goal keeper cannot survive alone ! Mid-field and back-field are important !

Failure Mode & Effects Analysis (FMEA)



1-2-3 Surgical Safety 1-2-3

- Adapted from WHO Safety Checklist
- Critical processes of surgical patient journey combined into **ONE** single checklist
- and.....

more crucial points addressed...

- Marking
- Blood loss
- Anaesthetic issues
- Drug allergies
- Surgical concerns
- Post-operative care
- Surgical device issues
 - (more complex in modern surgery)

123

Surgical Safety

123

Briefing

Department of Surgery

Jan 30, 2009

CONSENTING PROCESS ①

SENDING PATIENT ②

THEATRE RECEPTION ③

Briefing on

①②③

SURGICAL SAFETY

①②③

- Date : Friday, 30 Jan 2009
- Time : 1:00 - 2:00pm
- Venue : Seminar Room 1, 2/F,
Clinical Sciences Building, PWH

① THEATRE, BEFORE ANAESTHESIA

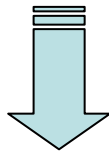
② BEFORE INCISION

③ BEFORE LEAVING THEATRE

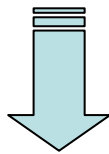


Front Page

1. Consenting process



2. Sending Patient



3. Theatre Reception

OT Date : _____	Diagnosis : _____	Patient Name : _____
Theatre : _____	Procedure/Side : _____	HKID : _____
		Ward/Bed : _____

1 2 3 SURGICAL SAFETY 1 2 3

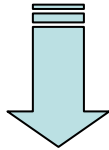
1	
1 CONSENTING PROCESS	
<input type="checkbox"/> Surgeon has confirmed the following patient's information • Name & HKID • Diagnosis • Procedure / Side	SURGEON Signed : _____ Print : _____ Date : _____ Time : _____
<input type="checkbox"/> Consent has been confirmed with OT list	
Marking <input type="checkbox"/> Yes <input type="checkbox"/> N/A	
'Type & Screen' required <input type="checkbox"/> Yes <input type="checkbox"/> No (Risk of blood loss < 500ml (7ml/kg in children))	
Availability of essential medical devices confirmed (OT list remark) <input type="checkbox"/> Yes <input type="checkbox"/> N/A	

2	
2 SENDING PATIENT	
<input type="checkbox"/> Nurse has confirmed the following patient's information • Name & HKID • Diagnosis • Procedure / Side	WARD NURSE Signed : _____ Print : _____ Date : _____ Time : _____
<input type="checkbox"/> Consent has been confirmed with OT list	
Marking <input type="checkbox"/> Confirmed <input type="checkbox"/> N/A	
Confirm 'Type & Screen' available <input type="checkbox"/> Yes <input type="checkbox"/> Not required	
<input type="checkbox"/> Medical notes & films (supporting documents) available	

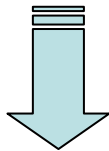
3	
3 THEATRE RECEPTION	
<input type="checkbox"/> Nurse has confirmed the following patient's information • Name & HKID • Diagnosis • Procedure / Side	RECEPTION NURSE Signed : _____ Print : _____ Date : _____ Time : _____
<input type="checkbox"/> Consent has been confirmed with OT list	
Marking <input type="checkbox"/> Confirmed <input type="checkbox"/> N/A	
Confirm 'Type & Screen' available <input type="checkbox"/> Yes <input type="checkbox"/> Not required	
<input type="checkbox"/> Medical notes & films (supporting documents) available	

Back Page

1. Theatre, before anaesthesia



2. Before incision



3. Before leaving theatre

OT Date : _____ Diagnosis : _____
Theatre : _____ Procedure/Side : _____

Patient Name : _____
HKID : _____
Ward/Bed : _____

1 2 3 SURGICAL SAFETY 1 2 3

THEATRE, BEFORE ANAESTHESIA

- Anaesthetist (Surgeon in LA) has confirmed the following patient's information
 - Name & HKID
 - Diagnosis
 - Procedure & Side
 - Marking
- Anaesthesia safety check completed (Concentration & dosage of LA)
- Known allergy
 Yes No
- Airway assessment

SIGN IN Anaesthetist (Surgeon in LA)

Signed : _____
Print : _____
Date : _____
Time : _____

1

BEFORE INCISION

- Time Out
 - Name & HKID
 - Diagnosis
 - Procedure & Side
- Marking
 Confirmed N/A
- Anticipated critical events
- Prophylactic antibiotics
- Availability of essential medical devices confirmed (OT list remark)
 Yes N/A

