



SCDF
The Life Saving Force

SCDF Clinical Audit System – Past, Present and Future



Scope

- The Past....”History of Clinical Audit Team”
- The Current Team
- Clinical Audit Cycle
- The Future of Clinical Audit
- The Takeaway...





In the Past.....

There was no Clinical Audit

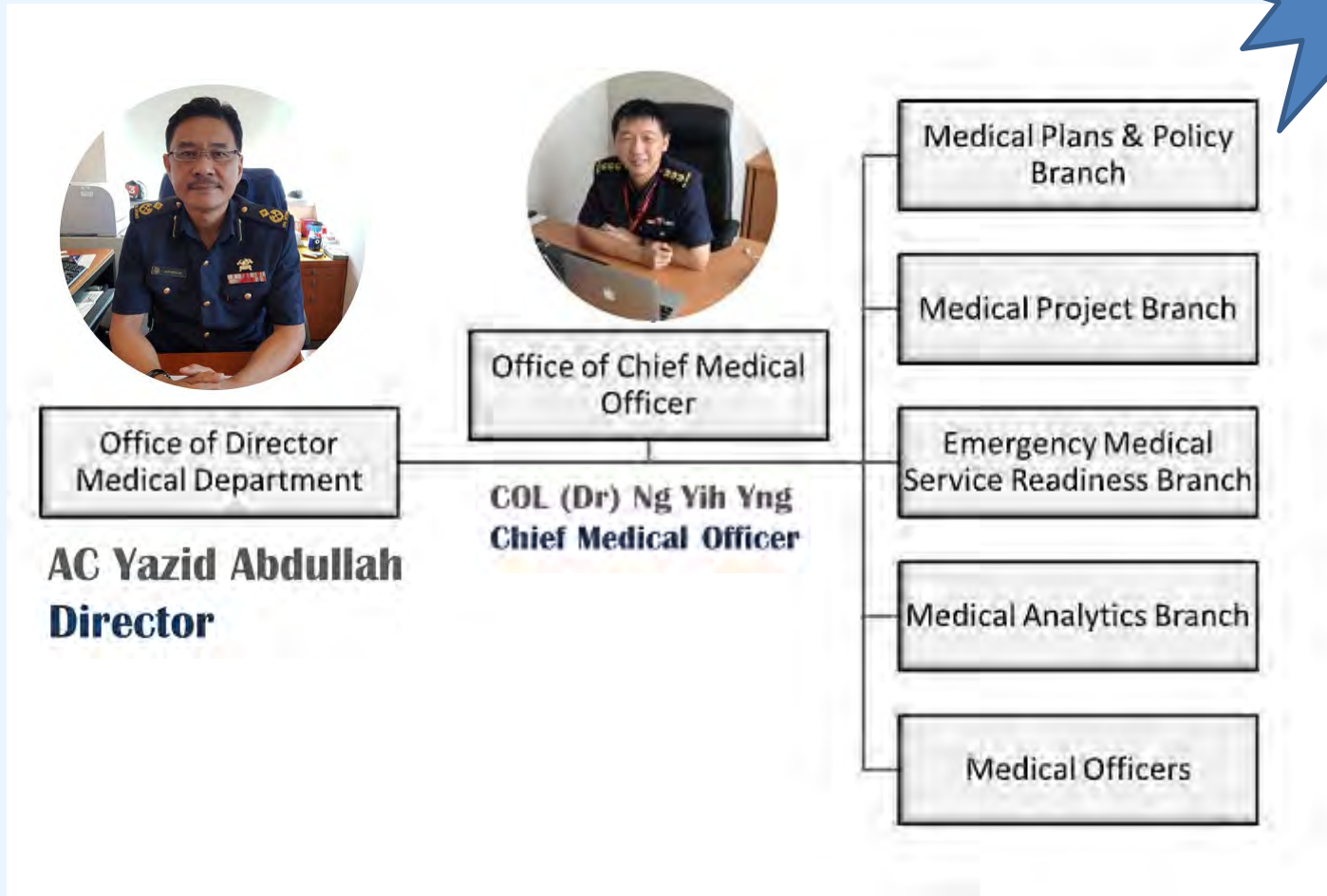
2013
1 PRM
OHCA Audit

Oct 2013
2 PRMs
+PAO Audit

Mar 2014
1ATL + 3 PRMs
+SCDF Audit

SCDF Medical Department

NOW!



