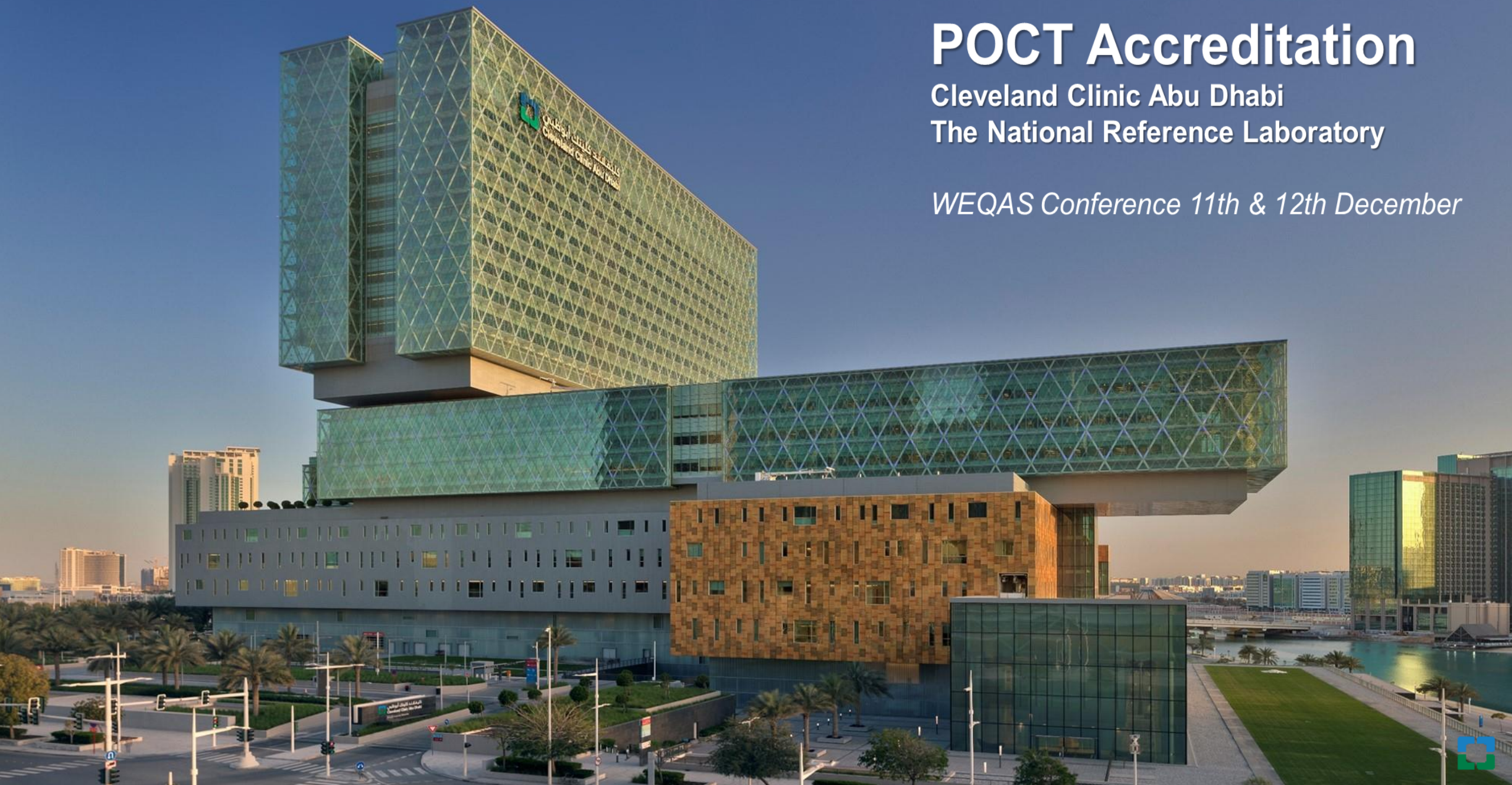


# POCT Accreditation

Cleveland Clinic Abu Dhabi

The National Reference Laboratory

*WEQAS Conference 11th & 12th December*



# Objectives

1. Outline the history of Cleveland Clinic Abu Dhabi and its partnership with the National Reference Laboratory.
2. Detail the key aspects of the Quality Management System that ensure compliance with ISO accreditation.
3. Examine the impact of automation on competency management, including successes and challenges.
4. Present the future plans for Point-of-Care Testing (POCT) at the National Reference Laboratory.

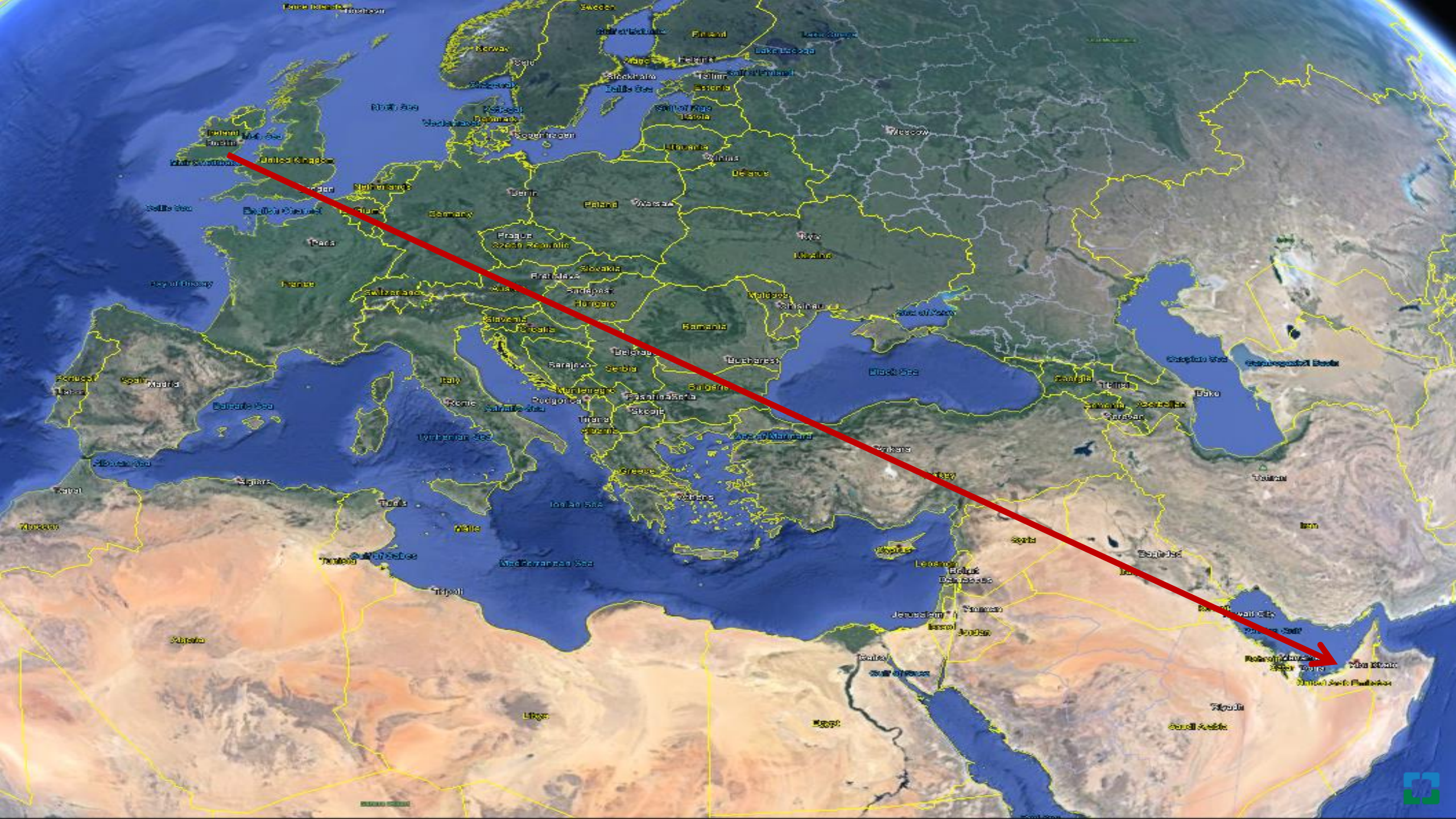


# Takeaway Messages

- **Understanding the Relations:** Cleveland Clinic Abu Dhabi and National Reference Laboratory are business entities within the M42 group
- **Achieving Accreditation:** Governance, evaluation and continual improvement are key requirements to obtaining & maintaining ISO POCT accreditation
- **Competency Through Technology:** Automation of training and competency renewals is vital to ensure sustainability and widespread compliance to requirements
- **Looking to the Future:** NRL will centralize all POCT functions across the M42 healthcare group through a dedicated POCT department.







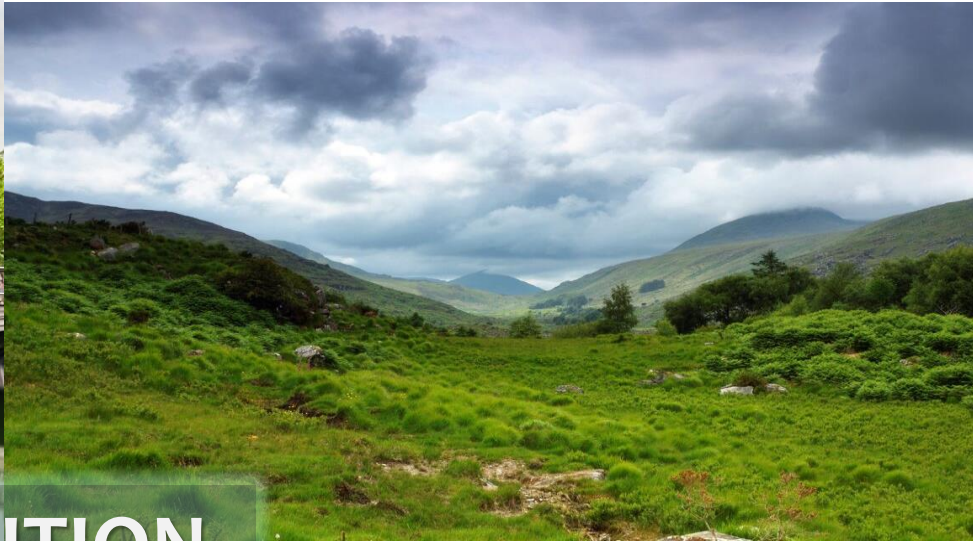




My First Day!



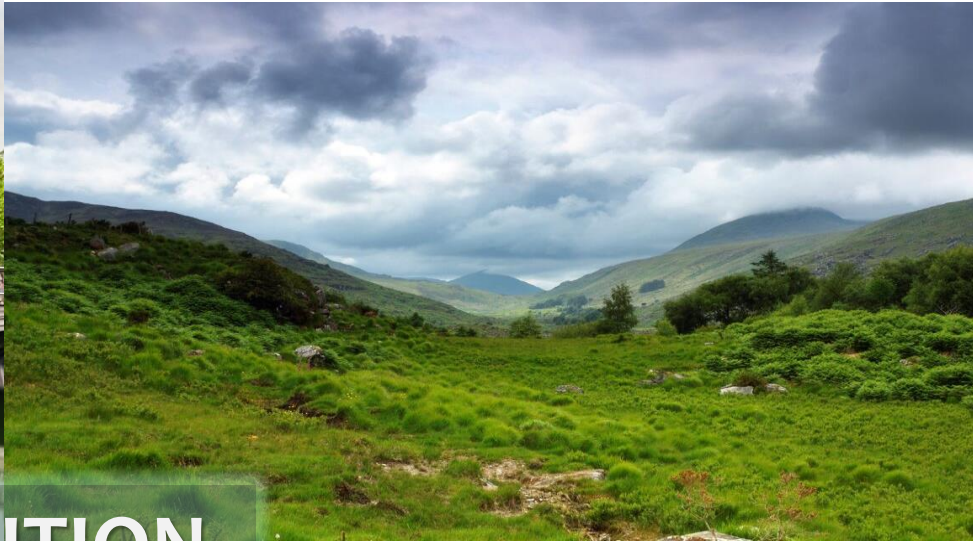




# TRANSITION







# TRANSITION



Man's best friend has helped a lot





# Understanding the relationships





## Where innovation **meets care**

**M42**, a first-of-its-kind integrated healthcare powerhouse, is formed through the coming together of **G42 Healthcare** and **Mubadala Health**.

In 2023 Mubadala Health (MH) purchases G42 and becomes M42.  
CCAD and NRL were part of the former MH and are now part of M42



## Where innovation **meets care**

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## M42 Healthcare Providers

## Former MH assets



## M42 Services

## Combination of previous MH & G42 services

### Digital Health Services



### OMICS as a Service



### Testing Labs



### Health Screening



### Clinical Research Organization



### Environmental Sciences



ENVIRONMENTAL SCIENCES



المختبر المرجعي الوطني  
National Reference Laboratory  
A Mubadala Health Partner

CCAD laboratory  
transferred to NRL in 2019





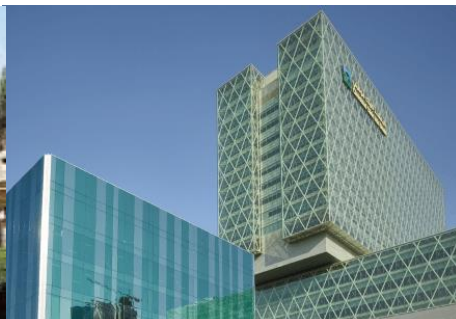
# NRL's portfolio of laboratories



**ICAD, Abu Dhabi**



**Dubai Science Park**



**Cleveland Clinic  
Abu Dhabi**



**Healthpoint**



**ICLDC Abu Dhabi**



**ICLDC ZSC**



**ICLDC Al Ain**



**Mubadala Health  
Dubai**



**Specialized  
Rehabilitation Hospital**



**Danat El Emarat**



# 4.4 MILLION SQUARE FEET

## Diagnostic & Treatment

- ✓ 26 Operating Rooms
- ✓ 20 Procedure Rooms
- ✓ 24 Imaging Suites
- ✓ 44 Room Emergency Department

## Swing Wing

- ✓ Current: Office Space
- ✓ Future: Supports Bed Expansion

## Ambulatory Clinic

- ✓ 243 Exam Rooms

## Patient Tower

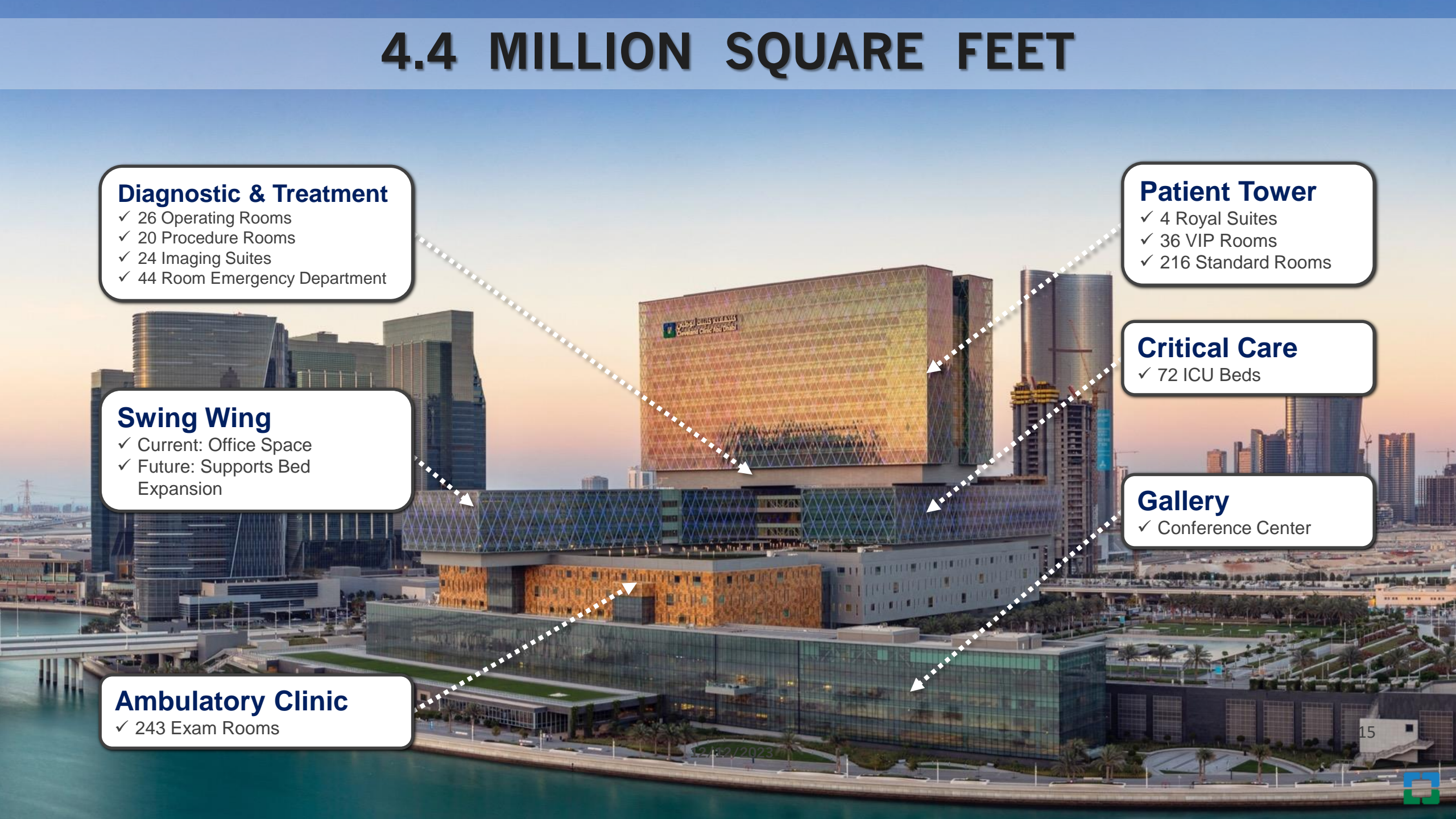
- ✓ 4 Royal Suites
- ✓ 36 VIP Rooms
- ✓ 216 Standard Rooms

