

**SELF ASSESSMENT CHECKLIST BASED ON CCL STANDARDS AND BEST PRACTICE GUIDELINES FOR  
PAKISTAN (2017) FORMULATED BY PSIC**

**HCE INFORMATION**

<b>Name of HCE</b>	
<b>Address of HCE</b>	
<b>E-Mail Address</b>	
<b>Land line No</b>	
<b>PHC Registration/License No</b>	
<b>Scope of Services as per licensing Application</b>	

**CEO/MEDICAL DIRECTOR INFORMATION**

<b>Name</b>	
<b>Designation</b>	
<b>E-Mail Address</b>	
<b>Mobile No.</b>	

**FOCAL PERSON/CATH LAB OPERATOR**

<b>Name</b>	
<b>Designation</b>	
<b>E-Mail Address</b>	
<b>Mobile No.</b>	

**LAST ONE YEAR THROUGHPUT**

<b>No. of PCIs performed :</b> <b>No. of Major Cardiac Surgery Procedures performed :</b> <b>ICU occupancy:</b> <b>CCU occupancy:</b>	
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<b>Director Cath Lab (or Nominee's) Name:</b>	
<b>Designation:</b>	<b>Signature</b>
	<b>Stamp</b>

# **Section A**

## Level - I CCL

### Labs with on-site Cardiac Surgical Services

#### 1. STANDARDS FOR HOSPITALS

Does the CCL has on-site availability of the following facilities:

<i>Tick all that apply.</i>	YES	NO	Comments
Cardiovascular surgery	<input type="checkbox"/>	<input type="checkbox"/>	
Cardiovascular anesthetists	<input type="checkbox"/>	<input type="checkbox"/>	
Intensive care unit	<input type="checkbox"/>	<input type="checkbox"/>	
Nephrology consultative services and dialysis (on-site or on-call)	<input type="checkbox"/>	<input type="checkbox"/>	
Neurology consultative services (on-site or on-call)	<input type="checkbox"/>	<input type="checkbox"/>	
Hematologic consultative and blood bank services	<input type="checkbox"/>	<input type="checkbox"/>	
Echocardiography (TTE & TOE) and Doppler	<input type="checkbox"/>	<input type="checkbox"/>	
MRI, CT – Optional	<input type="checkbox"/>	<input type="checkbox"/>	
In case of pediatric catheterization laboratory, provision of similar services for pediatric-aged patients	<input type="checkbox"/>	<input type="checkbox"/>	
Mechanical support devices at a minimum including adequate number of intra-aortic balloon or Impella catheters	<input type="checkbox"/>	<input type="checkbox"/>	
24/7 on call service to handle emergencies	<input type="checkbox"/>	<input type="checkbox"/>	

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Does the CCL has on-site availability of the following facilities:

	YES	NO	Comments
List of procedures performed and excluded in the laboratory (Attach a list)	<input type="checkbox"/>	<input type="checkbox"/>	
A document defining the process for the introduction of new procedures into the laboratory setting	<input type="checkbox"/>	<input type="checkbox"/>	

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## Level - II CCL

### Labs without on-site Cardiac Surgical Services

#### 1. STANDARDS FOR HOSPITALS

Does the CCL has on-site presence of the following:

*Tick all that apply.*

	YES	NO	Comments
Coronary care unit	<input type="checkbox"/>	<input type="checkbox"/>	
Intensive care unit	<input type="checkbox"/>	<input type="checkbox"/>	
Hematologic Consultative Services	<input type="checkbox"/>	<input type="checkbox"/>	
Hematologic Blood Bank Services	<input type="checkbox"/>	<input type="checkbox"/>	
Echocardiography (TTE&TOE) and doppler	<input type="checkbox"/>	<input type="checkbox"/>	
Mechanical support devices at a minimum including adequate number of intra-aortic balloon or Impella catheters	<input type="checkbox"/>	<input type="checkbox"/>	
Signed MOUs/LOs between the CCL and the receiving hospital having Cardiac Surgery services to accept cases	<input type="checkbox"/>	<input type="checkbox"/>	
Existence of a mechanism whereby a cardiac surgeon can review coronary angiograms before elective procedures and provide comments to the cardiologist and, if necessary, patients	<input type="checkbox"/>	<input type="checkbox"/>	
Availability of surgical backup at all hours for urgent cases and for elective cases at mutually agreeable times	<input type="checkbox"/>	<input type="checkbox"/>	

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Does the CCL has on-site presence of the following:

*Tick all that apply.*

	YES	NO	Comments
Confirmed availability of cardiac surgeon and a next available Operating Room before elective procedures begin as per written agreement	<input type="checkbox"/>	<input type="checkbox"/>	
Mechanism in place for direct discussion between the cardiologist and cardiac surgeon should urgent transfer be necessary	<input type="checkbox"/>	<input type="checkbox"/>	
Documented evidence of a rehearsed plan for the transport of patients to a facility with cardiac surgery and the ability to have patients on cardiopulmonary bypass within 90 minutes of the onset of the emergency	<input type="checkbox"/>	<input type="checkbox"/>	
Availability of transport to begin transfer within 20 minutes	<input type="checkbox"/>	<input type="checkbox"/>	
PCI consent form explaining that the procedure is being performed without on-site surgery and what will occur if surgery is necessary	<input type="checkbox"/>	<input type="checkbox"/>	