Clinical Audit Team

Officially Set Up in
Mar 2014

Chief Medical Officer
Dr Ng Yih Yng
Overall Clinical Audit Advisor

Data Analysis,
Identify Gaps,
Provide Solutions

CPT Joey

UPEC Dr
Goh E-Shaun
(Clinical Consultant)

Clinical Audit
Specialist

WO1
Zohri

SWO2
Michael

WO1
Doris

Audit Assistants/
Data Entry

NSFs

NSFs

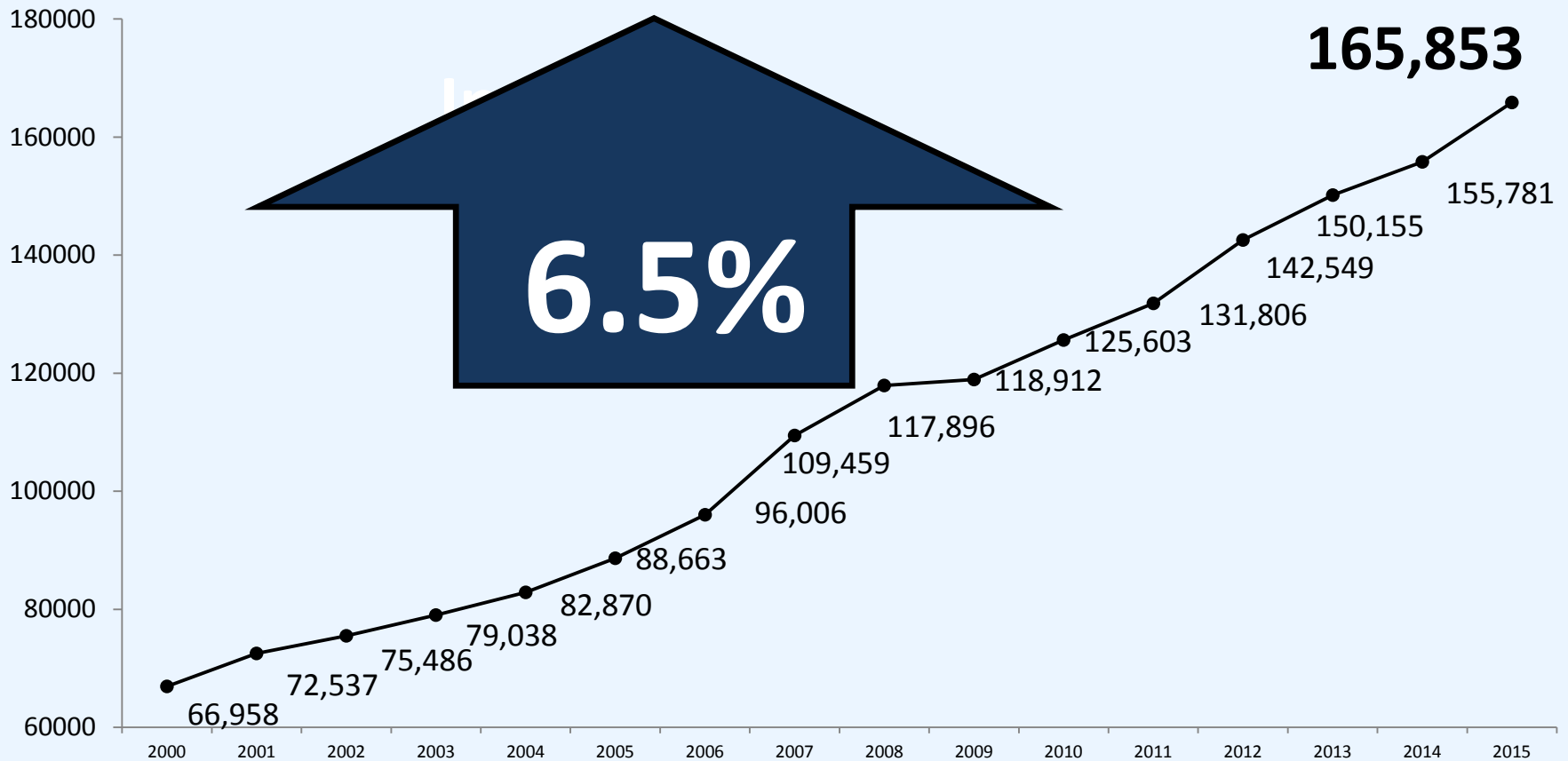
NSFs

Singapore Civil Defence Force





EMS


- Total of **55** Emergency Ambulances (as at Dec 2015)
- Total Active PRMs about **270** PRMs (from SCDF & Private Ambulance Operators)
- Population of **5.61** Million (as at June 2016)
- About **ONE** Ambulance for every 100,000 people

Our EMS calls are increasing with our growing and aging population



Increase of Emergency Ambulance Fleet

		No. of Amb	Jun 2009	Sep 2013	Dec 2014	Dec 2015	Dec 2016	Dec 2017	Dec 2018
P A O			5	15	10	10	10	10	10
			5	5	5	8	10	10	10
			-	-	5	7	10	10	10
SCDF			40	30	30	30	30	40	50
Total			50	50	50	55	60	70	80



Important to ensure that the rapid build up does not compromise standard of care rendered to EMS patients