## Critical Care

- ✓ 72 ICU Beds

## Gallery

- ✓ Conference Center





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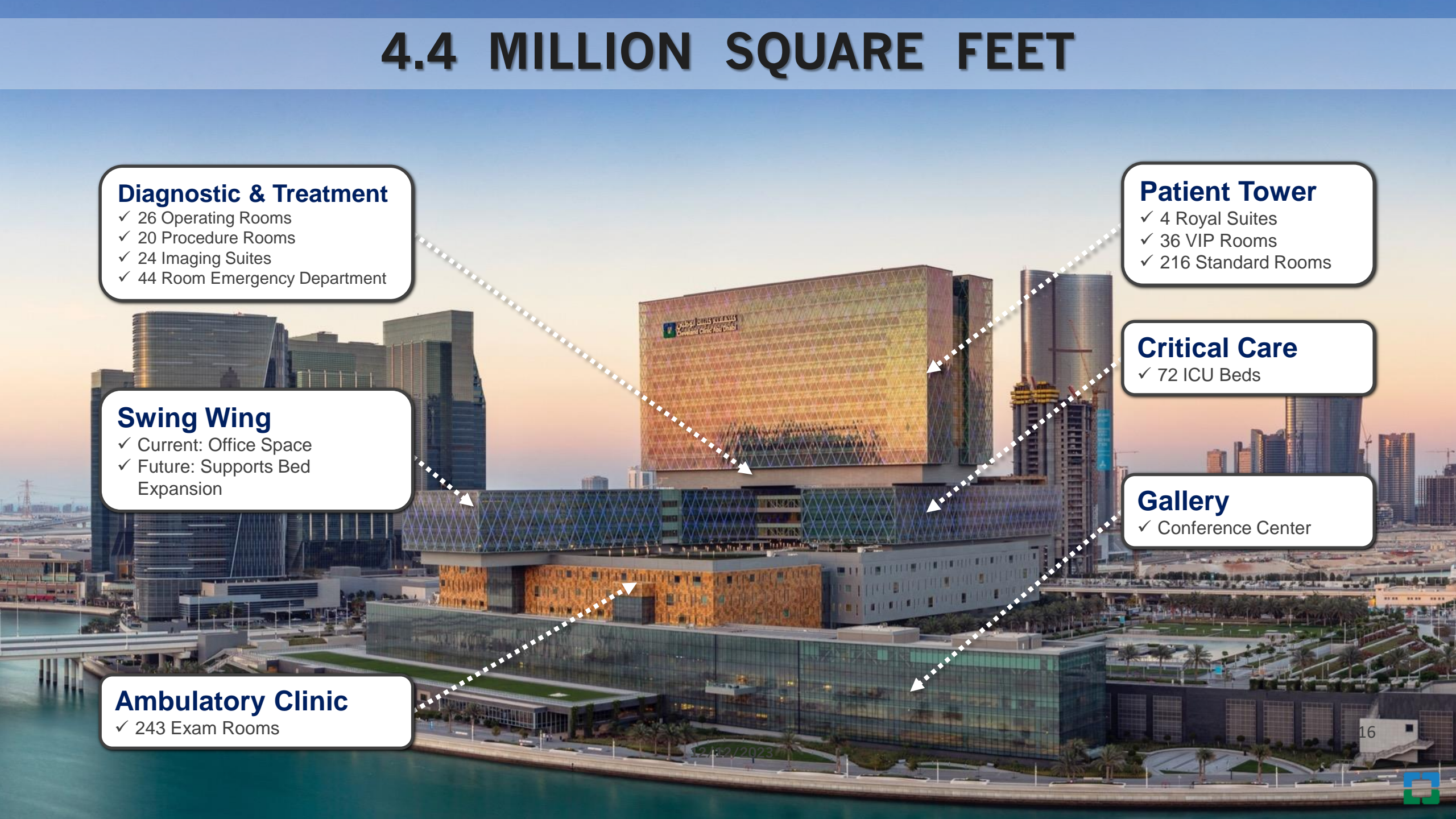
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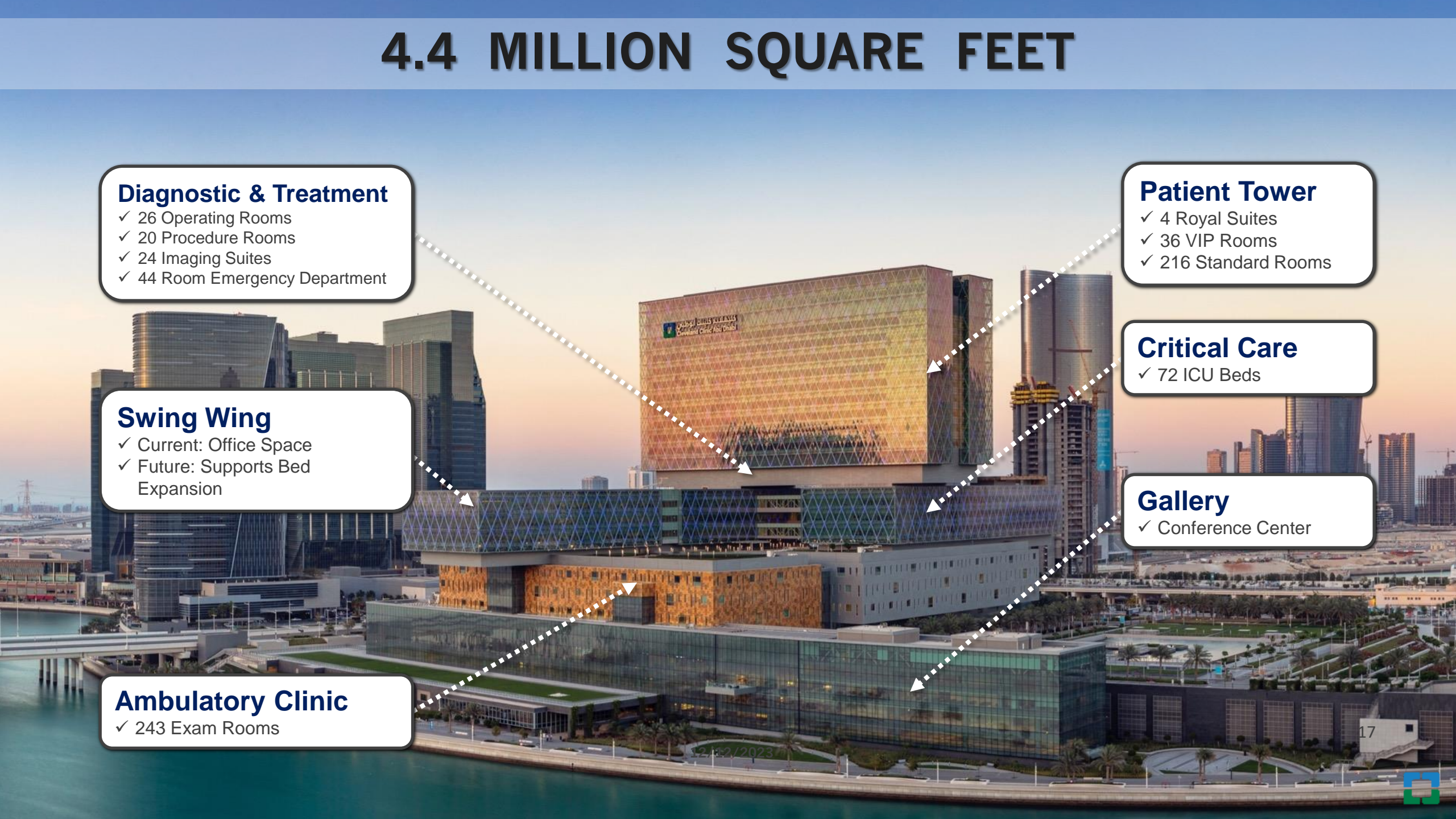
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- ✓ 72 ICU Beds

## Gallery

- ✓ Conference Center





# Services delivered by 15 Institutes and 55+ Medical & Surgical Specialties

Heart & Vascular Institute	Digestive Disease Institute	Neurological Institute	Eye Institute	Respiratory Institute	Critical Care Institute	Surgical Sub-specialties Institute
<ul style="list-style-type: none"> <li>• Cardiac Surgery</li> <li>• Thoracic Surgery</li> <li>• Vascular Surgery</li> <li>• Vascular Medicine</li> <li>• Cardiology</li> </ul>	<ul style="list-style-type: none"> <li>• Colorectal Surgery</li> <li>• General Surgery</li> <li>• Gastroenterology</li> <li>• Hepatology</li> </ul>	<ul style="list-style-type: none"> <li>• Neurosurgery</li> <li>• Neurology</li> <li>• Neurorehab</li> <li>• Psychiatry</li> </ul>	<ul style="list-style-type: none"> <li>• Ophthalmology (Including</li> <li>• Pediatric Ophthalmology)</li> </ul>	<ul style="list-style-type: none"> <li>• Pulmonology</li> <li>• Allergy &amp; Immunology</li> </ul>	<ul style="list-style-type: none"> <li>• Critical Care</li> </ul>	<ul style="list-style-type: none"> <li>• Otolaryngology</li> <li>• Plastic Surgery</li> <li>• Urology</li> <li>• Dentistry</li> <li>• Gynecology</li> </ul>

Medical Subspecialties Institute		Emergency Medicine Institute	Anesthesiology Institute	Pathology&Laboratory Medicine Institute	Nursing Institute	Imaging Institute	Oncology Institute
<ul style="list-style-type: none"><li>• Endocrinology</li><li>• Hospital Medicine</li><li>• Internal Medicine</li><li>• Primary Care</li><li>• Nephrology</li></ul>	<ul style="list-style-type: none"><li>• Infectious Disease</li><li>• Dermatology</li><li>• Rheumatology</li><li>• Executive Health</li><li>• Preventive Medicine</li></ul>	<ul style="list-style-type: none"><li>• Emergency Medicine</li></ul>	<ul style="list-style-type: none"><li>• Anesthesia</li><li>• Pain Management</li></ul>	<ul style="list-style-type: none"><li>• Anatomic Pathology</li><li>• Clinical Pathology</li></ul>	<ul style="list-style-type: none"><li>• Nursing</li><li>• Case Management</li><li>• Patient &amp; Family Education</li></ul>	<ul style="list-style-type: none"><li>• Radiology</li></ul>	<ul style="list-style-type: none"><li>• Oncology</li><li>• Hematology</li></ul>

Quality & Patient Safety Institute



# History of CCAD

2015	2016	2017	2018	2019	2020	2023
<ul style="list-style-type: none"> <li>✓ Hospital Opening</li> <li>✓ Capacity: 154 Beds (24 ICU), 1000 Clinic Visits</li> </ul>	<ul style="list-style-type: none"> <li>✓ JCI Accredited</li> <li>✓ Capacity: 250 Beds (48 ICU), 1500 Clinic Visits</li> </ul>	<ul style="list-style-type: none"> <li>✓ Research and Innovation</li> <li>✓ Capacity: 364 Beds (72 ICU), 2000 Clinic Visits</li> </ul>	<ul style="list-style-type: none"> <li>✓ JCI Certification for Stroke, Extension Survey for Research and Transplant</li> <li>✓ Capacity: 364 Beds (72 ICU), 2000 Clinic Visits</li> </ul>	<ul style="list-style-type: none"> <li>✓ JCI Reaccreditation</li> <li>✓ Capacity: 364 Beds (72 ICU), 2300 Clinic Visits</li> </ul>	<ul style="list-style-type: none"> <li>✓ JCI Stroke Intracycle Review</li> <li>✓ Capacity: 364 Beds (72 ICU), 2500 Clinic Visits</li> </ul>	<ul style="list-style-type: none"> <li>✓ JCI Stroke Reaccreditation</li> <li>✓ Capacity: 394 Beds (72 ICU), 2700 Clinic Visits</li> </ul>





# Employees (Caregivers)



**Total Caregivers: 5,201**

**Total CCAD Caregivers: 3,401**

- ❑ Physicians: 419
- ❑ Advanced Practice Providers: 11
- ❑ Nurses and Allied Health: 1,834
- ❑ Non-clinical: 1,137
- ❑ Contracted Caregivers: \*1800+ contractors

*\*This number varies as some contracts are service level agreements.*

***Note: No independent practitioners/ physicians from outside CCAD***



# Achieving Accreditation





# POCT Accreditations & Regulations



**Joint Commission International**

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**Department of Health Abu Dhabi**

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**College of American Pathologists (CAP)**

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**ISO 15189/22870 Emirates International Accreditation Center (EIAC)**



**2016 /2017**



Progress Forward  
15189 Accreditation  
Joint Commission



**2019**

Laboratory Transferred  
to NRL & changed  
accreditation body



**2015**

Open Doors



CAP Accreditation



**2014**

Activate

هيئة الصحة - أبوظبي  
HEALTH AUTHORITY - ABU DHABI



**CCAD POCT Accreditation Journey**



# POCT Scope at Cleveland Clinic Abu Dhabi



## Whole Blood Chemistry

- Glucose
- Gases & Electrolytes
- Creatinine
- HbA1c
- Hemoglobin
- Lipids
- Rapid Hb/O2Hb
- HCG



## Stool

- Fecal Occult Blood



## Coagulation

- Activated Clotting Time
- PT/INR
- TEG (Hemostasis)



## Urine

- Urinalysis
- Pregnancy Testing



## Infectious Disease

- Influenza A/B
- Covid



## Sweat

- Sweat Testing

Instrument	Test	ISO Accredited	CAP Accredited
Accucheck Inform II	Glucose	Yes	Yes
Alere	Urine HCG	Yes	Yes
Coaguchek	PT/INR	Yes	Yes
Cobas B101	Lipids	Yes	Yes
DCA Vantage	HbA1c	Yes	Yes
Hemocue	Hb	Yes	Yes
ISTAT	Creatinine	Yes	Yes
ISTAT	ACT (Celite/Kaolin)	Yes	Yes
Radiometer ABL 90	Gases/electrolytes/metabolites	Yes	Yes
Seracult	Fecal occult blood	No	Yes
TEG6S	Thromboelastography	Yes	Yes
Urisys	Urinalysis	Yes	Yes
Wescor	Sweat Testing	Yes	Yes
LIAT	Influenza A/B & SARS Co V-2	No (New)	No (New)
ISTAT	Whole blood BHCG	No (New)	No (New)



# Number of POCT Operators

Device Type / Kit	Description	No. of Devices	Caregivers
AccuChek	Blood Glucose	120	1,465
Coaguchek	PT/INR	4	161
Radiometer ABL90 flex	Blood Gas, Electrolytes, Co-OX	9	174
i-Stat	Activated Clotting Time & Creatinine	5	21 47
Urisys 1100	Urine Chemistry	5	106
DCA Vantage	HbA1c	3	41
Hemochron Signature Elite	Activated Clotting Time	5	54
TEG6s	Thromboelastograph	2	21
Hemocue	Rapid Hemoglobin	3	15
Sweat Chek	Sweat testing	1	2
Cobas b101	Lipids	1	59
N/A (Abbott Urine HCG Kit)	Urine HCG/Pregnancy	Kits	101
N/A (Seracult Kit)	Fecal Occult Blood	Kits	22
N/A (Inflammadry kit)	Dry Eye Testing	Kits	6
N/A (Physician Performed Microscopy)	Urine Microscopy	Kits	5



# GOVERNANCE





# GOVERNANCE





# POCT Charter



Brought to you by Mubadala

## POCT Steering Committee Charter

### Pathology and Laboratory Medicine Institute

<b>Target Group:</b> CCAD Caregivers Medical Staff, Nursing Staff, Laboratory Technical Staff	<b>SOP Number:</b> PLMI-POCT-ORG-pol-004 <b>Version:</b> 4	<b>Original Date of Issue:</b> 06/11/2014	<b>Date of Last Review:</b> 25/03/2020
<b>Prepared by:</b> Jonathan Harris Jonathan Harris	<b>Reviewed by:</b> Jonathan Harris	<b>Approved by:</b> Dr. Laila Abdel-Wareth	<b>Effective Date:</b> 25/03/2020

Printed uncontrolled copies are for reference only. Please refer to the electronic copy for the latest version.

