V Cardiothoracic Surgery

Cardiothoracic Surgery

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Cardiothoracic Surgery

V Cardiothoracic Surger

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Perfusion
QUICK REFERENCE
The Bronch Room
Vucuws
Vucuws

Blood wastage poster

Heparin allergy protocol

Laser Bronch

Bronch c Tumor Destruction

Cardiothoracic Surger

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#### VANDERBILT UNIVERSITY

#### MEDICAL CENTER

#### INTRODUCTION

The Cardiac Surgery team at Vanderbilt University Medical Center (VUMC) is responsible for staffing acquired cardiac surgery, congenital cardiac surgery revision, thoracic surgery, combination cases between cardiac surgery and both electrophysiology and the cardiac cath lab, and interventional pulmonology cases across multiple floors of a Level 1 Trauma Center 24 hours a day, 365 days a year. The diversity of procedures and the divergence of surgeon preferences within each specialty supported by this staff require an extensive knowledge base. The vast quantity of information required to support the varied physician requirements and patient populations prolongs the length of time required for novice staff competency.

The Doctor Preference Card (DPC) format is designed to convey information to Central Supply and Central Sterile Processing departments for packing case carts. The DPC is not designed or may not even be available in a trauma situation to show emergent cannulation steps or other essential information.

### METHODS

Recognizing the need to share intraoperative information more efficiently, a cloud account was obtained and a standard user-friendly format was developed for case reference guides (CRGs). The CRGs were categorized by surgeon and subcategorized by case to include glove and gown size, bovie settings, topical medications, surgical prep, positioning, equipment, supplies, instruments, suture, drains, dressings, cannulation, scrub hints, and circulator hints. Although these supply lists made up the core of the CRGs, inclusion of explanations and insights was encouraged. All members of the cardiothoracic team were given access to this account with the ability to view and edit the CRGs. The cloud account is accessible by staff members on smart phones or computers anywhere at any time.

### Presented at the AORN Surgical Conference & Expo 2016

# Use of Cloud Storage and Synchronization of Case Reference Guides to Support Novice Staff Across Cardiac and Thoracic Surgery and Interventional Pulmonology in Real Time

📃 Dr. Ball AVR 🚢

📃 Dr. Ball Mid-CAB 🚢

📃 Dr. Ball MVR/MINI 🚢

📃 Dr. Ball Off Pump CAB 🛛 🚢

📃 🛛 Dr. Ball On Pump CAB 🛛 🚢

Dr. Ball TAVR Direct Aortic Access

🗧 Dr. Ball TAVR Percutaneous 🛛 🚢

Perfusion Supplies 44

Dr. Ball TAVR with Apical Approach

📃 Dr. Ball PE 🛛 🚢

📃 Dr. Ball Femoral Cannulation 斗

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		Dr. Absi	v	Cardiothoracic Surgery
		Dr. Ball	V	Cardiothoracic Surgery
		Dr. Barton	V	Cardiothoracic Surgery
		Dr. Bichell	V	Cardiothoracic Surgery
		Dr. Danter	V	Cardiothoracic Surgery
		Dr. Grogan	V	Cardiothoracic Surgery
		Dr. Kaiser	V	Cardiothoracic Surgery
		Dr. Lambright	V	Cardiothoracic Surgery
		Dr. Nesbitt	V	Cardiothoracic Surgery
		Dr. Petracek	V	Cardiothoracic Surgery
		Dr. Shah	V	Cardiothoracic Surgery
		EP room	V	Cardiothoracic Surgery
		OLD SURGEONS	V	Cardiothoracic Surgery
		Perfusion	V	Cardiothoracic Surgery
		QUICK REFERENCE	V	Cardiothoracic Surgery
		The Bronch Room	V	Cardiothoracic Surgery
		vucuws	V	Cardiothoracic Surgery
	W	Allograft instructions.docx	V	Cardiothoracic Surgery
	Р	Blood wastage poster	V	Cardiothoracic Surgery
	<b>=</b>	Bronch c Tumor Destruction	V	Cardiothoracic Surgery
	₽	Heparin allergy protocol	V	Cardiothoracic Surgery
		Laser Bronch	V	Cardiothoracic Surgery

### RESULTS

The CRG system became the single most consulted reference tool used by our staff intraoperatively. It consolidated staff notes and checklists in a single resource. The correct equipment has been delivered to the surgeon at the correct time more frequently than before this resource was developed. Secondary to this, turnover time and surgical supply waste have been reduced.