Anaesthetist Signed: _____ Nurse Signed: _____
Print : _____ Print : _____

TIME OUT (Surgeon)

Signed : _____
Print : _____
Date : _____
Time : _____

2

BEFORE LEAVING THEATRE

- Instrument, gauze & needle count correct
- Name of procedure confirmed
- Specimen label confirmed and sent
- Equipment problem addressed
- Key concerns reviewed

SIGN OUT (Circulating nurse)

Signed : _____
Print : _____
Date : _____
Time : _____

3

OT Date : _____

Diagnosis : _____

Theatre : _____

Procedure/Side : _____

Patient Name : _____

HKID : _____

Ward/Bed : _____

1 2 3 SURGICAL SAFETY 1 2 3

1

CONSENTING PROCESS

- Surgeon has confirmed the following patient's information
 - Name & HKID
 - Diagnosis
 - Procedure / Side
- Consent has been confirmed with OT list
- Marking
 - Yes N/A
- 'Type & Screen' required
 - Yes No (Risk of blood loss < 500ml (7ml/kg in children))
- Availability of essential medical devices confirmed (OT list remark)
 - Yes N/A

SURGEON

Signed : _____

Print : _____

Date : _____

Time : _____



The day before
surgery



A good practice

The evening before surgery:
Check the OT list vs. consent form

Consent form with text in both English and Chinese. The English text includes sections for patient information, procedure details, and consent. The Chinese text is a translation of the same information.

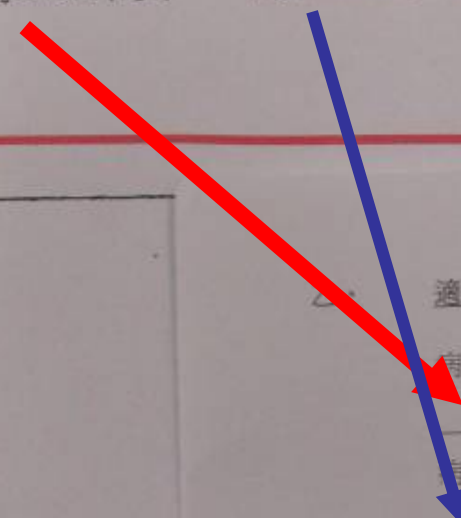
Clipboard with a form titled "STATE OF MASSACHUSETTS DEPARTMENT OF HEALTH SERVICES". The form contains a table with columns for patient information and procedure details. The table is mostly empty, with some handwritten notes and a red line drawn across it.

2008/1/28

Sex / Age	Ward / Bed	Diagnosis	Procedure	Type	Surgeon	Notes
F 26y	3D 01X	Temporal arteriovenous malformation (Right)	Craniotomy for excision of cerebral arteriovenous malformation (Right)	Ultra Major	WONG, Kwok Chu George ZHU, Xian Lun Cannon LAI, Kwong Lun	GA Post-op. ICU BrainLAB neuronavigation Mayfield pin fixation Supine oblique USG Microscope
M 41y		Right leptomeningeal lesion (Right)	Right craniotomy + tumor excision (Right)	Major	CHAN, Tat Ming Danny ZHU, Xian Lun Cannon POON, Wai Sang Wayne MAK, Wai Kit	GA Post-Op HDU (3C Lateral position (right side up) Frozen section Neuronavigation Midas Rex

59 FROM DEPARTMENT OF SURGERY

30 / 11



適應症及手術/醫療程序/治療

病人的診斷/適應症：

Right leptomeningeal lesion

病人接受的手術/醫療程序/治療名稱或性質：

Right craniotomy + Tumor Excision

預期得到的效果：

Diagnostic

丙、一般與手術有關的風險

任何手術都可以有風險，包括：

1. 分泌物集留於肺部造成胸腔感染；
2. 傷區出血或感染為常見的術後併發症；
3. 腿部深處靜脈可能出現栓塞，如栓塞血塊脫落流到肺部，可能危及生命，但此併發症非常罕見；
4. 心臟或腦部循環可能出現問題，而引致心臟病或中風；
5. 若發生嚴重併發症，病人可能在手術中或手術後死亡。

2008/1/28

Right

Front

Left

Left

Back

Right

Right thoracic
Procedure

Left
hemithyroidectomy

Right kidney
procedure
(Anterior)