### Objectives

The Point of Care Testing (POCT) Committee is a multidisciplinary team to ensure Cleveland Clinic Abu Dhabi (CCAD) and National Reference Laboratory (NRL) safely, effectively, and efficiently manages the hospital's use of POCT. The main objectives of the POCT Committee are to approve all POCT methods in use at CCAD and review their performance and clinical effectiveness. The committee will also accept proposals for new POCT services, and review them on the bases of clinical need and effectiveness, appropriateness, workload and training, test limitations, risk management, financial impact, health and safety, and the ability to audit quality of a proposed service. The POCT Committee will advise Medical Executive Council (MEC) of any recommendations to enhance the service.

### Committee Membership

Name	Title / Department	Organisation	Committee Role
<b>Dr. Laila Abdel-Wareth</b>	Co Chairperson of Committee & Chief: Pathology & Medical Laboratory Institute. Medical Director of POCT Program	NRL	Co-Chair (V)
<b>Cathy Pearse</b>	Co. Chairperson of Committee, Director Nursing Quality	CCAD	Co- Chair (V)
<b>Andrew Turner</b>	Laboratory Manager / PLMI	CCAD	Member (V)
<b>Jonathan Harris</b>	POCT Manager / PLMI	CCAD	Member (V)
<b>Mary Ponciano</b>	POCT Department Representative	NRL	Member (Non V)
<b>Adam Bennett</b>	Director Respiratory Therapy	CCAD	Member (V)
<b>Patrice Began</b>	Nurse Director/ Acute Care	CCAD	Member (V)
<b>John Tote</b>	Nurse Director/ICU	CCAD	Member (V)
<b>Wissam Halimeh</b>	Nurse Manager Cleveland Clinic Al Ain	CCAD	Member (V)
<b>Nuno Raposo</b>	Lead Perfusionist, Operating Room	CCAD	Member (V)
<b>Ziad Sadik</b>	Pharmacy	CCAD	Member (V)
<b>Samer Zeinni</b>	CCAD Finance Representative	CCAD	Member (V)
<b>Nicolas Turin</b>	Hospital Risk Manager	CCAD	Member (V)
<b>Raymond Turner</b>	Laboratory/Hospital Information System (Sunquest/EPIC) representative / IT	CCAD	Member (V)
<b>Helal Bin Ali</b>	Clinical Engineering representative	CCAD	Member (V)
<b>Mammad Anjikkadan</b>	Procurement representative / Supply Chain/	NRL	Member (V)
<b>Dr. Arun Kumar</b>	Physician representative / Anesthesia Institute	CCAD	Member (V)
<b>Dr. Samer El Kaissi</b>	Physician Representative/Medical Sub Specialties	CCAD	Member (V)
<b>Dr. Nahla AlJaberi</b>	Physician representative / Critical Care	CCAD	Member (V)

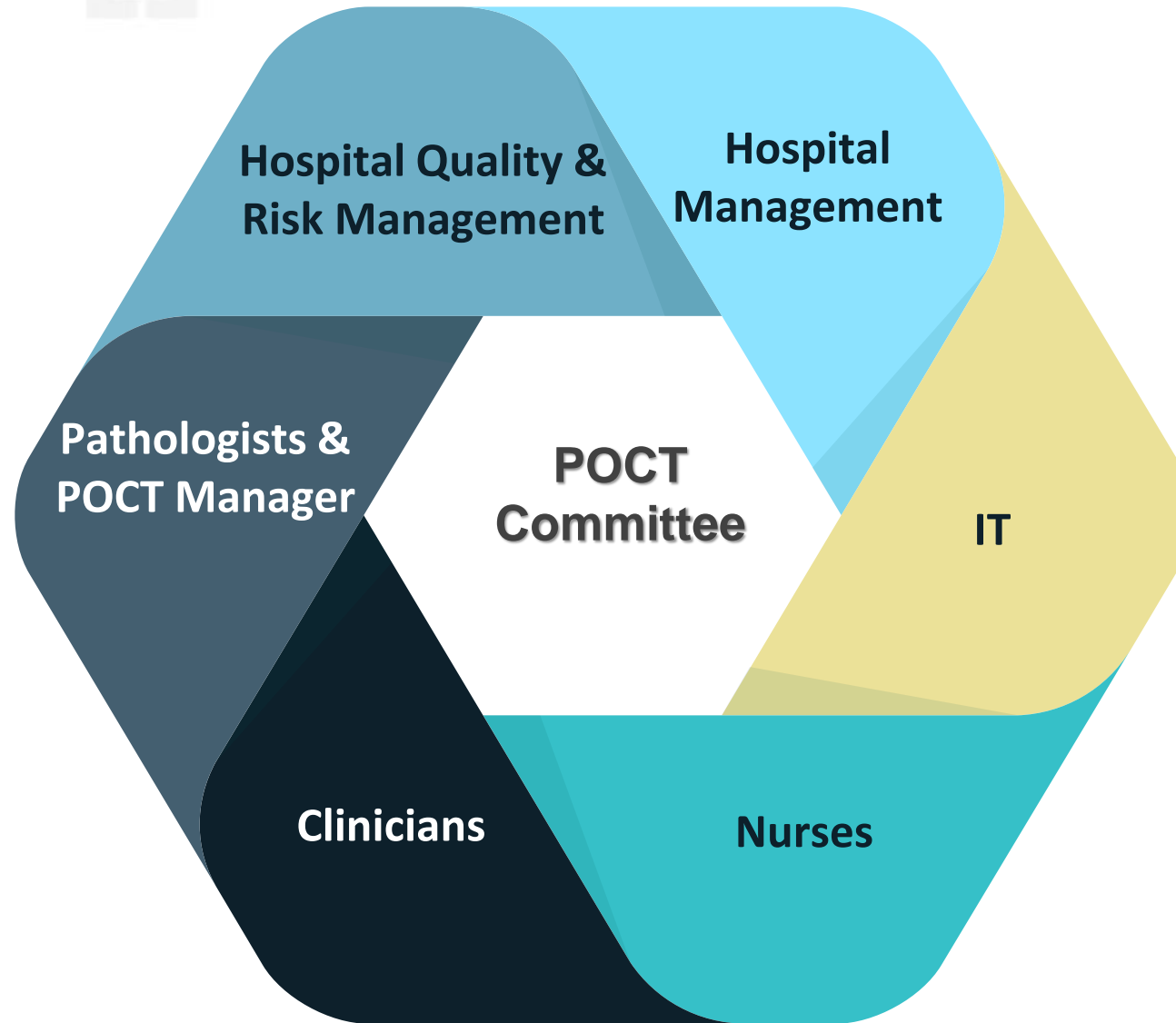
V, voting; Non-V, non-voting

\*Other Ad Hoc Members may be coopted, as necessary

\*\*A delegate voting member may attend in the absence of an appointed member. This excludes the Chair and Co-Chair of the Committee, at least one of which needs to be present for a committee meeting.







# Medical Executive Council (MEC)

POCT manager reports to the MEC on behalf of POCT Committee





# Medical Executive Council (MEC)

POCT manager reports to the MEC on behalf of POCT Committee



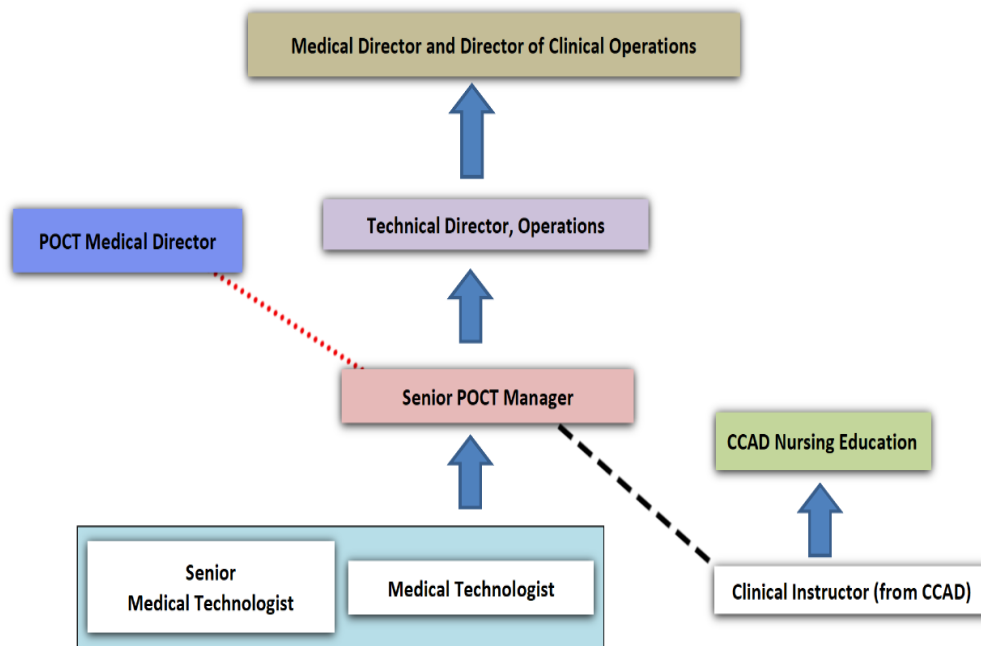
A close-up, low-angle shot of a wooden surface with a grid of brass pins. The pins are connected by thin brass wires, forming a series of overlapping squares and rectangles. The lighting is warm and directional, coming from the upper left, which creates strong highlights on the pins and wires and casts long, soft shadows to the right. The background is a blurred wooden texture.

