



Handover Facts

- Transfer of professional responsibility and accountability for some, or all aspects of patient care.

(Manser *et al*, 2013).

- In Critical Care patients are especially vulnerable to handover errors due to the number of transitions occurring throughout their care.

(Manser *et al*, 2013; Catchpole *et al*, 2007).

Handover Facts

- To improve safety and quality of care some hospitals, in the UK and the USA, are learning from Industry such as Airline Companies or Formula 1.

(Reader and Cuthbertson, 2011; Catchpole et al, 2007).

TEAMWORK

SAFETY



Observational Study

- **Aim:** To introduce a Formula 1 approach, for Critical Care admissions, enhancing efficiency and safety of patient handover.
- **Design and Methods:** Using a Plan - Do - Study - Act approach for introducing a Formula 1 analogy, a new admission protocol was developed as a service improvement project. Teamwork and communication were assessed before and after its implementation.
- **Phase 1 (Before):** 15 L3 patients from A&E (4), Theatres (7) and Wards (4).
- **Phase 2 (After):** 16 L3 patients from A&E (6), Theatres (7) and Wards (3).

Six dimensions

- Teamwork and Leadership;
- Circumstances of the Handover;
- Conduct during Handover;
- Task Management;
- Workspace and Situation Awareness;
- Handover Quality.

Phase Two - Implementation of:

- Revised Admission Checklist
- Quick Bed Space Set Up Guide
- Admission Allocation Team

Outcome: Before and After

Before



After



Unchanged dimensions

- **Conduct during Handover and Handover Quality:** Not all the relevant information was selected and communicated. Around 50% of the handovers did not follow a logical structure and/or using all the documentation available (Before and After).
- Only change seen was that the receiving nurse was also present at handover and not prioritising the technology (with the new protocol).
- **Circumstances of the Handover:** No changes before or after.

Conclusions

- Changes were made to the way Critical Care admissions occurred with revision of admission checklists and processes.
- Teamwork was seen to be more efficient, coordinated, quicker and systematic than before.
- New protocol can be trained in less than 15 minutes.

Constraints

- High Turnover of staff (both Nursing and Medical Staff).
- More difficulties perceived when Ward is understaffed or busier.
- Some resistance to the “Moment of Silence”.
- Numerous Departments to liaise with.

Relevance for Clinical Practice

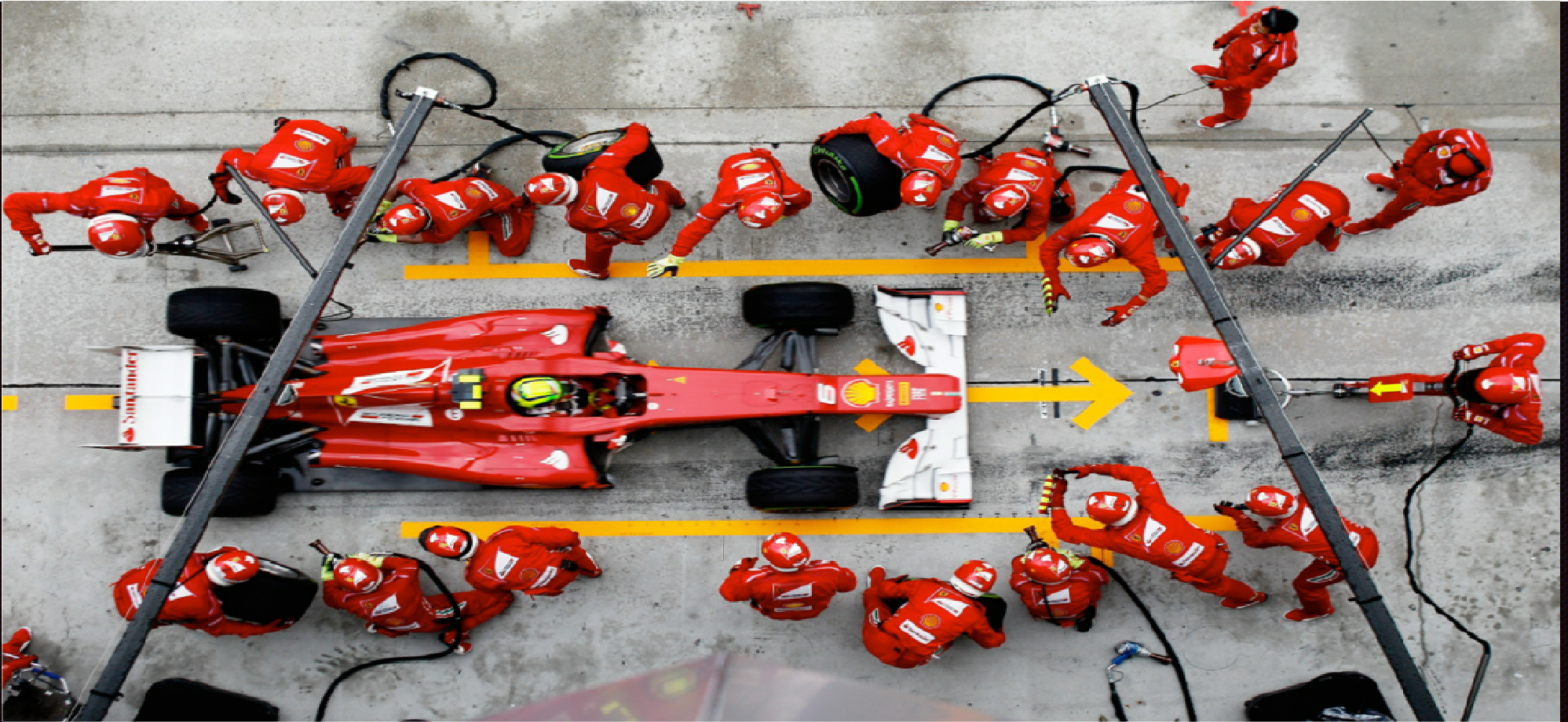
- Healthcare services can use Industry as a benchmark.
- Some processes can be conceptualized and redesigned, to develop effective teamwork and enhance patient safety.