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## Level - III CCL

# HOSPITAL-BASED/FREESTANDING DIAGNOSTIC ONLY LABORATORIES

Does your CCL has on-site presence of the following:

*Tick all that apply.*

	YES	NO	Comments
Coronary Care unit	<input type="checkbox"/>	<input type="checkbox"/>	
Hematologic consultative and blood bank services	<input type="checkbox"/>	<input type="checkbox"/>	
Echocardiography (TTE&TOE) and Doppler	<input type="checkbox"/>	<input type="checkbox"/>	
Mechanical support devices	<input type="checkbox"/>	<input type="checkbox"/>	
Formal Patient transfer agreement	<input type="checkbox"/>	<input type="checkbox"/>	

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# **Section B**



## 2. STANDARDS FOR EQUIPMENTS

### 2.1 Which of the following equipment/facility is present at your CCL?

*Tick all that apply.*

	YES	NO	Comments
Digital fluoroscopy	<input type="checkbox"/>	<input type="checkbox"/>	
Angiography with multiple image intensifier	<input type="checkbox"/>	<input type="checkbox"/>	
On-line image storage and retrieval capabilities	<input type="checkbox"/>	<input type="checkbox"/>	
Physiologic monitoring (pressure, pulse oximetry and ECG channels)	<input type="checkbox"/>	<input type="checkbox"/>	

### 2.2 Do you have a varied inventory consisting the following:

*Tick all that apply.*

	YES	NO	Comments
Disposable supplies for vascular access management	<input type="checkbox"/>	<input type="checkbox"/>	
Disposable supplies for diagnostic coronary angiography and ventriculography	<input type="checkbox"/>	<input type="checkbox"/>	
Supplies for coronary guiding catheters	<input type="checkbox"/>	<input type="checkbox"/>	
Coronary guide wires	<input type="checkbox"/>	<input type="checkbox"/>	
Angioplasty balloons coronary stents	<input type="checkbox"/>	<input type="checkbox"/>	

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2.3 Do you have the following emergency management equipment and systems readily available in the CCL?

*Tick all that apply.*

	YES	NO	Comments
Resuscitation equipment	<input type="checkbox"/>	<input type="checkbox"/>	
Biphasic defibrillator	<input type="checkbox"/>	<input type="checkbox"/>	
Endotracheal intubation apparatus	<input type="checkbox"/>	<input type="checkbox"/>	
Temporary trans-venous pacemakers	<input type="checkbox"/>	<input type="checkbox"/>	
Intra-aortic balloon pump	<input type="checkbox"/>	<input type="checkbox"/>	
Pericardiocentesis equipment	<input type="checkbox"/>	<input type="checkbox"/>	

2.4 Is there any process in practice documenting routine preventive maintenance and testing of lab equipment based on vendor recommendations?

Mark only one oval.

YES

No

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**RADIOGRAPHY SYSTEM**

2.5 Does the radiography system includes, but not limited to, the following:

*Tick all that apply.*

	YES	NO	Comments
Image quality,	<input type="checkbox"/>	<input type="checkbox"/>	
Dynamic range,	<input type="checkbox"/>	<input type="checkbox"/>	
Modulation transfer function,	<input type="checkbox"/>	<input type="checkbox"/>	
Fluoroscopic spatial resolution,	<input type="checkbox"/>	<input type="checkbox"/>	
Fluoroscopic field of view size accuracy,	<input type="checkbox"/>	<input type="checkbox"/>	
Low contrast resolution,	<input type="checkbox"/>	<input type="checkbox"/>	
Record fluoroscopic mode	<input type="checkbox"/>	<input type="checkbox"/>	
Automatic exposure control under standard conditions and at maximum output	<input type="checkbox"/>	<input type="checkbox"/>	
Calibration of integrated radiation dose meters	<input type="checkbox"/>	<input type="checkbox"/>	
Functional UPS/Generator with service log book	<input type="checkbox"/>	<input type="checkbox"/>	
A process documenting routine preventive maintenance and testing of laboratory equipment based on vendor recommendations, including a comprehensive radiation safety program	<input type="checkbox"/>	<input type="checkbox"/>	

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### 3. STANDARD FOR CATH LAB OPERATORS AND STAFF

Does your CCL meet the following requirements:

*Tick all that apply.*

	YES	NO	Comments
Registration with PSIC	<input type="checkbox"/>	<input type="checkbox"/>	
Established credentialing committee that reviews the individual physician's credentials and allows them privileges of carrying out defined procedures in that hospital	<input type="checkbox"/>	<input type="checkbox"/>	
Cath. Lab director, who should be a credentialed interventional cardiologist with preferably 5 years of experience as interventional cardiologist	<input type="checkbox"/>	<input type="checkbox"/>	