# Organization

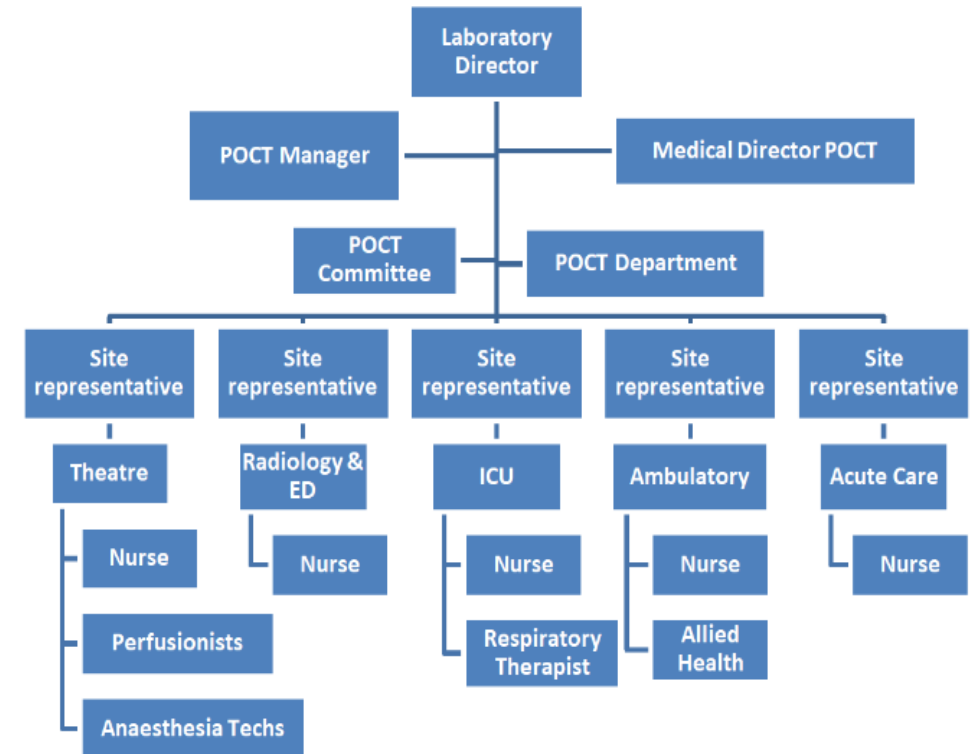


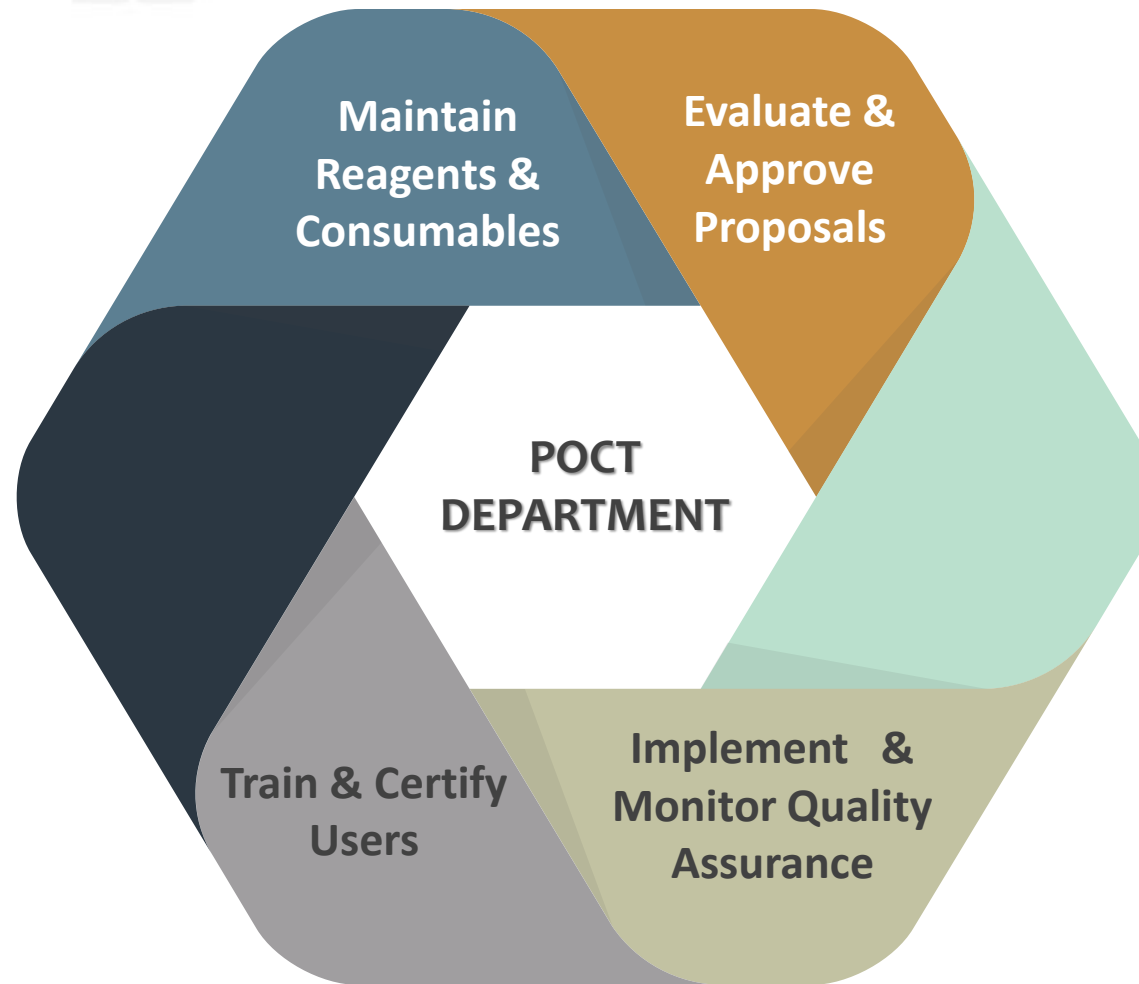
# POCT Organisational Chart

## POCT Department



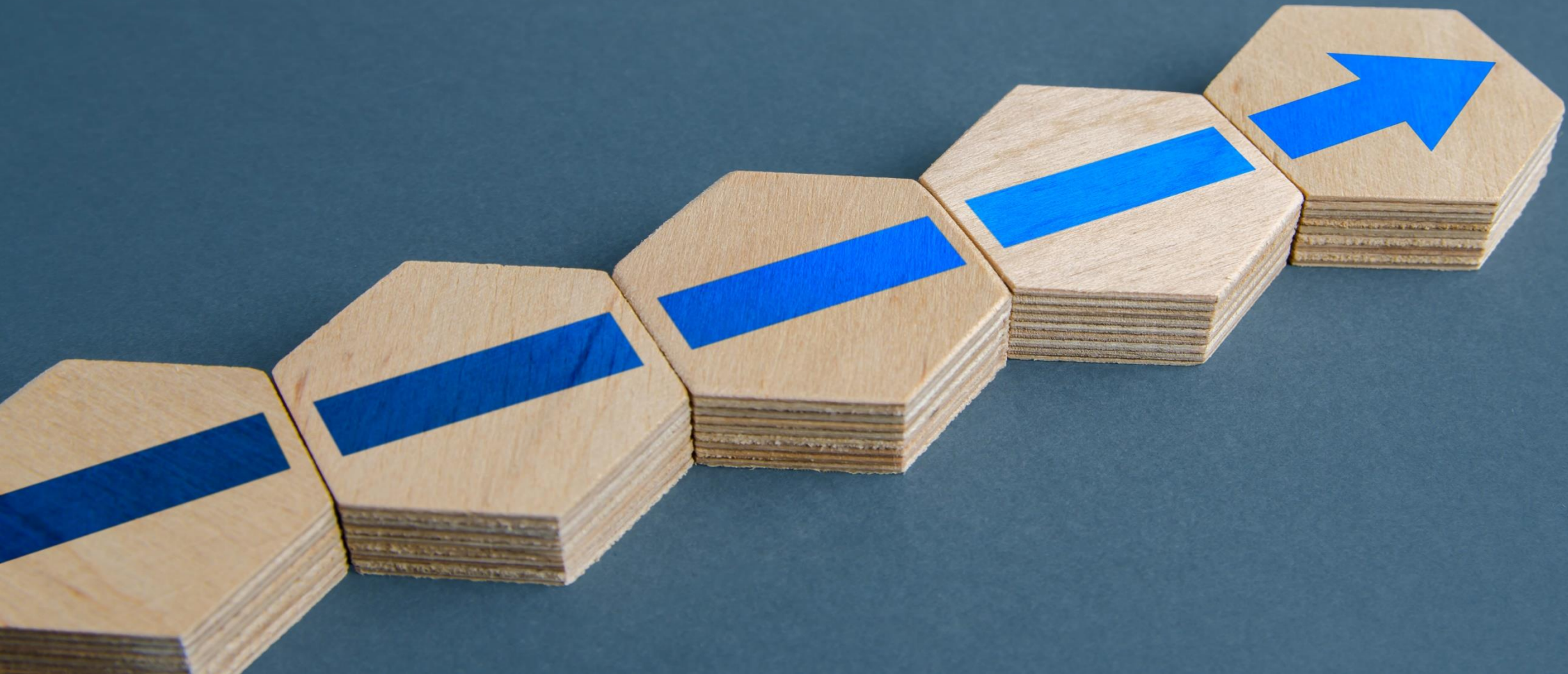
## CCAD







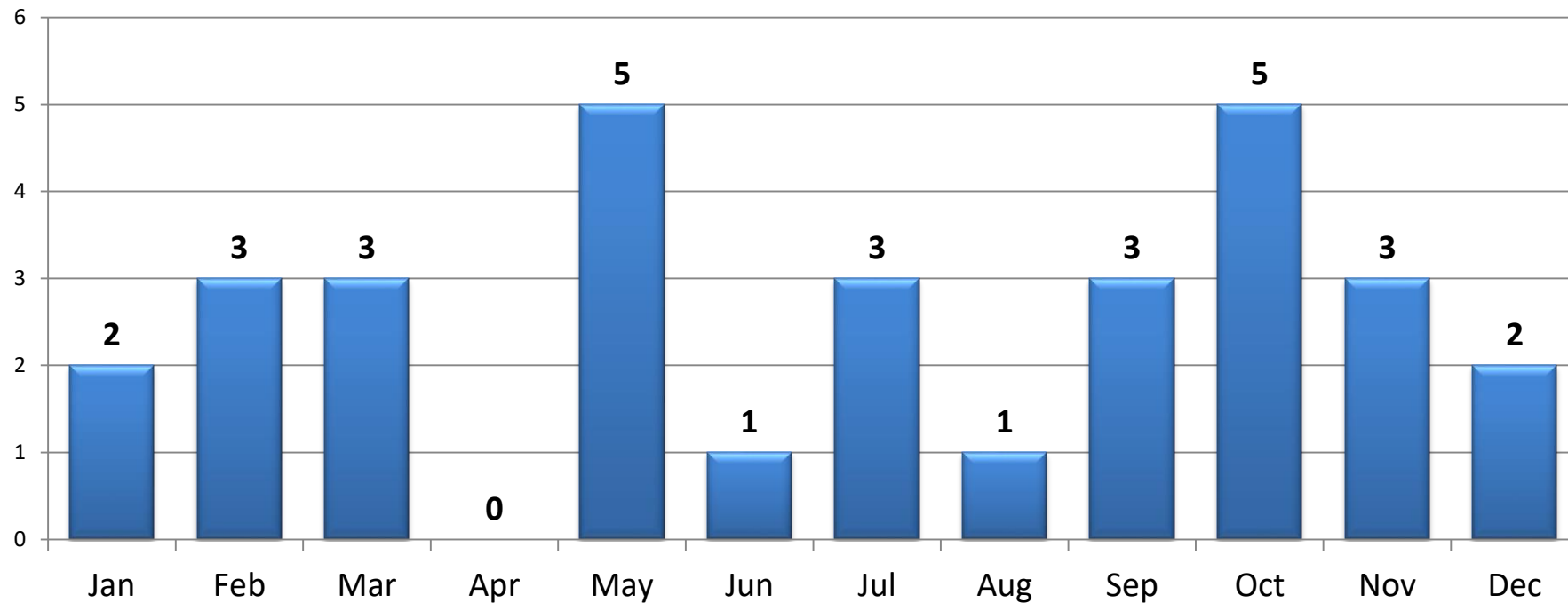
# Evaluation and Continual Improvement



# Non-conformities

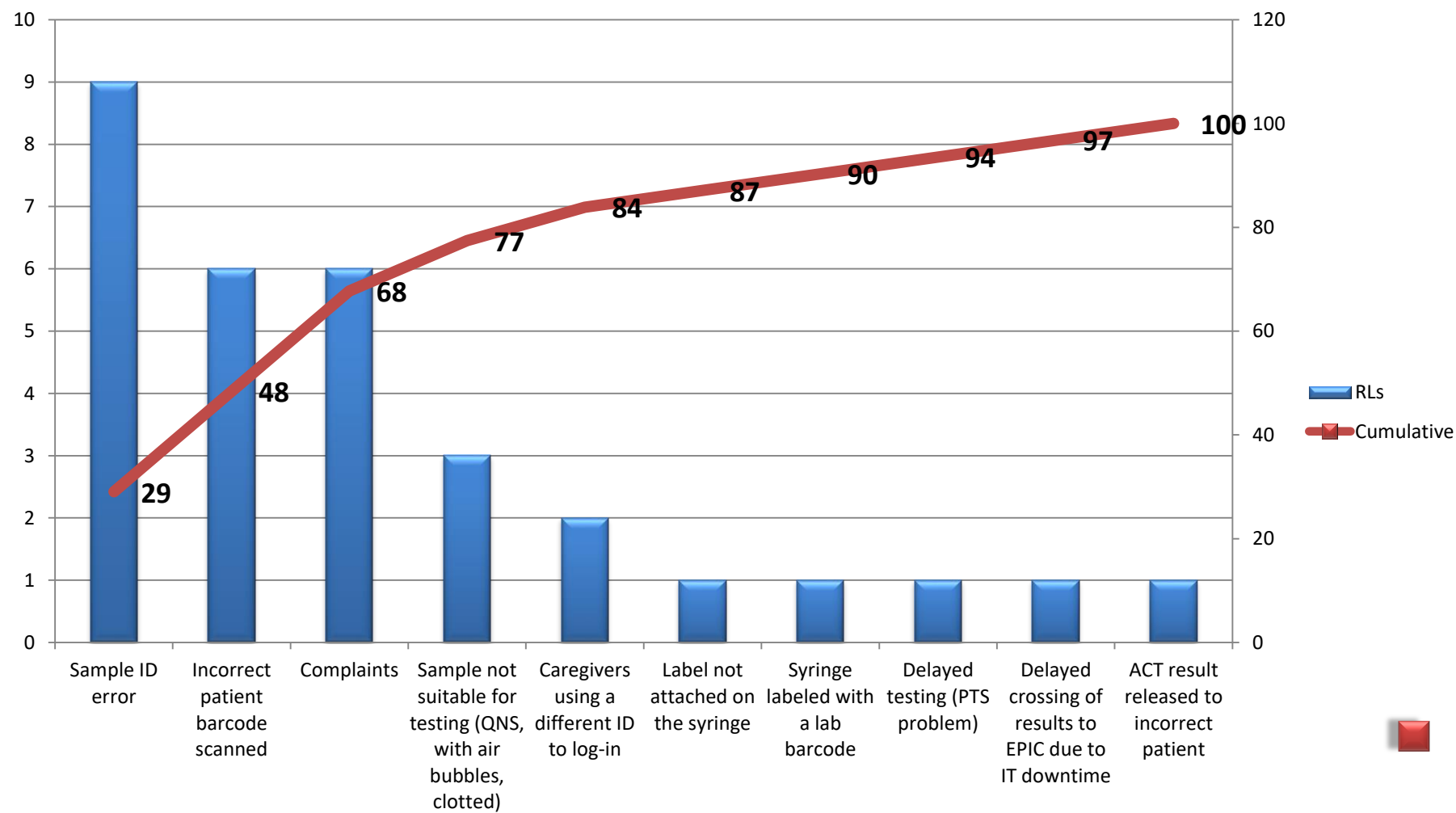


**Total = 31**





# Pareto Chart: Trend Analysis



# Audit Program

## Form

**Prepared by:**  
 Mary Aljie Ponciano

**Effective Date:**  
 16/12/2020

**Form Number (version):**  
 PLMI-POCT-PRI-frm-008  
 Version: 3

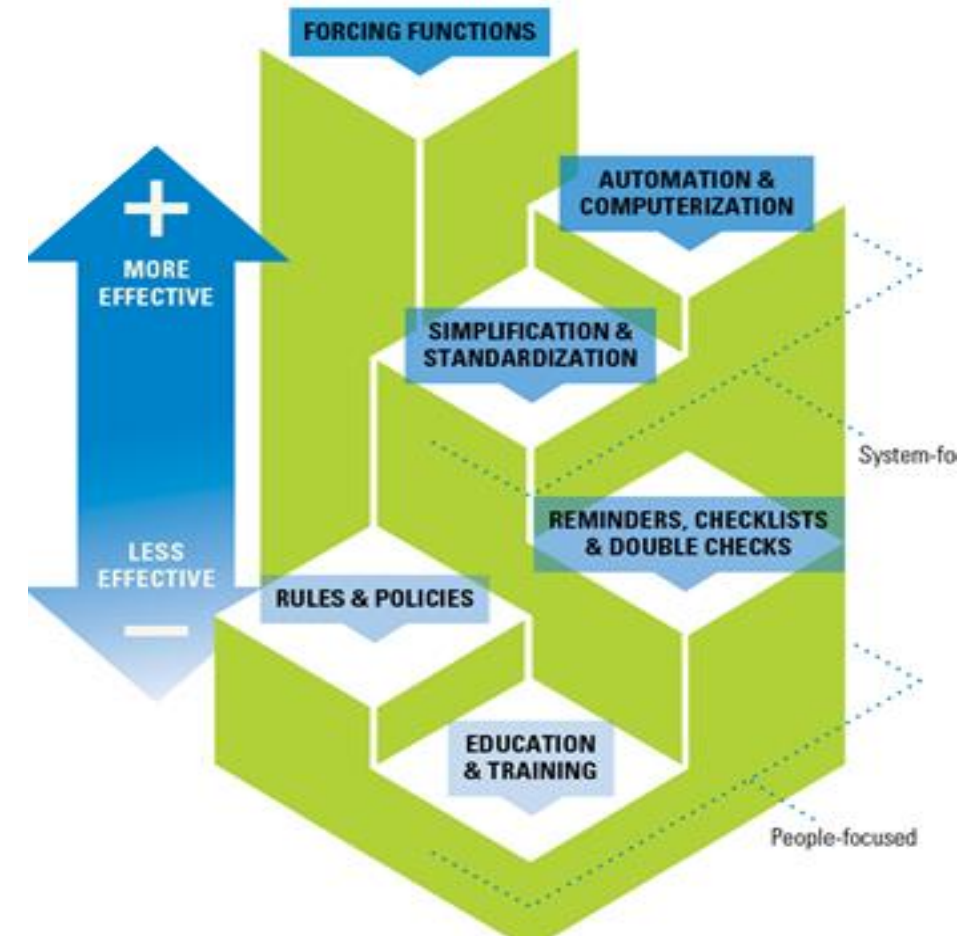
POCT Instrument or Kit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Users
Accucheck Inform II		AQIRP WA		IC							IC MC		Anaesthesia Tech, Nurse, Physiotherapist, CCT Dialysis Tech
Coaguchek Pro II			AQIRP WA	IC							IQCP IC MC		Nurse
Cobas b101		MC WA											Nurse
DCA Vantage HBA1c				IC MC					AQIRP WA				Nurse
Fecal Occult Blood		VA WA											Physician
Hemochron Signature Elite				IC			AQIRP WA				IQCP IC		Anaesthesia Technician, Perfusionist, Nurse
Hemocue				IC MC				AQIRP WA					Nurse
Inflammdry			VA WA			AQIRP WA						CE	Nurse
ISTAT ACT Celite				IC			AQIRP WA			IC	IQCP		Nurse





# All Solutions are Not Equal

- ❑ Pre and post analytics largest contributor to error
- ❑ Adopt less analytic centric point of view
- ❑ Focus on: automation, innovative system technologies to overcome “human and process factors”
- ❑ **To be most effective, action plans need to move to stronger actions rather than education or reminders alone**
- ❑ Vendors have to do more and listen to our needs



Hierarchy of Intervention Effectiveness

# Key Performance Indicators

Key Performance Indicators	Benchmark/ Data Source	Target	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Service: POCT emails. Follow up within 3 working days <b>(Contractual KPI)</b>	CCAD/ Outlook	100%	100	100	100	100	100	100	100	100	100	100	100
Close out of non-conformances within 60 days <b>(Contractual KPI)</b>	CCAD/ NCF Tracker	100%	100	100	100	100	100	100	100	NA	NA	100	100
Correct ID of blood gas specimens (Patient safety)	CCAD/ RL Solutions	100%	100	100	100	100	100	100	99.99	99.99	99.99	100	100
Correct ID for all Point-of-Care test (Patient safety)	CCAD/ RL Solutions	100%	100	100	99.99	99.99	100	100	100	Merged with Correct ID blood gas			
Renewal of POCT competencies (Compliance)	CCAD/ LMS & POCT Tracker	≥92.5%	97	NA	95	100	100	100 93	NA	NA	94	94 100	On-going
<b>ICU Protocol for capillary glucose testing</b>	CCAD	100%	87.2	90.9	90.3	92	93	92	95	92.8	91.2	92	95
Timely delivery of POCT supplies	CCAD/NRL Oracle	Pass	Pass	Pass	No	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass
Blood gas turn around time: 99% reported within 30 minutes	CLS/AQURE	≥99%	100	99.9	100	100	100	99.99	100	99.95	99.99	99.8	99.2
<b>Time Therapeutic Range for POCT INR</b>	AHA	50%	65	65	60	58	66	69	67	62	64	70	63
<b>Effectiveness of POCT Hba1c versus inpatient Hba1c</b>	CCAD	<10%	7.3	7.3	7.2	7.2	7.1	6.9	5.9	5.9	5.8	5.6	5.9





A blurred photograph of a hospital room. In the foreground, a patient is lying in a bed, wearing a white hospital gown and a white identification band on their wrist. Their hand is visible, holding a small object. In the background, a nurse in a green uniform is standing and looking down, possibly at a patient or a piece of equipment. The room has large windows with green curtains, and the overall atmosphere is clinical and busy.