References

Catchpole K. *et al.* (2007). Patient handover from surgery to intensive care: using Formula 1 pit-stop and aviation models to improve safety and quality. *Paediatric Anaesthesia*, [online] Volume 17 (5), p.470 - 478. at: <http://onlinelibrary.wiley.com/doi/10.1111/j.1460-9592.2006.02239.x/abstract>[Accessed 30/11/2015].

Manser T. *et al.* (2013). Team communication during patient handover from the operating room: more than facts and figures. *The Journal of the Human Factors and Ergonomics Society*, [online] Volume 55 (1) , p. 138 - 156. Available at : http://www.researchgate.net/publication/236068917_Team_Communication_During_Patient_Handover_From_the_Operating_Room_More_Than_Facts_and_Figures [Accessed 30/11/2015].

Reader T. and Cuthbertson B. (2011). Teamwork and team training in ICU: Where do similarities with aviation end?. *Critical Care* [online] 15:313. <http://www.ccforum.com/content/15/6/313>[Accessed 30/11/2015].

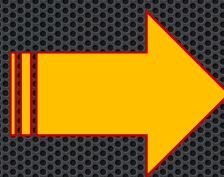


Thank you!

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- Patient ID Band Index Team KH4524
- Admission Bloods BMI/Nutrition Chart
- Admission MRSA / Acinetobacter Swabs
- ECG CXR Septic Screen (BC, Ur, Sp)
- Completed Front Sheet
- NOK Details Aware of Admission
- Property Form No:
- Admitting Consultant aware of Admission
- Admitted to Patient Register
- Admit onto Medtrack
- TISS/Apache Form

MCCU/SCCU



Admitting Nurse:

ADMISSION CHECKLIST

1st Hour	*If applicable	Sign.
GCS & Pupils Check		<input type="checkbox"/>
Pacing Box Checked*		<input type="checkbox"/>
Chest Drains suction ON*		<input type="checkbox"/>
Patient ID Band checked		<input type="checkbox"/>
Alarms Set + Transducers		<input type="checkbox"/>
ICP/EVD site check/levelled*		<input type="checkbox"/>
ABCDE Assessment + Obs		<input type="checkbox"/>
NG/Drains/Catheter secured*		<input type="checkbox"/>
Adm. Bloods + ABG/VBG*		<input type="checkbox"/>
Adm. Swabs (MRSA + CRE)		<input type="checkbox"/>
Septic Screen (BC+Ur+Spt)*		<input type="checkbox"/>
Drugs & Fluids Prescribed		<input type="checkbox"/>
ECG		<input type="checkbox"/>
INDEX TEAM (KH4524) + Labels		<input type="checkbox"/>
First 3 Hours		
ICU Consultant aware of ADM.		<input type="checkbox"/>
MEDTRACK		<input type="checkbox"/>
Nutrition Chart		<input type="checkbox"/>
VTE + Catheter on EPR ^		<input type="checkbox"/>
K-PACE (NOK Details & Aware)		<input type="checkbox"/>
Property Form N.:		<input type="checkbox"/>
Roll Patient if OK (PA check)		<input type="checkbox"/>

^ when printing labels

JSCCU

READY... SET... GO!!!