- *Increasing need for EMS Quality Assurance*

- ✓ Ageing Population
- ✓ Increased Public Involvement – A Nation of Lifesavers

- *Need to Ensure Consistency in Medical Intervention*

- ✓ Consistency in Documentation
- ✓ Consistency in EMS Patient Management

Two Processes to Focus

Post Operations Documentation / Analysis

- Documentation Submission Process

Clinical Audit / Gap Analysis

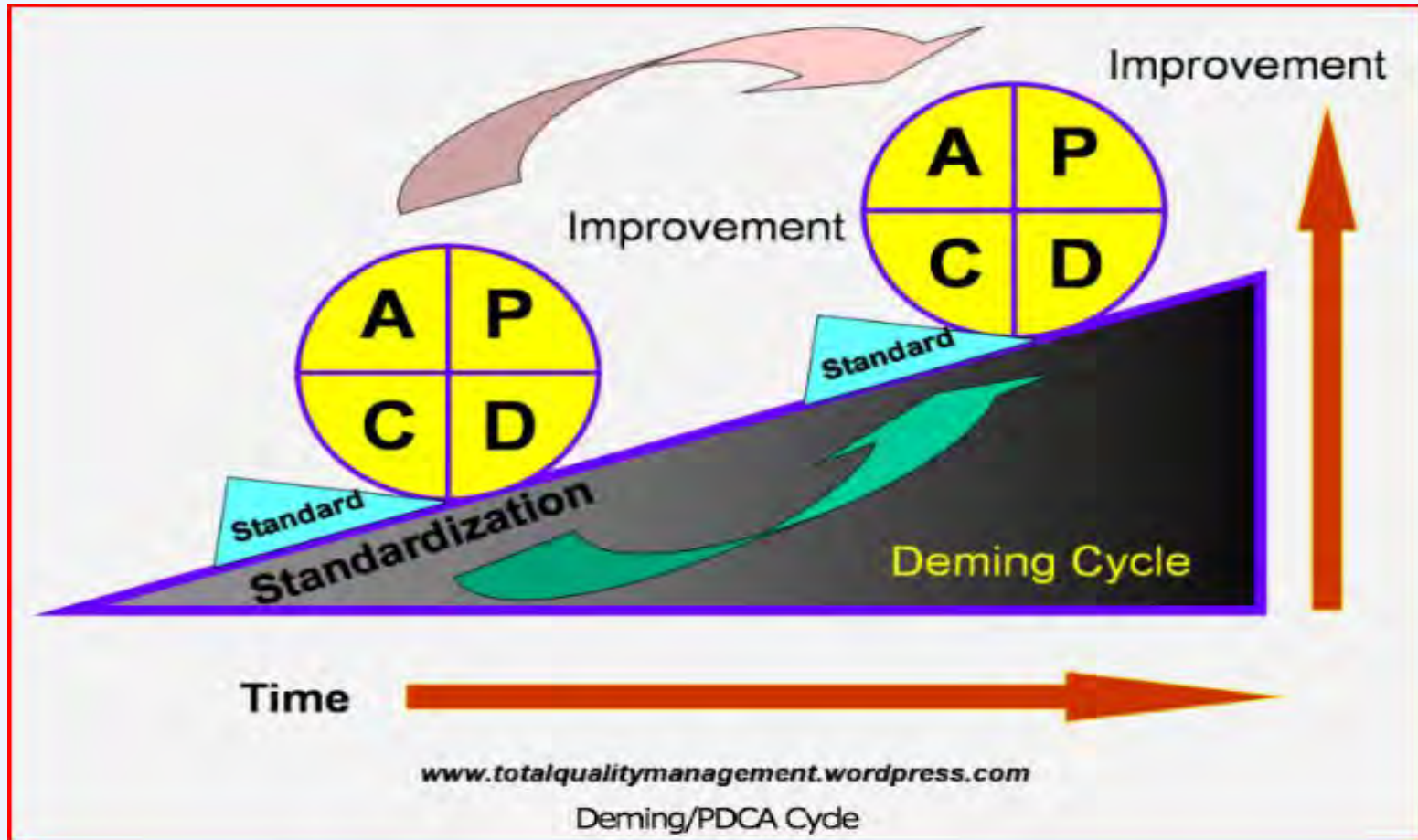
- Ensuring Clinical Proficiency
- Closing the Audit Loop

MAIN OBJECTIVE

To improve the overall clinical skills, knowledge, competency and professionalism of SCDF's Emergency Medical Service



The Deming Cycle



By W. Edwards Deming

The “ARRA” Audit Cycle





What Do We **AUDIT** Now?

- Clinical **Feedback** from ED Doctors
- Clinical Complaints from Members of Public
- All **Cardiac Arrest** Cases
- 2 Cases per Paramedic of 1-2 **SELECTED System** per month
- **Quality** of Documentation



How Do We **REVIEW**?

- **Score** each case based on our current audit checklist
- Conduct **Interview** for any case that score below 70%
- Auditors will do **Root Cause Analysis** of the case and educate the Paramedic accordingly
- If the issues found were systemic, recommendations will be made for follow-up actions by other stakeholders



What type of Recommendations?

- Individual issues
 - Division PRMs to monitor PRM for 1-3months
 - Self-study and present for sharing
- Systemic issues
 - Protocol Improvement
 - SOP Updates
 - Technical Improvement
 - Training & Sharing Updates



4 Key Words on **ACTION**?

- **C**ommunication – How?
- **O**wnership – Who?
- **P**rofessionalism – When?
- **S**tandardization – What?