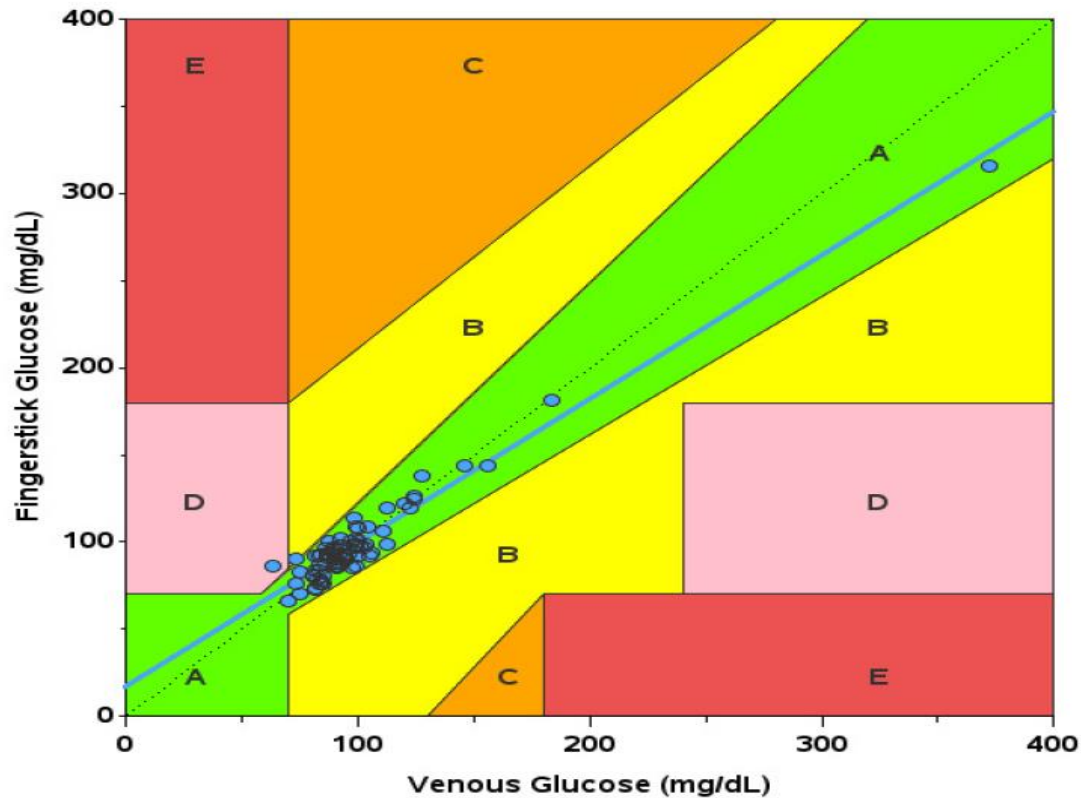
**Limitations of glucose meters in critically ill patients**



**Limitations of glucose meters in critically ill patients**



# Clarke Error Grid



**A:** values within clinical acceptability

**B:** would not lead to inappropriate treatment

**C:** are those points leading to unnecessary treatment

**D:** potentially dangerous failure to detect hypoglycemia or hyperglycemia

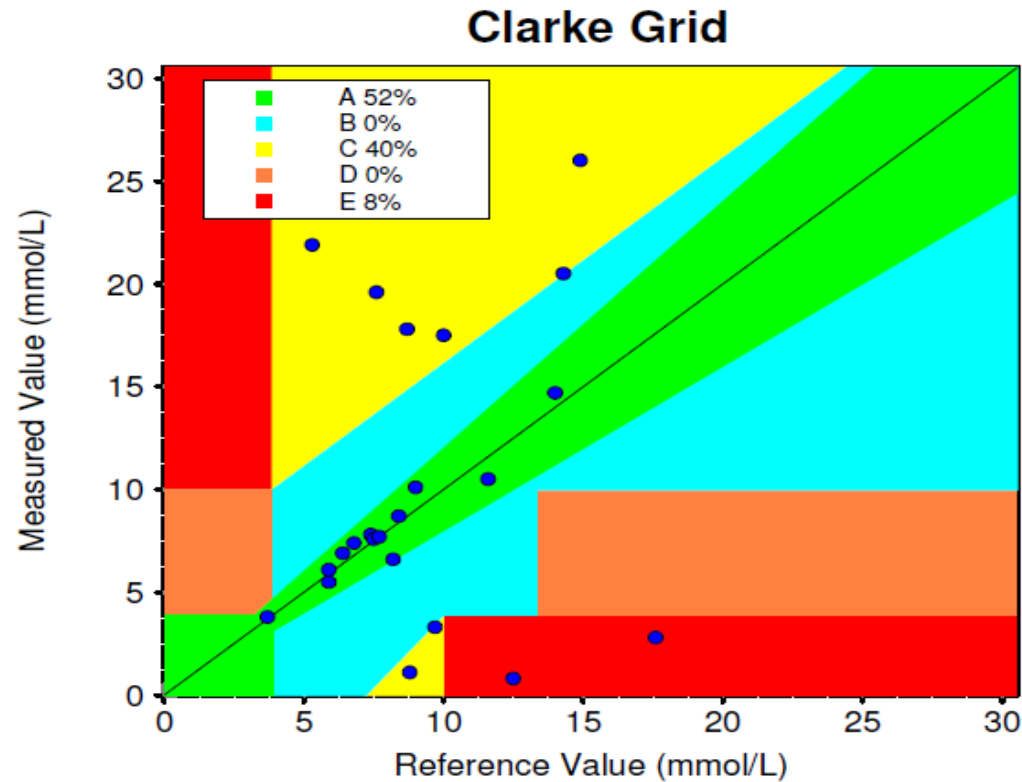
**E:** confuse treatment of hypoglycemia for hyperglycemia and *vice versa*.



# ICU protocol is identifying real outliers

X Method Accucheck V/A

Y Method Accucheck Capill



Region	Count	Percent	Cum Percent
A	13	52%	52%
B	0	0%	52%
C	10	40%	92%
D	0	0%	92%
E	2	8%	100%
Excluded	0		
Out/Bnds	8		
Total	33		



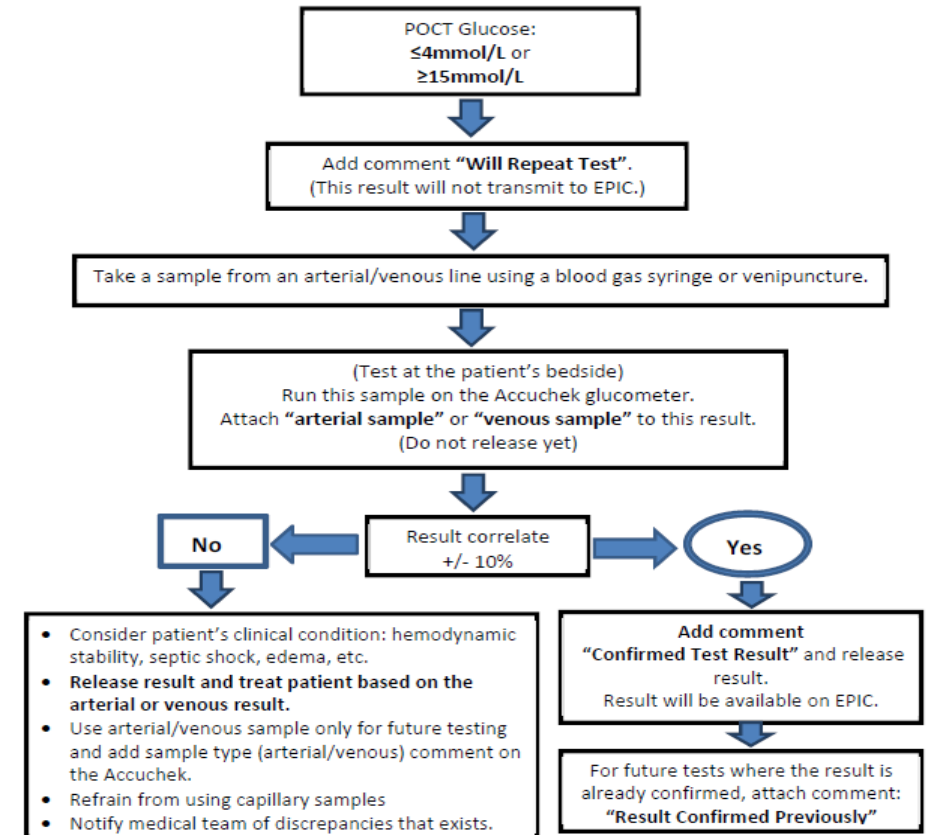
# CCAD ICU protocol

- ❑ **Issue:** Incorrect results released and acted upon
- ❑ **Benefit:** Accuracy of results are assured

Form

Prepared by: Kate O'Callaghan Mary Aljie Ponciano	Effective Date: 04/09/2018	Form Number (version): PLMI-POCT-EQM-jaid-026 Version no: 3
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For patients with septic shock, edema or whose circulation is compromised in any way, use arterial or venous blood samples only.



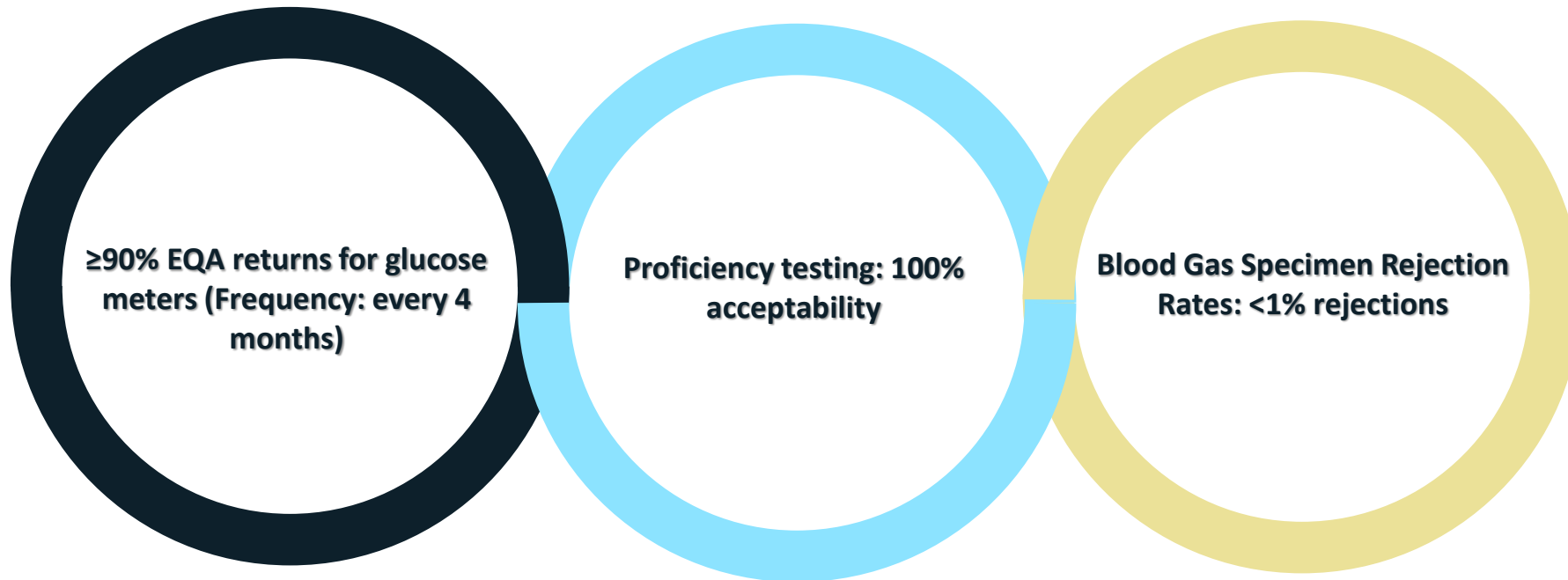


# Weekly Report to ICU managers

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Date & Time	Patient ID	Last Name	Location	Result	Validation	Comments	User	Last name	First name	Episode	Remarks	
2	26/09/2018 03:30	10161883		CCAD - 6 HAD	> 33.3	Rejected	Will Repeat Test	13298			1	Repeated , No comment attached	
3	25/09/2018 07:02	10075734		CCAD - 6 HAD	3.9	Validated		14936			2	Not repeated No comment attached	
4	24/09/2018 17:31	10051944		CCAD - 6 HAD	3.9	Validated		11424			3	Not repeated No comment attached	
5	23/09/2018 12:58	10186743		CCAD - 6 HAD	4	Validated		14770			4		
6	23/09/2018 12:57	10186743		CCAD - 6 HAD	3.8	Rejected	Will Repeat Test; test re	14770				Repeated , No comment attached	
7	29/09/2018 12:16	10187104		CCAD - 6 HAD	15	Validated		11117			5	Not repeated No comment attached	
8	29/09/2018 05:44	10161883		CCAD - 6 HAD	16.3	Validated		12619			6	Not repeated No comment attached	
9	29/09/2018 04:23	10161883		CCAD - 6 HAD	16.3	Validated		12619			7	Not repeated No comment attached	
10	28/09/2018 20:05	10085523		CCAD - 6 HAD	17	Validated		14763			8	Not repeated No comment attached	
11	28/09/2018 16:25	10085523		CCAD - 6 HAD	16.9	Validated		14233			9	Not repeated No comment attached	
12	28/09/2018 08:11	10161883		CCAD - 6 HAD	15	Validated		13088			10	Not repeated No comment attached	
13	28/09/2018 06:50	10161883		CCAD - 6 HAD	17.9	Validated		11398			11	Not repeated No comment attached	
14	28/09/2018 05:36	10161883		CCAD - 6 HAD	19.3	Validated		11398			12	Not repeated No comment attached	
15	27/09/2018 15:12	10161883		CCAD - 6 HAD	15	Validated		12619			13	Not repeated No comment attached	
16	27/09/2018 12:07	10161883		CCAD - 6 HAD	15.5	Validated		12619			14	Not repeated No comment attached	
17	26/09/2018 15:41	10085523		CCAD - 6 HAD	15	Validated		12453			15	Not repeated No comment attached	
18	26/09/2018 10:00	10085523		CCAD - 6 HAD	17.5	Validated		12453			16	Not repeated No comment attached	
19	25/09/2018 22:01	10085523		CCAD - 6 HAD	15.6	Validated		14936			17	Not repeated No comment attached	
20	25/09/2018 18:50	10085523		CCAD - 6 HAD	15.3	Validated		14726			18	Not repeated No comment attached	
21	25/09/2018 09:57	10161883		CCAD - 6 HAD	18	Validated		14664			19	Not repeated No comment attached	
22	25/09/2018 08:50	10161883		CCAD - 6 HAD	15.7	Validated		13536			20	Not repeated No comment attached	
23	24/09/2018 11:33	10158536		CCAD - 6 HAD	15.9	Validated		12452			21	Not repeated No comment attached	
24	24/09/2018 10:18	10161883		CCAD - 6 HAD	15.5	Validated		12608					



# New KPIs 2023



# Internal Quality Control

## Report to POCT committee

POCT Device	Tests	Remarks
Accucheck	Glucose	All acceptable
Coaguchek	PT/INR	All acceptable
DCA Vantage	HbA1c	All acceptable
Hemochron	Activated Clotting Time	All acceptable
ISTAT	Activated Clotting Time	All acceptable
ISTAT	Creatinine	All acceptable
RP500	Blood gas, electrolytes, co-oximetry, lactate, glucose	All acceptable
Sweat Chek	Sweat conductivity	All acceptable
TEG6s	Thromboelastogram	All acceptable
Urisys	Urine Chemistry	All acceptable
Kits (Alere )	Pregnancy test	All acceptable
Kits (Seracult)	Fecal occult blood	All acceptable