Quick Bed Space Set up Guide



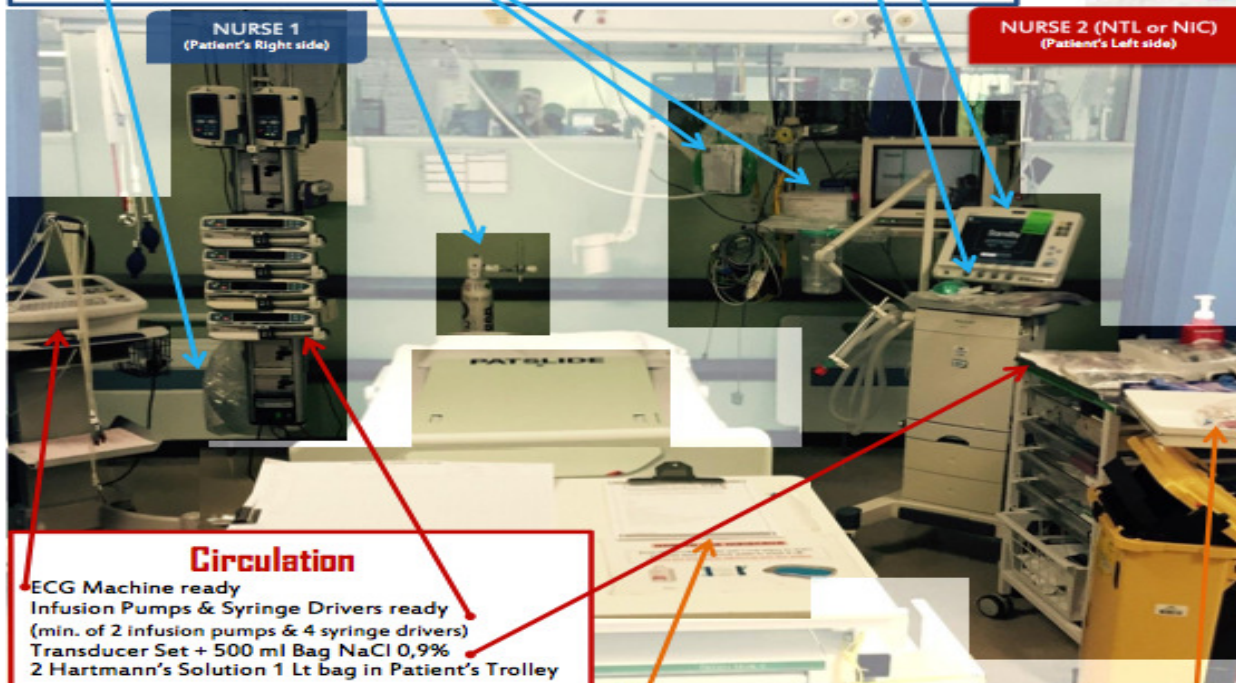
Airway & Ventilation

Green Bag & Airway Box
Suction ready
Oxygen Cylinder (Full)
Ambu Bag ready

Chest suction **if applicable*
Ventilator on Stand-By
In-line closed suction
(with HME & EtCO2)

NURSE 1
(Patient's Right side)

NURSE 2 (NTL or NIC)
(Patient's Left side)



Circulation

ECG Machine ready
Infusion Pumps & Syringe Drivers ready
(min. of 2 infusion pumps & 4 syringe drivers)
Transducer Set + 500 ml Bag NaCl 0,9%
2 Hartmann's Solution 1 Lt bag in Patient's Trolley

Environment

ICU Observations Chart & "Admission Pack"
Monitoring equipment ready
Specimen containers (FBC + Biochem + Coag + G&S + Swabs)
Patslide Available & Sliding Sheet
Scoop (if Log Roll)

"Admission Pack": KPACE Form / Care Plan / Fluid & Drug Charts / VTE Form / Blood Res. Form / Neuro OBS Chart*/ Family Booklet

ADMISSION TEAM Allocation

FI Pit Stop crew model

NURSE 1 (Patient's Right side)

- Transfer Infusions & Transducers Zero
- Prepares Drugs and Fluid Challenge*
- Patient's Temp.
- Take Samples **if applicable*

NURSE 2 (Patient's Left side)

- Connect Ventilator & Monitor
- Check Pacing Box; ICP / EVD*
- Chest Drains to Suction*
- Secure Drains/NG/Catheter
- EPR (Labels + VTE + Catheter)
- MEDTRACK **if applicable*

ICU DOCTOR

- Check plans with handing over staff
- ABCDE Assessment
- Prescribe 96 hours Fluid Chart
- Complete Drug Chart
- Write Medical Notes
- VTE Assessment

BED SIDE NURSE

- As soon as Patient arrives check Pupils
- Check Plan with Handing over Staff & ICU
- First Set of Observations
- ABCDE Assessment
- Check Drug Chart & Fluid Chart
- ECG
- Roll Patient if appropriate (with Nurse 1 & Nurse 2
=> if Log Roll to call more staff) & CRE Swab
- VTE Assessment Form
- Nutrition Chart
- Complete K-PACE + Check Property

i After connecting the Patient to the Ventilator and before the Handover, there should be a moment of silence followed by Team Member introductions by Name and Role.