Cloud access to CRGs and the ability to edit them in real time has fostered a sense of engagement among staff members that did not exist with the DPC system or individual note taking. The CRGs allow us to focus valuable training time on clinical decision making instead of searching for information about surgeon preferences.

## DISCUSSION

The development of the CRG system from an auxiliary role to a principal role has presented challenges. One challenge is the prompt to change the password when a perceived security threat is identified. The initial launch of the CRG system allowed all staff members to share one username, but this is being replaced by granting separate users access.

Jan 15, 2016

Feb 5, 2015

Jan 9, 2015

Dec 1, 2015

10:39 am

Jan 19, 2016

Dec 8, 2015

Sep 23, 2014

Mar 25, 2014

Jul 31, 2015

Jan 9, 2015

Google Drive Folder

Mar 26, 2013

Created

Add a description

Dec 28, 2015 by Cardiothoracic Surger

Another challenge is keeping the content accurate. Granting everyone the ability to edit the CRGs has resulted in some misinformation either due to lack of attention or understanding. There are occasionally circumstances prompting the surgeon to deviate from their normal routine, and staff must be able to distinguish these from permanent preference changes before editing the CRG.

New staff members are able to review these CRGs from home if they know their assignment in advance. It has been argued that providing thorough information on each case discourages staff from committing details to memory or critically thinking through the steps of the case. As a reference material, the CRGs are not intended to replace critical thought or clinical experience and expertise.

## **CLINICAL IMPLICATIONS**

Scrub Hints:

Saw blade UF

Hands instruments back to scru

usually no pericardials

does not tac mammary

falling off.

pass shunt on gerald forcep

Slush/warmer drape

Instruments: Ope

Hall Saw/ Blade UP

Instruments: Hold

Ankenney (On Pump)

3-0 Prolene SH-1 x3

4-0 Prolene RB-1 x2

Disposable Tourniquets x

Cannulas and pump lines

Circulator Hints:

Delacroix (Long blade up, short hook first)

Supplies: (open in this sequence)

• O Prolene C1 x2 for femoral cannulat

Does not like room hot

Red Standing mat if available

Stands for IMA

Octobase (Off Pump, 4 small blades, metal inserts)

Cardiac Basic Dr. Balls Specials

de-fib Paddles

Leg Pan

Hygienic issues of physical binders and reference materials utilized in multiple rooms or multiple cases have been eliminated by using a digital format.

New staff members rely on the CRGs most heavily and are charged with critically examining the information to begin contributing value to the team even before they are clinically independent. This contribution can simply be the initiation of a conversation with a preceptor seeking clarification. The cloud CRG system strengthens the team bond by increasing knowledge sharing, valuing transparency of information, and enhancing communication between team members.

#### Andy Rainer, RN, BSN Barbara Nowotny, RN, BSN



### STAFF FEEDBACK

"It was absolutely helpful learning our service! The information is clear, concise, and user friendly. 1 think it makes our jobs so much easier!"

- Mandy, RN

"The shared drive makes surgical DPCs functional and accessible for OR nurses."

- Gina, RN

"I like being able to bring up case information on my phone when I need to pull suture."

- Kellsee, CST

"Every case has the possibility of changing at any point. Giving everyone the ability to edit means that people who don't understand the case can mess everyone up all day long.

- Amy, CST

"The shared drive was a great tool for me when first coming to the cardiac service at Vanderbilt. I can access the information at home, allowing me to be better prepared for my next workday."

- Justin, RN

"It's great for training. Not only is it good for new staff but also for the new surgeons."

- Victoria, CST