# External Quality Control



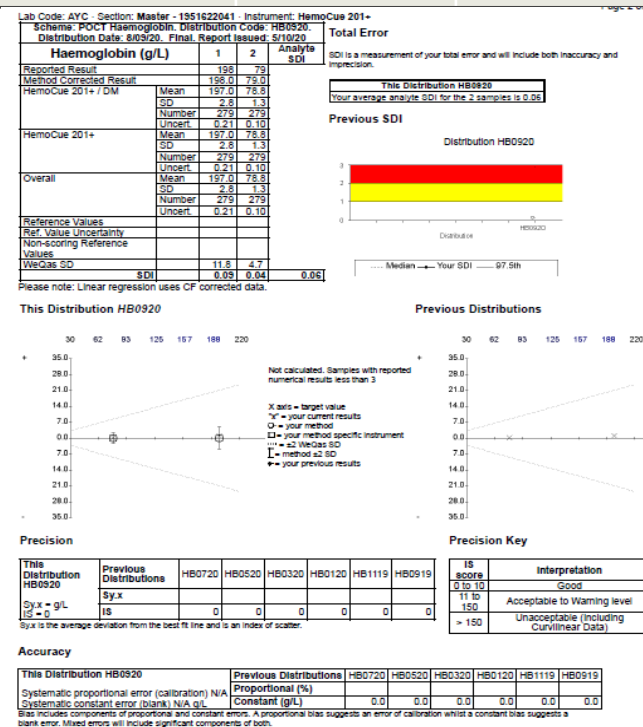
COLLEGE of AMERICAN  
PATHOLOGISTS

CAP Code	Device	Result
SO-B kits 1 – 8	RP500 Blood Gas	Acceptable
SW2-B	Sweat Analysis Chek	Acceptable
CT2-B kits 1 – 2	Hemochron Activated Clotting Time	Acceptable
CT3-B kits 1 – 2	Hemochron	Acceptable
CT5-B kits 1 – 2	ISTAT	Acceptable
CM-B	hCG kit & Urisys 1100	Acceptable
LN17-B Kit	Accucheck	Acceptable
WP10-B	Coaguchek	Acceptable
WBGQ-B kit	Accucheck	Acceptable



GLOBAL PROVIDER OF QUALITY  
IN DIAGNOSTIC MEDICINE

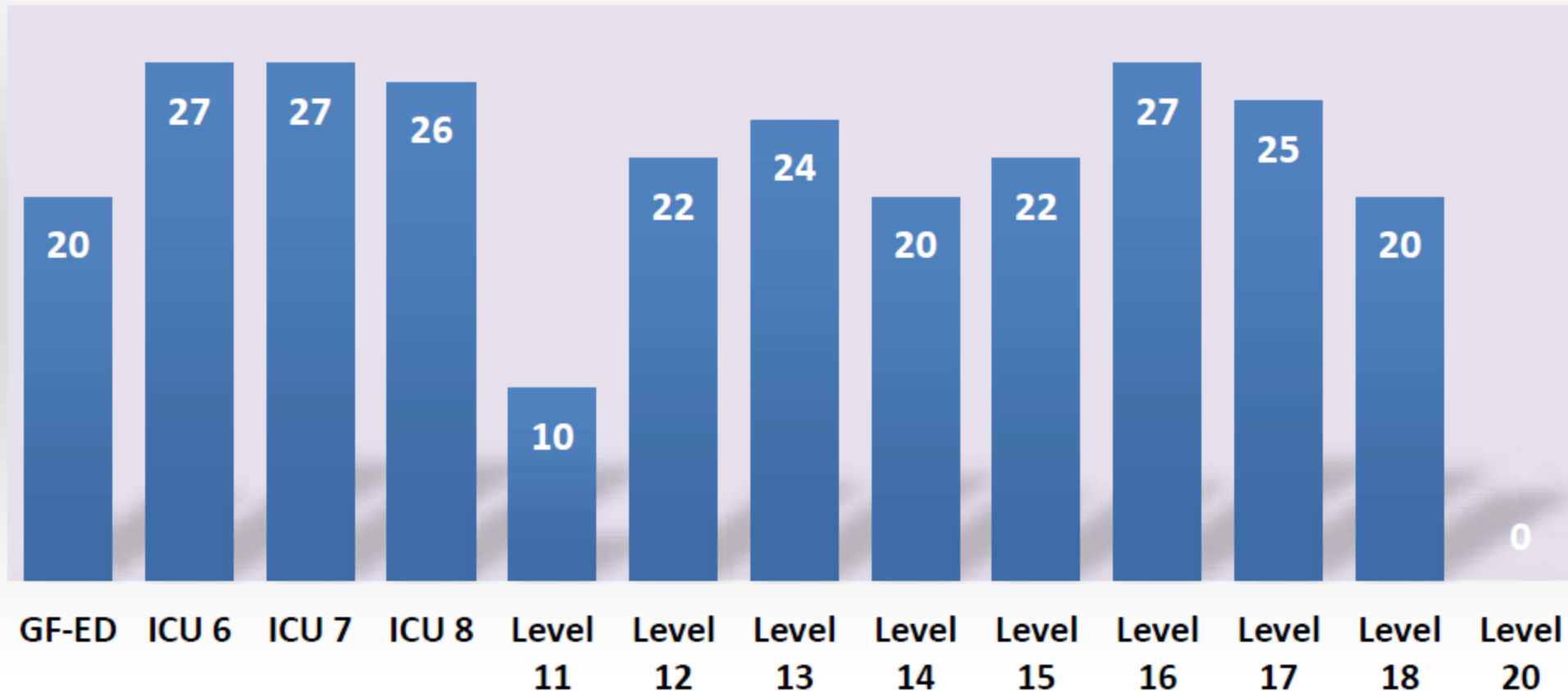
Scheme	Device	Result
POCT Haemoglobin	Hemocue Hb201	Acceptable



# Continual Improvement

Automating the documentation of glucose meter tasks performed by nurses

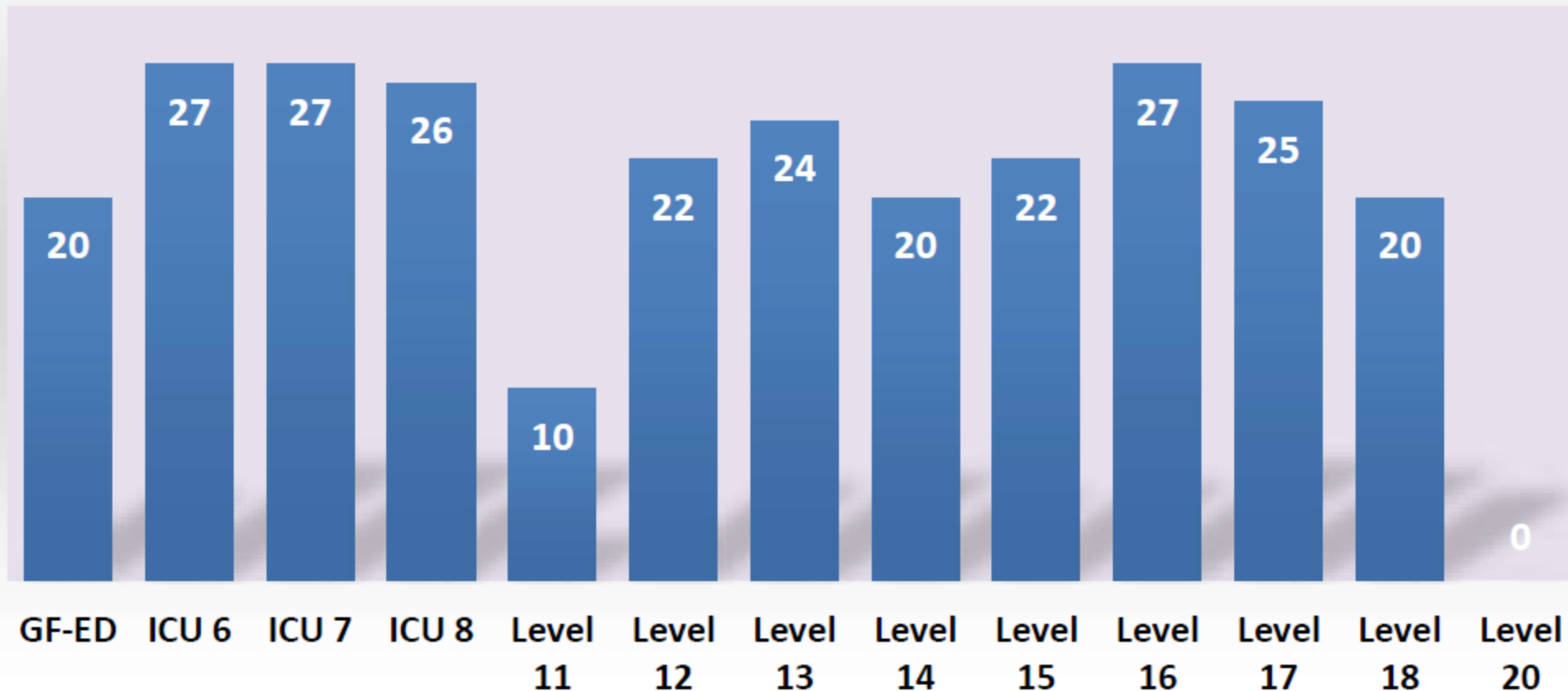
## IP Daily Checklist (September)



# Continual Improvement

Automating the documentation of glucose meter tasks performed by nurses

## IP Daily Checklist (September)

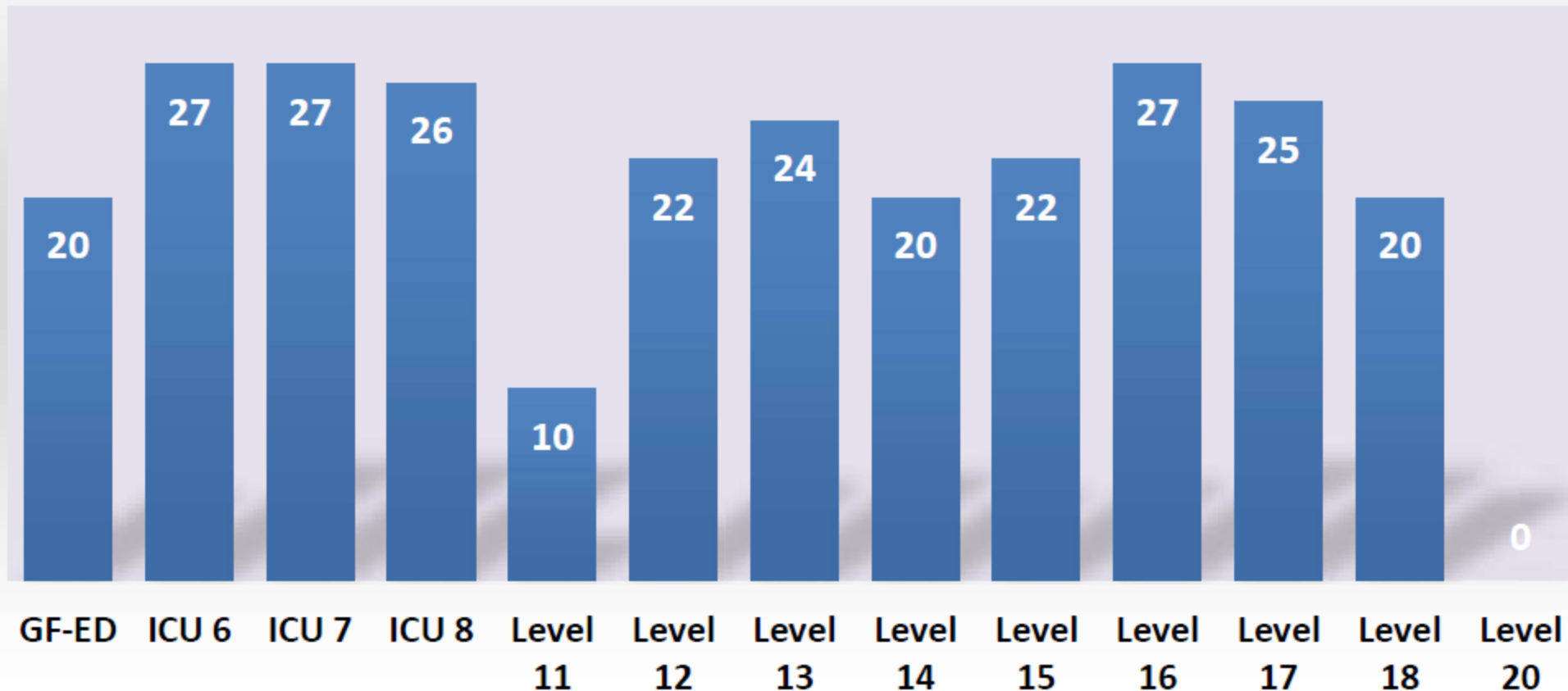




# Continual Improvement

Automating the documentation of glucose meter tasks performed by nurses

## IP Daily Checklist (September)



# The performance of POCT MUST be understood

## EP Evaluator<sup>®</sup>

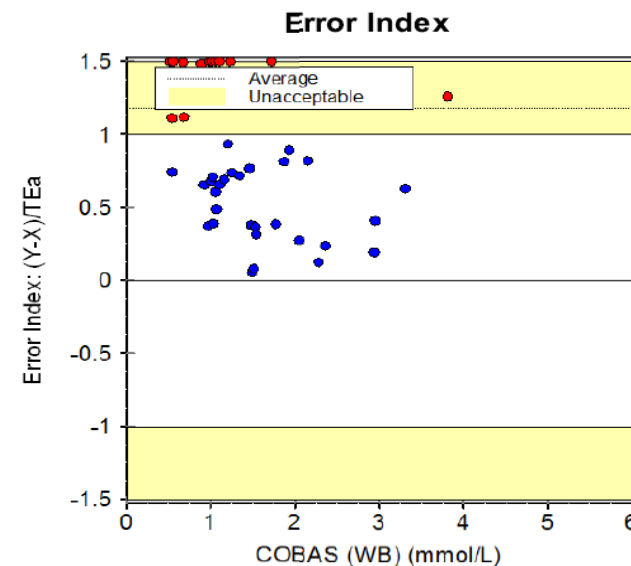
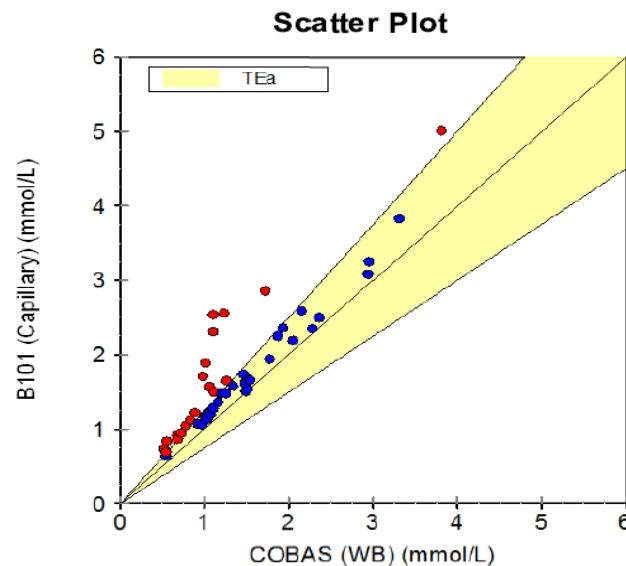
Clinical Laboratory -- Cleveland Clinic Abu Dhabi

Trig

### Two Instrument Comparison

X Method COBAS (WB)

Y Method B101 (Capillary)



# Method Comparisons

Shared with medical teams frequently

## EP Evaluator®

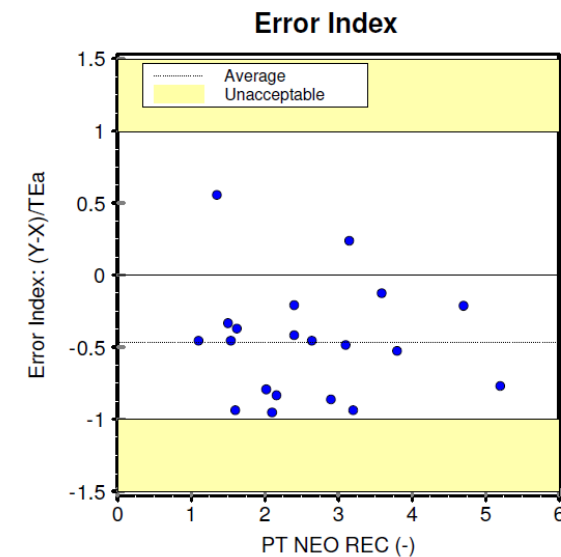
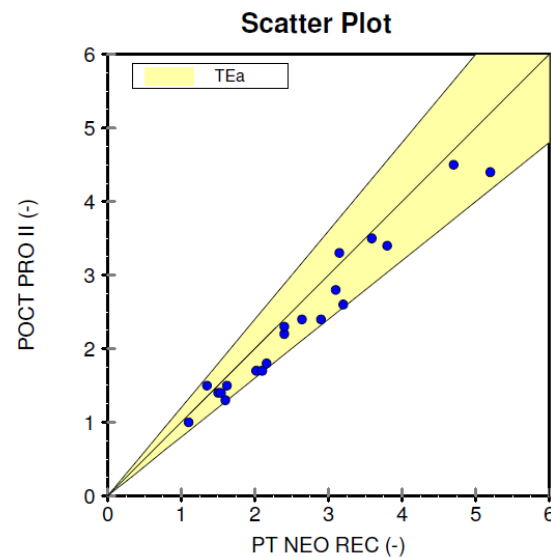
Clinical Laboratory -- Cleveland Clinic Abu Dhabi

INR

### Two Instrument Comparison

X Method PT NEO REC

Y Method POCT PRO II





# POCT Program Annual Survey 2023

302

respondents



Overall score:

4.4



## Work that we have initiated from your 2023 survey feedback

**You Asked:** Simplify the annual competency renewals

**We Delivered:** We have removed the requirement for Observer Test Sequence (OTS) for the POCT Glucose for the annual recertification in March. This has been universally welcomed by nursing staff. Further simplifications planned for other courses during 2023.