Left
arterial/vein
graft

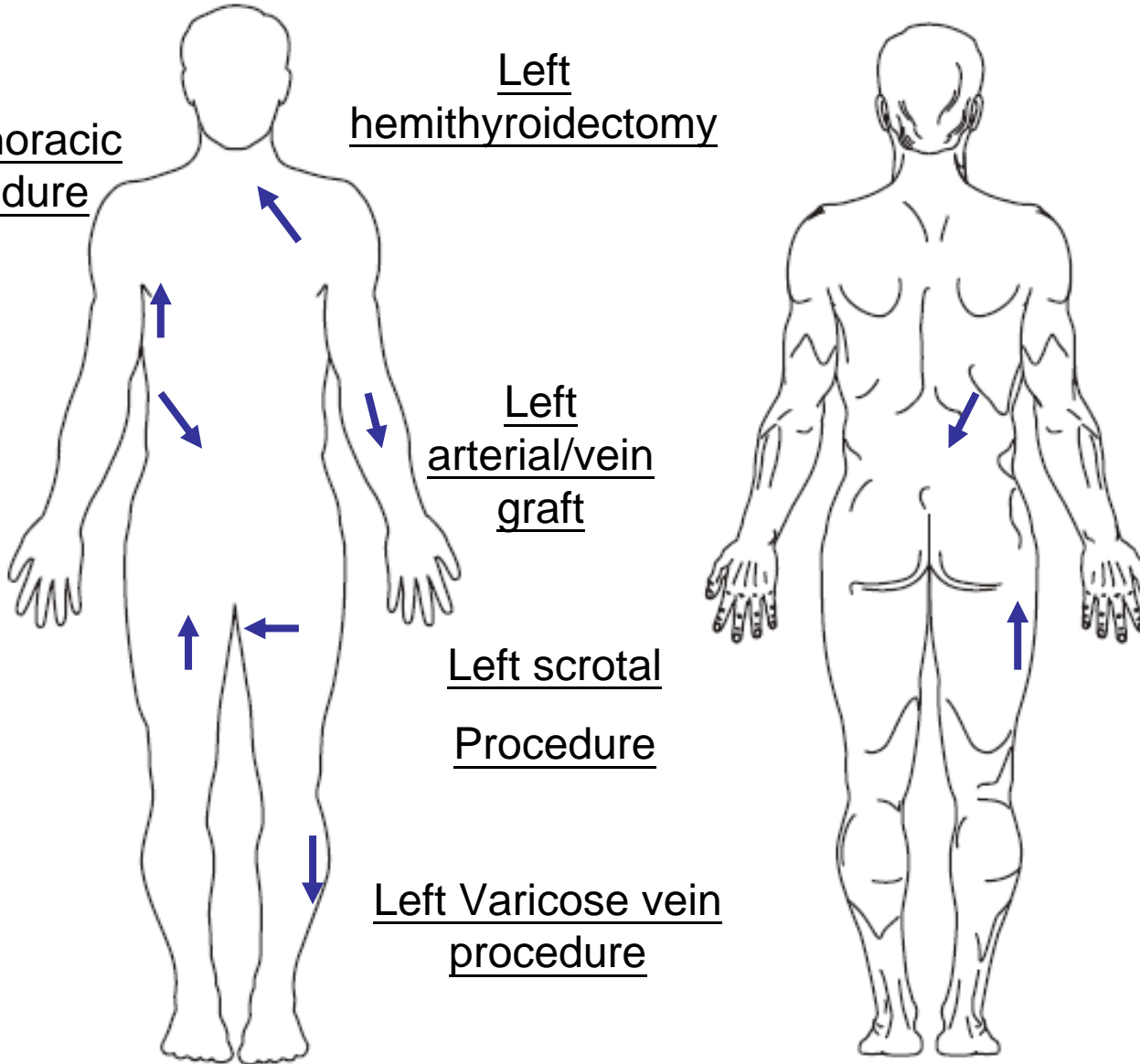
Right
kidney
procedure
(Posterior)