BENEFITS OF



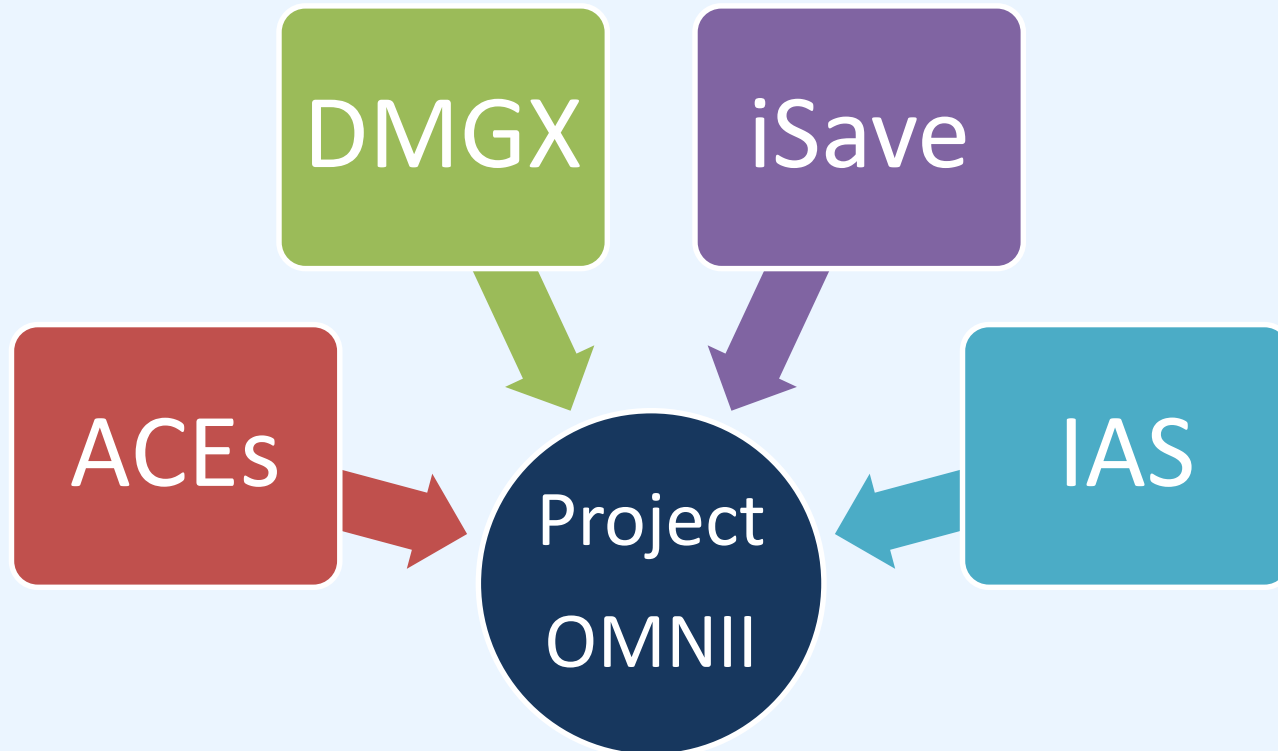
- More Accurate Data
- Better Ops Decision
- Medical Legal protection through good documentation standards
- Standardization of Patient Care
- Improve Professionalism & Proficiency
- Identify chronic clinical mistakes
- Improve survival

Future of SCDF Clinical Audit

- Intelligent Audit System (IAS)
 - 100% Audit using Protocol Algorithms
 - Flagged out outliers
 - Provide Immediate Feedback Platform direct to PRMs
 - Able to generate scorecard to approved stakeholders
 - Able to audit more with less manpower



Future-Ready Workflow



OMNII Operational Medical
Network Informatics Integrator



Future of SCDF Clinical Audit

- Decentralized EMS Auditors
 - ✓ Quality EMS Auditors with selected competency
 - ✓ Tailored In-house division auditors OJT training
 - ✓ Handholding by HQ Auditors to ensure consistency
- Tailor-made Clinical Auditor Basic Course for all future auditors
- Structured Audit Framework SOP
 - ✓ Structured Sharing of Audit Findings & Follow-up Actions
- Outcome-Based Performance Measure
 - ✓ Studying the CPR Quality of PRM vs Survival Outcome
 - ✓ Measure the relationship of early 12-lead transmission vs D2B time

Conclusion

In order to enhance EMS Clinical **PROFESSIONALISM**, all Quality Assurance Teams must leverage on **TECHNOLOGY**, proper **FRAMEWORK** and **COMMUNICATION** between branches, departments and most importantly with our **PARAMEDICS**.



Any Questions?