**You Asked:** A review of the ICU Protocol policy in place to address the limitations of capillary samples in critically ill patients

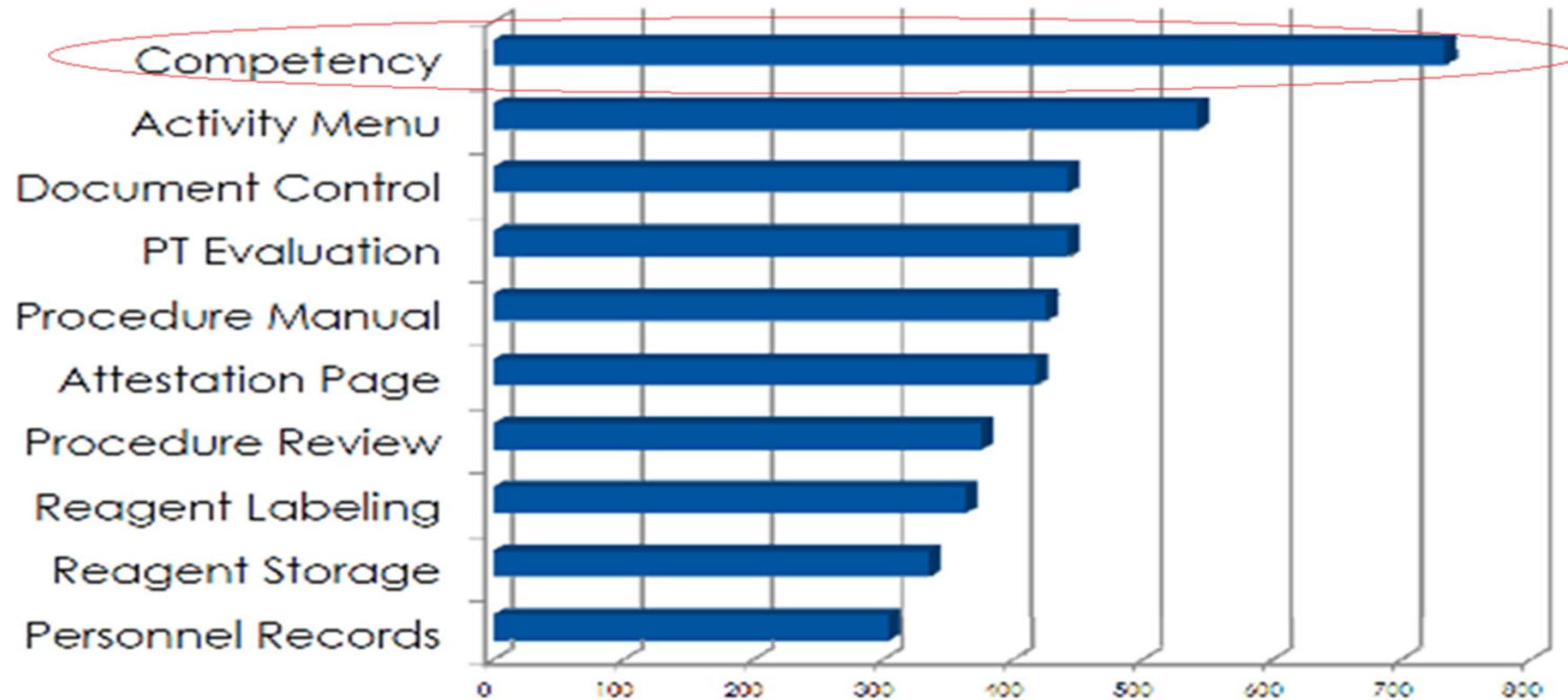
**We Delivered:** The POCT Department has reached out to ICU leadership and requested a collaborative review of the protocol. This is to determine if further efficiencies can be identified.



# Competency Through Technology



# Most Common Deficiencies CAP 2022





# Training and competency

What are the issues?

- ☐ Training hundreds/thousands of staff
- ☐ Wide variety of technologies, methodologies & complexity
- ☐ How to manage waived versus non waived tests **frequency** requirements? At least annually for all tests.
- ☐ Which of the **6 elements of competency** should we address?
- ☐ Staff clinically focused on patients.
- ☐ How to administer the training program in a sustainable way?



# Another Consideration!

## 6 Elements of Competency



Direct Observation



Troubleshooting



Monitoring & Recording



Blind Testing



Document Review



Maintenance Check



# Completely Paper Based System

2014-2016





# Recertification Months

Simplified the management (2016)

## Waived tests/Devices

Accucheck  
Urisys  
I-STAT (Creatinine)  
Urine hCG  
DCA Vantage

Hemocue  
H2 Breath Test  
CO Breath Test  
FeNO Breath Test

## Non-waived tests/Devices

Coaguchek  
TEG  
Sweat Chek  
RP-500  
Hemochron ACT

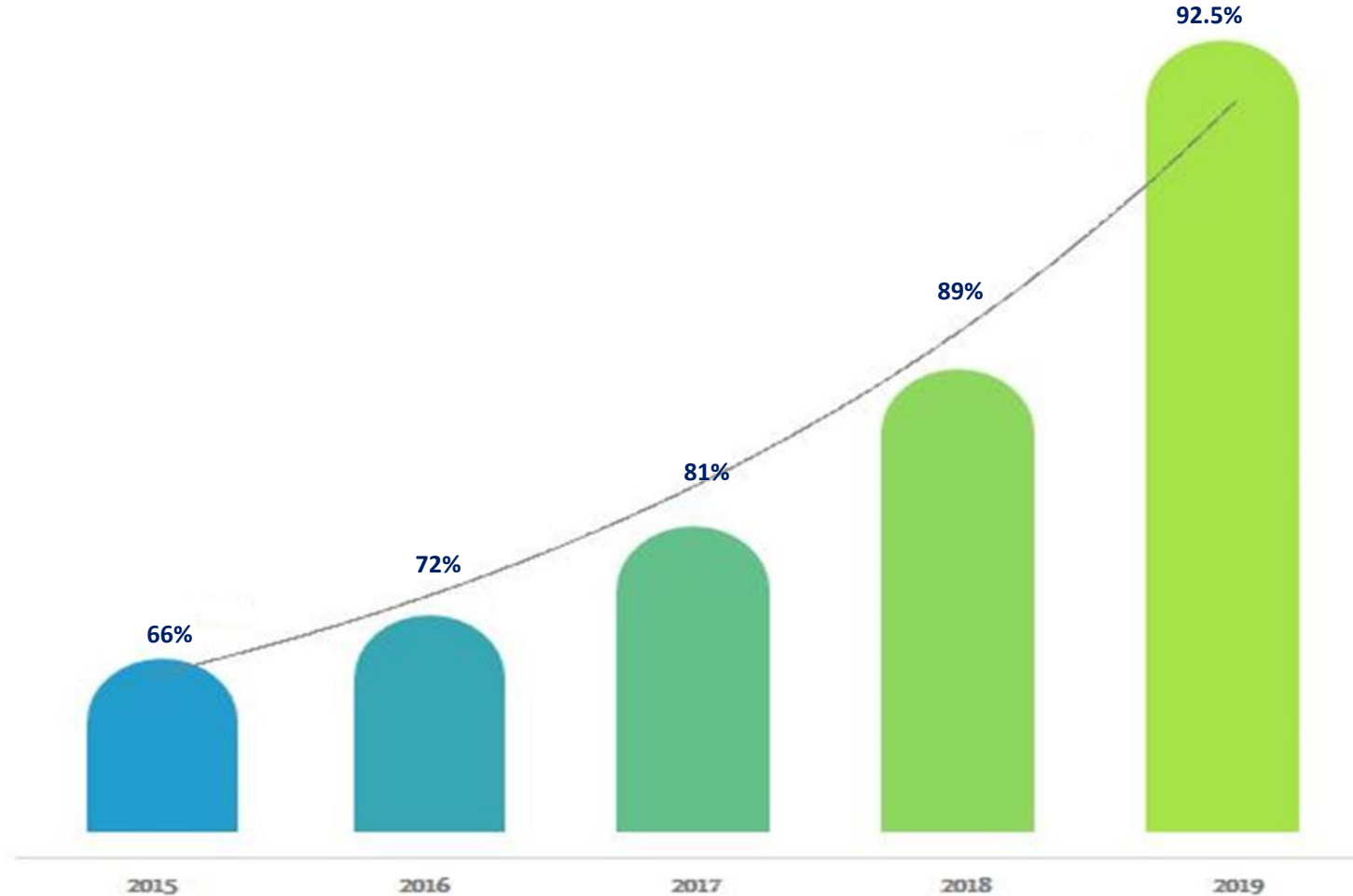
I-STAT (ACT & CG8)

Device recertification months											
January	February	March	April	May	June	July	August	September	October	November	December
	Hemochron	Sweat Chek	Coaguchek	RP-500	I-STAT (ACT & CG8)		Hemochron	Sweat Chek	Coaguchek	RP-500	I-STAT (ACT & CG8)
	TEG						TEG				
		Accucheck		Urisys	I-STAT (Creatinine)	FOB		Hemocue	FeNO CO & H2 Breath	DCA Vantage	
					Urine HCG						

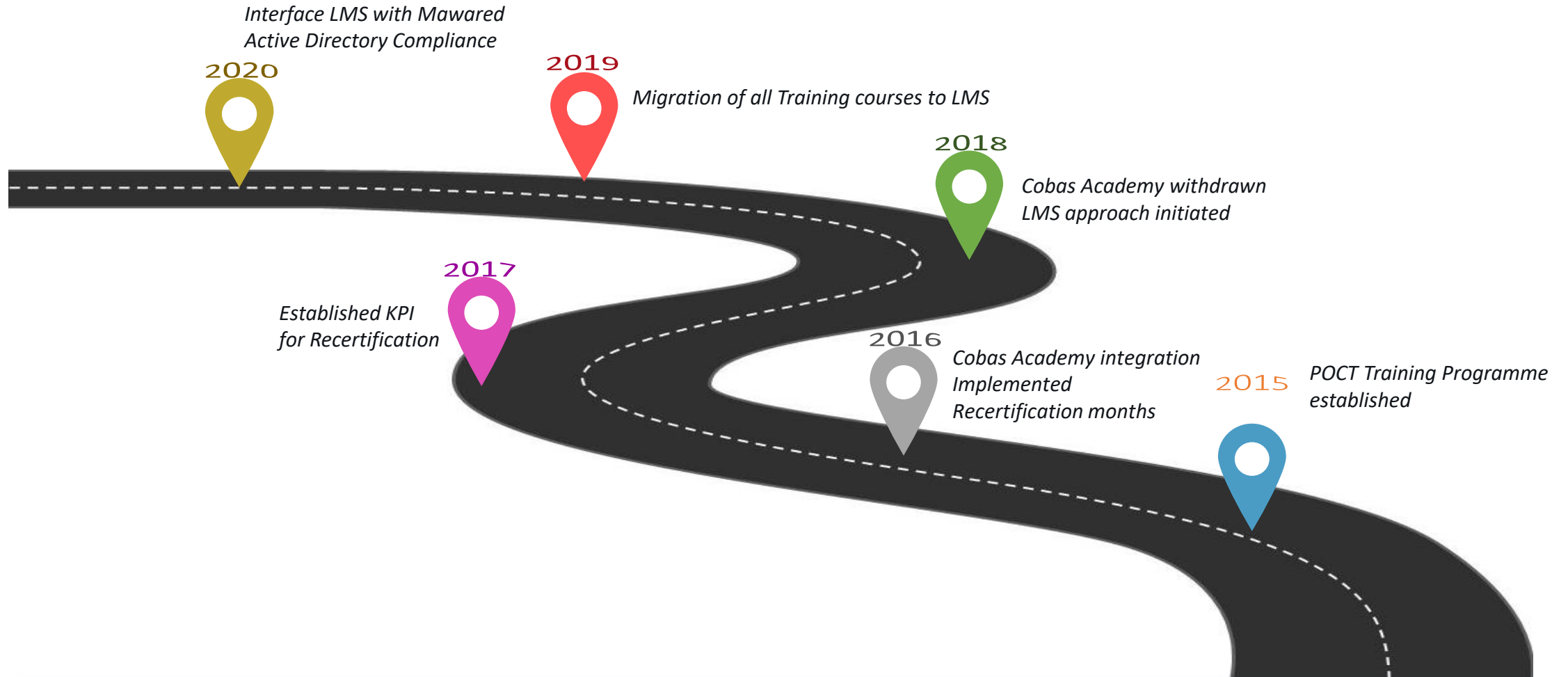


# Key Performance Indicator

Brought accountability (2017)

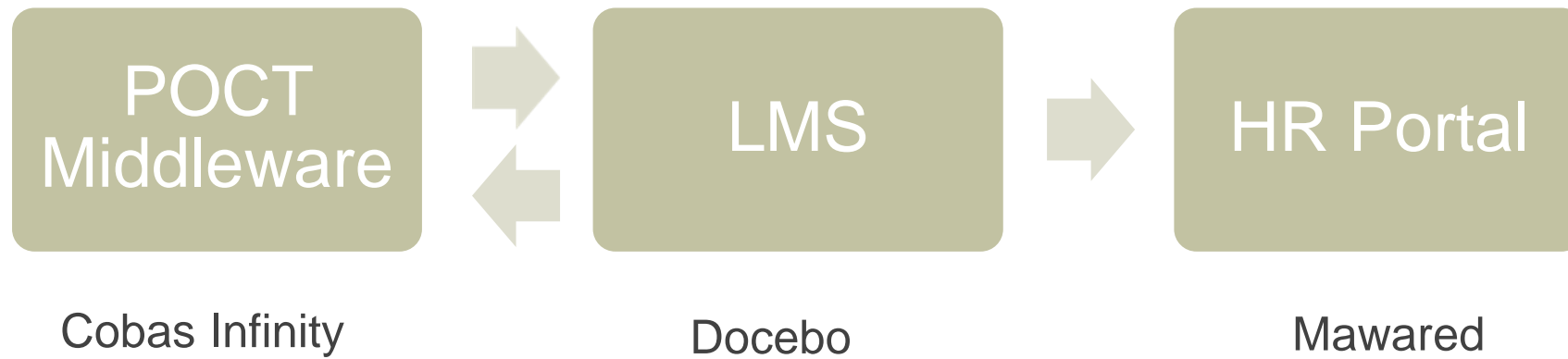


# POCT Training & Competency Management Roadmap

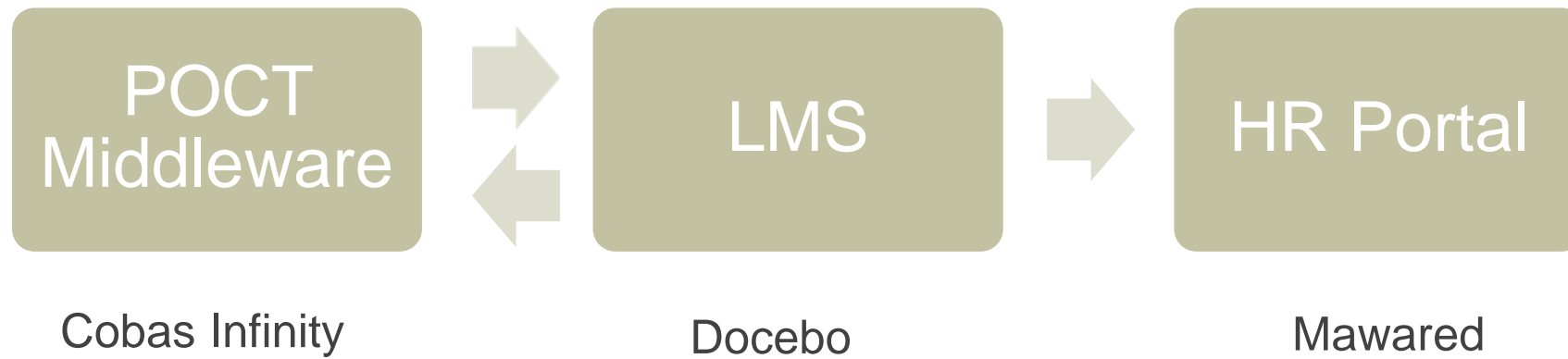




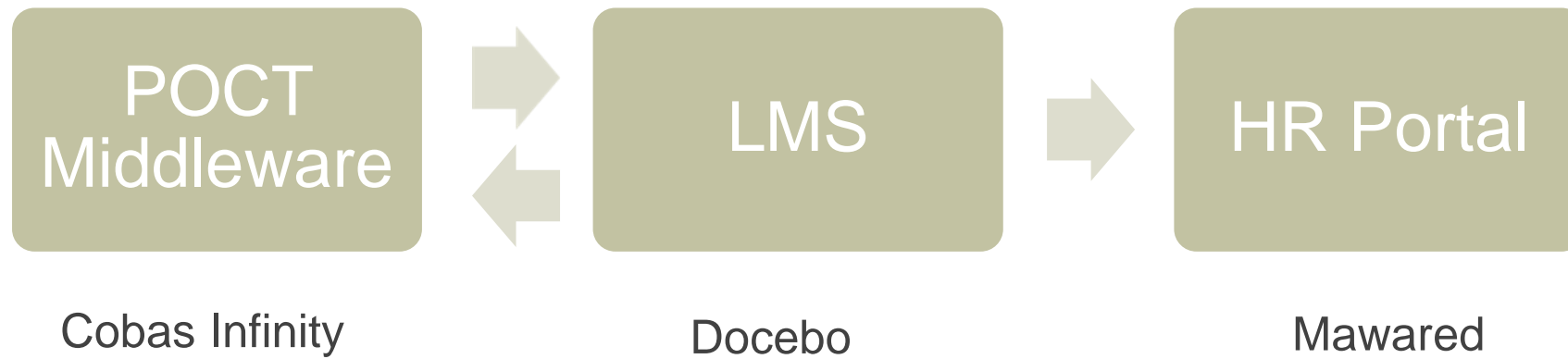
# Automation Workflow



# Automation Workflow



# Automation Workflow





# Learning Management System (LMS)



# List of POCT Courses

























Two types: Initial training and recertification for each device

Course Management

Manage course details and properties

Search within results...