Right
inguinal
hernia

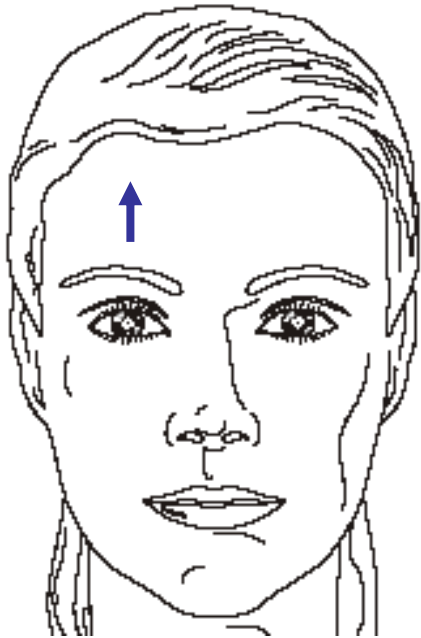
Left scrotal
Procedure

Right
buttock
abscess

Left Varicose vein
procedure



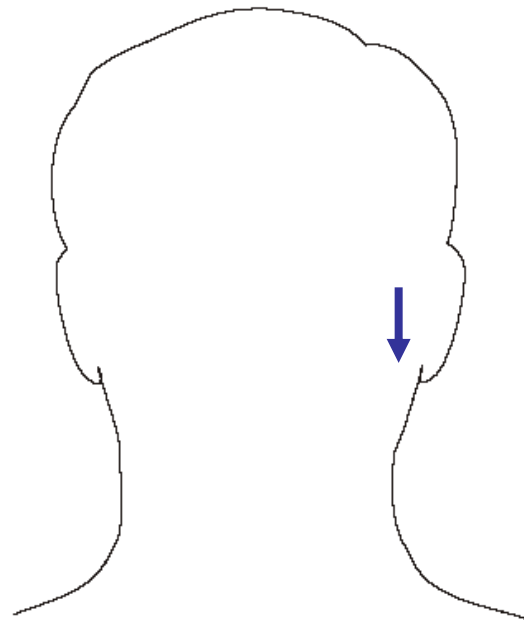
Right Front Left



Right craniotomy

Right burr hole

Left Back Right



Right translabyrinthine
approach for acoustic

neuroma

Right inguinal hernia repair



2

SENDING PATIENT

Nurse has confirmed the following patient's information
• Name & HKID • Diagnosis • Procedure / Side

Consent has been confirmed with OT list

Marking

Confirmed N/A

Confirm 'Type & Screen' available

Yes Not required

Medical notes & films (supporting documents) available

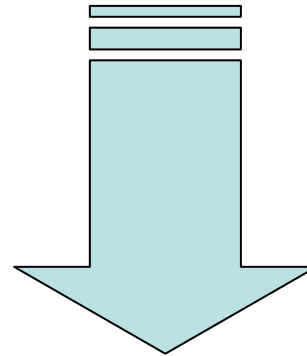
WARD NURSE

Signed : _____

Print : _____

Date : _____

Time : _____



To Theatre Reception

Sending patient



3

THEATRE RECEPTION

Nurse has confirmed the following patient's information
• Name & HKID • Diagnosis • Procedure / Side

Consent has been confirmed with OT list

Marking

Confirmed N/A

Confirm 'Type & Screen' available

Yes Not required

Medical notes & films (supporting documents) available

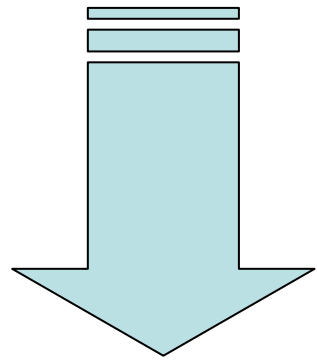
RECEPTION NURSE

Signed : _____

Print : _____

Date : _____

Time : _____



To Theatre

OT Date :

Diagnosis :

Theatre :

Procedure/Side :

Patient Name :

HKID :

Ward/Bed :

1 2 3 SURGICAL SAFETY 1 2 3

THEATRE, BEFORE ANAESTHESIA

- Anaesthetist (Surgeon in LA) has confirmed the following patient's information
 - Name & HKID
 - Diagnosis
 - Procedure & Side
 - Marking
 - Anaesthesia safety check completed (Concentration & dosage of LA)
- Known allergy
 Yes No
- Airway assessment

SIGN IN Anaesthetist (Surgeon in LA)

Signed :

Print :

Date :

Time :

1



BEFORE INCISION

- Time Out
 - Name & HKID
 - Diagnosis
 - Procedure & Side

Anaesthetist Signed:

Nurse Signed:

Print :

Print :

Marking

Confirmed N/A

Anticipated critical events

Prophylactic antibiotics

Availability of essential medical devices confirmed (OT list remark)

Yes N/A

TIME OUT (Surgeon)

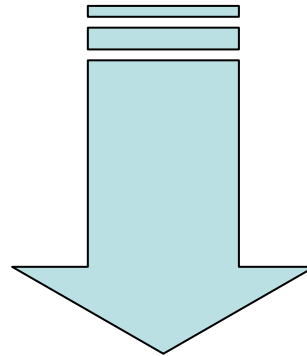
2

Signed :

Print :

Date :

Time :



Surgery time

BEFORE LEAVING THEATRE

- Instrument, gauze & needle count correct
- Name of procedure confirmed
- Specimen label confirmed and sent
- Equipment problem addressed
- Key concerns reviewed

SIGN OUT
(Circulating nurse)

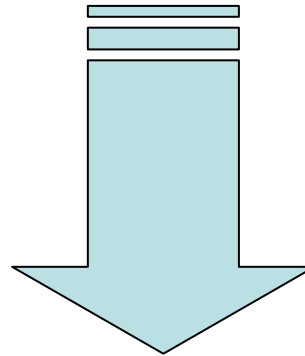
3

Signed : _____

Print : _____

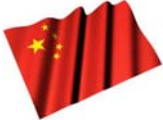
Date : _____

Time : _____



Surgery completed

PWH: Implementation of “123 Surgical Safety 123”

<i>Milestones</i>	<i>Date</i>
Trial run in Dept of Surgery (elective cases)	9 Feb 2009
Audit & Evaluation	April 2009
Live run in all <u>elective</u> cases (all Depts)	17 Aug 2009
Live run in all <u>elective</u> & <u>emergency</u> cases	1 Oct 2009 

123 SURGICAL SAFETY

123

OT Date : _____ (4.7)

Theatre : _____ (14.6)

Patient Name : _____

HKID : _____

Ward/Bed : _____

123 SURGICAL SAFETY

123

CONSENTING PROCESS

- Surgeon has confirmed the following patient's information (1.9)
 - Name & HKID
 - Diagnosis
 - Procedure / Side
- Consent has been confirmed with OT list (5.0)

Marking

- Yes N/A

Positioning

- Supine Prone Other (OT list remark)

'Type & Screen' required

- Yes No (Risk of blood loss < 500ml)

Availability of essential medical devices confirmed

- Yes N/A

SURGEON

Signed : _____ (0.9)

THEATRE, BEFORE ANAESTHESIA

- Anaesthetist (Surgeon in LA) has confirmed the following patient's information (5.3)
 - Name & HKID
 - Diagnosis

SIGN IN

Anaesthetist (Surgeon in LA)

Signed : _____ (2.5)

Print : _____ (2.8)

Date : _____ (2.2)

Time : _____ (4.7)

Audit for Compliance

Elective Surgery

Feb – April 2009 (9 weeks)

SENDING PATIENT

- Nurse has confirmed the following patient's information (1.9)
 - Name & HKID
 - Diagnosis
 - Procedure / Side
- Consent has been confirmed with OT list (2.5)

Marking

- Confirmed N/A

Confirm 'Type & Screen' available

- Yes Not required

- Medical notes & films (supporting documents) available (4.0)

Date : _____ (0.9)

Time : _____ (0.9)

- Anticipated critical events (36.3)
- Prophylactic antibiotics (17.7)

Availability of essential medical devices confirmed (OT list remark)

- Yes N/A (10.9)

TIME OUT

(Surgeon)

Signed : _____ (0.9)

Print : _____ (0.9)

Date : _____ (0.9)

Time : _____ (1.6)

THEATRE RECEPTION

- Nurse has confirmed the following patient's information (1.2)
 - Name & HKID
 - Diagnosis
 - Procedure / Side
- Consent has been confirmed with OT list (2.2)

Marking

- Confirmed N/A (6.2)

Confirm 'Type & Screen' available

- Yes Not required (4.7)

- Medical notes & films (supporting documents) available (6.2)

RECEPTION NURSE

Signed : _____ (0.9)

Print : _____ (1.2)

Date : _____ (1.2)

Time : _____ (1.2)

BEFORE LEAVING THEATRE

- Instrument, gauze & needle count correct (6.5)
- Name of procedure confirmed (6.5)
- Specimen label confirmed and sent (17.7)
- Equipment problem addressed (23)
- Key concerns reviewed (22.7)

SIGN OUT

(Circulating nurse)

Signed : _____ (3.7)

Print : _____ (4.0)

Date : _____ (3.7)

Time : _____ (8.4)

Compliance

Compliance (%)	Overall 57 checkboxes
Good >95%	68.4%
Satisfactory 90-95%	15.8%
Fair 85-90%	7%
Poor <85%	8.8%

Missing checkboxes

Consenting Process	0.9 - 5%	Before Anaesthesia	2.2 – 10.9%
Sending Patient	0.3 – 4%	Before Incision	0.9 – 36.3%
Reception	0.9 – 6.2%	Before leaving theatre	3.7 – 23%

Improved Communication



**OT
Nurse**

Anaesthetist

**OT Reception
Nurse**

Ward Nurse

Surgeons