Mubadala ...


<input type="checkbox"/>	CREATIO...	CODE	THUMBNAIL	NAME	TYPE	WAITING LIST	ENROLLED	PUBLISHED	LANGUAGE
<input type="checkbox"/>	30/11/2020	RP 500 Bloo...		<a href="#">RP 500 Bloodgas Recertification 2020</a>	E-Learning		0 		English
<input type="checkbox"/>	1/11/2020	DCA Vantag...		<a href="#">DCA Vantage Recertification 2020</a>	E-Learning		21 		English
<input type="checkbox"/>	15/10/2020	Coaguchek ...		<a href="#">Coaguchek Recertification 2020</a>	E-Learning		96 		English
<input type="checkbox"/>	4/10/2020	Coaguchek ...		<a href="#">Coaguchek 6 Months Recertification 2020</a>	E-Learning		19 		English
<input type="checkbox"/>	1/10/2020	Hemochron...		<a href="#">Hemochron ACT Recertification 2020</a>	E-Learning		39 		English
<input type="checkbox"/>	9/08/2020	i-STAT ACT ...		<a href="#">i-STAT ACT Recertification 2020</a>	E-Learning		14 		English
<input type="checkbox"/>	29/06/2020	Cobas b101 ...		<a href="#">Cobas b101 Initial Training</a>	E-Learning		11 		English
<input type="checkbox"/>	25/06/2020	HemoCue H...		<a href="#">HemoCue Hb201 Initial Training</a>	E-Learning		21 		English



# Sample course content


## Initial Training

[Back](#) [Home Page](#) [Course Management](#) [Accucheck GNO 2020](#)


**Accucheck GNO 2020**  
For this module, please complete the following: Read the SOP Go through the Presentation Take the quiz Run QC Levels 1 and 2 Perform Patient testing (OTS) Upload the Traini

























[PROPERTIES](#) [ADVANCED PROPERTIES](#) [TRAINING MATERIAL](#) [ENROLLMENTS](#) [REPORTS](#) [LEARNING PLANS](#) [CATALOGS](#) [CHANNELS](#)

Folders

 **Accucheck GNO 2020**

Training Material



  1) Review: Accucheck GNO Checklist	 
  2) Read: Operation of the Accucheck Inform II Procedure	 
  3) Review: Accucheck GNO Presentation	  
  4) Complete: Accucheck GNO Quiz	   
  5) Upload: The Initial Training Assessment Form	  





# POCT Completion Reports

High level



## Accucheck GNO 2020

For this module, please complete the following: Read the SOP Go through the Presentation Take the quiz Run QC Levels 1 and 2 Perform Patient testing (OTS) Upload the Traini...

PROPERTIES

ADVANCED PROPERTIES

TRAINING MATERIAL

ENROLLMENTS

REPORTS

LEARNING PLANS

CATALOGS

CHANNELS

### Course report

Users that have completed  
the course



✓ 94  
Enrolled users

📅 319  
Days since launch

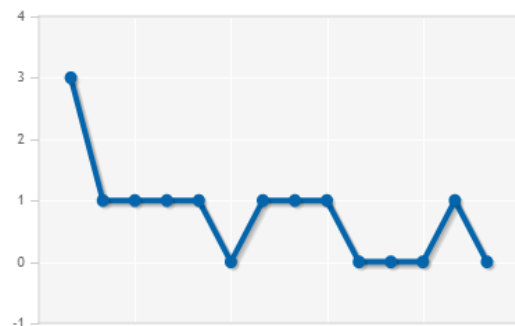
📊 5  
Training Material

🎬 0  
To Begin

🕒 8  
In Progress

🚩 86  
Completed

### Learning Object View Statistics:



# POCT Completion Reports

Low level

USERNAME	SUBSCRIPTION DATE	FIRST ACCESS DATE	COMPLETION DATE	LAST ACCESS DATE	PROGRESS	SESSION TIME	STATUS ▲	EVALUATION SCORE
MarcosM2	6/09/2020 8:03:37 am	14/11/2020 12:15:34 pm	-	15/11/2020 9:47:29 pm	80%	0h 12m	In Progress	0
VillegE	6/09/2020 8:03:37 am	20/11/2020 10:07:00 am	-	24/11/2020 5:49:17 pm	80%	0h 1m	In Progress	0
manohap	16/11/2020 8:34:58 am	16/11/2020 3:25:49 pm	-	25/11/2020 8:47:35 am	80%	0h 33m	In Progress	0
JoseG	29/11/2020 11:34:10 am	29/11/2020 3:38:23 pm	-	29/11/2020 4:48:55 pm	80%	0h 28m	In Progress	0
dagdaga	7/07/2020 3:26:14 pm	9/08/2020 3:55:45 pm	-	3/10/2020 5:57:24 pm	80%	0h 3m	In Progress	0
almashs2	7/07/2020 3:26:14 pm	2/09/2020 3:22:38 pm	-	15/09/2020 8:15:10 am	80%	0h 10m	In Progress	0
PicketJ	6/09/2020 8:03:35 am	7/09/2020 8:20:41 am	-	7/09/2020 6:14:16 pm	80%	0h 7m	In Progress	0
ThulanM	6/09/2020 8:03:36 am	16/09/2020 4:37:53 pm	-	22/09/2020 3:56:13 am	80%	0h 17m	In Progress	0
salams4	27/02/2020 12:17:06 pm	27/02/2020 1:51:15 pm	3/03/2020 1:06:09 pm	2/03/2020 5:17:28 pm	100%	0h 39m	Completed	100.00
reeda	29/01/2020 4:14:39 pm	29/01/2020 4:23:19 pm	4/02/2020 1:53:08 pm	4/02/2020 10:45:24 am	100%	0h 37m	Completed	100.00



# Individual Caregiver Status

Granular level

TITLE	FIRST ATTEMPT	LAST ATTEMPT	FIRST COMPLETION	COMPLETION DATE	VERSION	STATUS	RESET	EVALUATION SCORE
File - 1) Review: Accucheck GNO Checklist	14/11/2020 12:15:34 pm	14/11/2020 8:59:59 pm	14/11/2020 12:15:40 pm	14/11/2020 8:59:59 pm		✓	✗	
HTML Page - 2) Read: Operation of the Accucheck Inform II Procedure	14/11/2020 12:16:03 pm	14/11/2020 12:16:03 pm	14/11/2020 12:16:03 pm	14/11/2020 12:16:03 pm		✓	✗	
File - 3) Review: Accucheck GNO Presentation	14/11/2020 8:12:00 pm	14/11/2020 8:58:42 pm	14/11/2020 8:12:08 pm	14/11/2020 8:12:29 pm		✓	✗	
Test - 4) <u>Complete: Accucheck GNO Quiz</u>	14/11/2020 8:32:34 pm	14/11/2020 9:19:11 pm	14/11/2020 9:19:11 pm	14/11/2020 9:19:11 pm		✓	✗	85.00
Assignment - 5) Upload: The Initial Training Assessment Form	-	-	-	-		▶		0.00

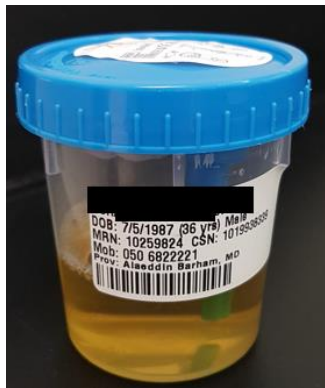






## Key Learning Point #2: Urine HCG + Specific Gravity testing

- In tandem with Urine HCG testing, run Urinalysis testing and determine the Specific Gravity (SG)
- **Urine SG less than 1.010** may cause **false negative result**
- Repeat testing by either using **blood sample** and send it to the Main laboratory or a **first morning urine** sample **MUST** be performed to obtain an accurate result



Transfer sample to BD  
urine tube



1. Urine HCG testing

AND

2. Urinalysis testing



**All scope connected and interfaced**



**Looking to the Future**





# Establishing a first of its kind POCT department in the UAE

To overcome the challenges and gaps in the POCT services across M42



**Governance/QMS absent** within some of the MH assets



**Partial or absent** billing and reimbursement



**Lack of standardization** in testing across the assets



**No standardized training** and competency system



**No dedicated support** for this unique pathology discipline



**Incomplete absent lot to lot** verification



**Incomplete or missing** patient result documentation



**Inconsistent supplies management system**



**NO Proficiency Testing (PT)** in place for some POCT



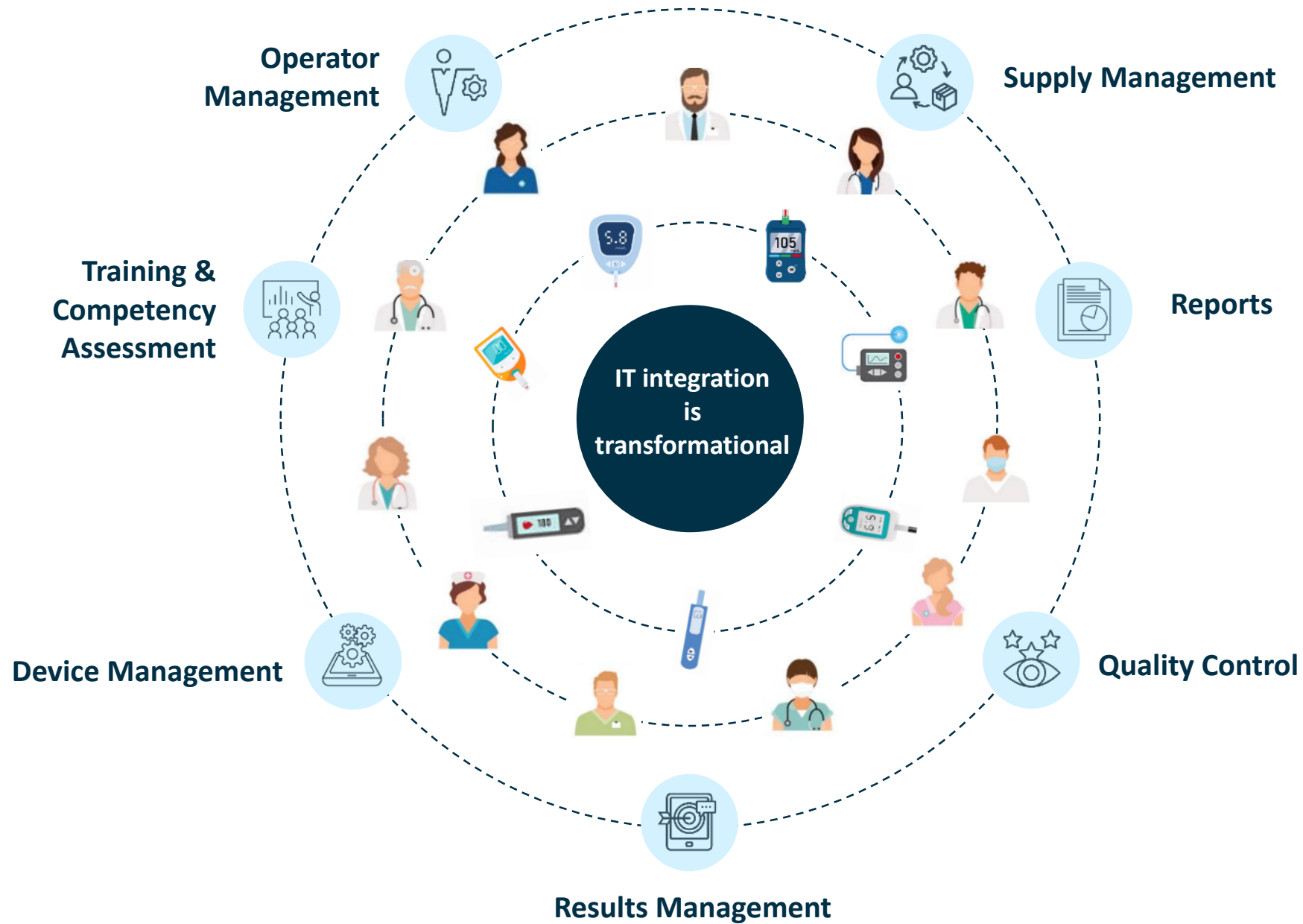
**No standardized equipment** management and validation approach

## POCT department: Centralized and integrated across MH network

NRL has launched a new POCT service line across Mubadala Health supporting and enabling

- ✓ Quality improvement
- ✓ Financial savings
- ✓ Optimize resources
- ✓ Identify efficiencies
- ✓ Integrate and centralize services across MH
- ✓ Support departments seeking to introduce new POCT
- ✓ Analyze budget impact, management/organizational change and clinical impact





# POCT Advances Conference

## 3<sup>rd</sup> POCT Advances Conference

Decentralizing Patient Care. Delivering on the Promise of POCT



March 11-12, 2023



230+ delegates from 17 countries



19 speakers



9.75 CME points

### Key Topics

- Where is POCT in Primary Care Strategies
- POCT Reimbursement Issues
- Clinical Effectiveness of POCT in the Decentralized Environment
- Oversight & Management of POCT Outside of the Hospital Setting
- POCT Digital Health Applications
- POCT in Home & Community Care



# 95%

of delegates rated the conference  
v. good or excellent

- “Amazing conference, everything was excellent: content, coordinators, speakers & organization”
- “Amazing conference with a high quality setup”
- “Gained a lot of practical information regarding POCT”
- “Very much informative and well-organized conference”





# Caregiver Recognition Ceremony

Internal event to recognize the outstanding contribution & support from caregivers across the MH network for the POCT program.

The event recognized:



**24** Individuals



**8** Teams



**7** Leadership team members



# POCT Management

## Walking a suspension bridge

- ❑ Constant balancing act between two sides: laboratory and nursing leadership
- ❑ POCT as a discipline is not taught in either laboratory or nursing degrees
- ❑ Frequently misunderstood by both sides. Can lead to isolation, friction, limited resources & poor programs.







**Current POCT team in NRL**



**1 becomes 2. Brother and sister reunited**





# Takeaway Messages

- **Understanding the Relations:** Cleveland Clinic Abu Dhabi and National Reference Laboratory are business entities within the M42 group
- **Achieving Accreditation :** Governance, evaluation and continual improvement are key requirements to obtaining & maintaining ISO POCT accreditation
- **Competency Through Technology:** Automation of training and competency renewals is vital to ensure sustainability and widespread compliance to requirements
- **Looking to the Future:** NRL will centralize all POCT functions across the M42 healthcare group through a dedicated POCT department.





Thank You