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### 3.1 ELIGIBILITY TO PERFORM “INDEPENDENT” INTERVENTIONAL CARDIOLOGY PROCEDURES

a. Has the operator at your CCL, been granted eligibility to perform the procedures independently, based on the following proposed qualification criteria (**Training Pathway**):

Name of Operator: \_\_\_\_\_ (To be filled separately for each operator)

*Tick all that apply.*

	YES	NO	Comments
FCPS in Interventional Cardiology	<input type="checkbox"/>	<input type="checkbox"/>	
Diplomate American Board of Interventional cardiology	<input type="checkbox"/>	<input type="checkbox"/>	
MRCP with specialized cardiology training in interventional Cardiology post fellowship	<input type="checkbox"/>	<input type="checkbox"/>	
Completed Certificate of Specialized Training in Cardiology (CCT)UK, or equivalent.	<input type="checkbox"/>	<input type="checkbox"/>	
FCPS cardiology, or equivalent, with at least 3 years post fellowship adequate supervised training/experience in Interventional Cardiology at CPSP recognized and PSIC registered Cath laboratory under the supervision of a certified interventional cardiologist	<input type="checkbox"/>	<input type="checkbox"/>	
At-least completed 75 procedures/year as primary operator	<input type="checkbox"/>	<input type="checkbox"/>	
Training Experience certificate to this effect (To be provided by the Cath Laboratory director HOD or Head of Institute)	<input type="checkbox"/>	<input type="checkbox"/>	

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### 3.1 ELIGIBILITY TO PERFORM “INDEPENDENT” INTERVENTIONAL CARDIOLOGY PROCEDURES

b. Has the operator at your CCL, been granted eligibility to perform the procedures independently, based on the following proposed clinical experience criteria (**Practice Pathway**)\*:

Name of Operator: \_\_\_\_\_ (To be filled separately for each operator)

*Tick all that apply.*

	YES	NO	Comments
FCPS Medicine/MRCP	<input type="checkbox"/>	<input type="checkbox"/>	
Diplomate American Board in Medicine or equivalent	<input type="checkbox"/>	<input type="checkbox"/>	
At least 15 years of practice experience in interventional cardiology	<input type="checkbox"/>	<input type="checkbox"/>	
At least completed 75 procedures/year in last two years	<input type="checkbox"/>	<input type="checkbox"/>	

\*This exemption is given till 2023 after which formal two years training/Fellowship in Interventional Cardiology will be mandatory

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### 3.2 PHYSICIAN EXTENDERS AND CARDIOLOGY FELLOWS:

Which of the following standards for physician extender and cardiology fellows are implemented at your CCL?

*Tick all that apply.*

	YES	NO	Comments
Is the primary operator always a physician?	<input type="checkbox"/>	<input type="checkbox"/>	
Is the non-physician healthcare provider always viewed as extension of the primary operator?	<input type="checkbox"/>	<input type="checkbox"/>	
Non-physician providers are trained and credentialed for pre-procedural and post-procedural followup care	<input type="checkbox"/>	<input type="checkbox"/>	
Physician extenders are proficient in both, technical and cardiac catheterization and percutaneous intervention	<input type="checkbox"/>	<input type="checkbox"/>	
Presence of documented policy regarding the supervising role of primary operating physician	<input type="checkbox"/>	<input type="checkbox"/>	

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### 3.3 REQUIRMENTS FOR NURSING PERSONNEL

Does the nursing personnel at your CCL, meet the requirements/ensure the presence of the following:

*Tick all that apply.*

	YES	NO	Comments
A registered Nurse functions as Nursing Supervisor for the CCL	<input type="checkbox"/>	<input type="checkbox"/>	
The nursing supervisor monitors pre and post procedure areas as well as the procedure laboratories	<input type="checkbox"/>	<input type="checkbox"/>	
The nursing supervisor makes sure that all local patient care policies and procedures are followed	<input type="checkbox"/>	<input type="checkbox"/>	
The CCL Nurses have the experience of atleast one-year critical care practice & knowledge of cardiovascular medication etc	<input type="checkbox"/>	<input type="checkbox"/>	
Presence of licensed vocational practical nurses	<input type="checkbox"/>	<input type="checkbox"/>	
Presence of nursing assistants	<input type="checkbox"/>	<input type="checkbox"/>	
Presence of trained nurses administering conscious or deep sedation	<input type="checkbox"/>	<input type="checkbox"/>	
Presence of skilled allied health professionals (nurses and technicians) trained and experienced in evaluating patients before and after catheter based interventional procedure	<input type="checkbox"/>	<input type="checkbox"/>	

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### 3.4 REQUIRMENTS FOR TECHNOLOGISTS

Do the technologists at your CCL, meet the following requirements?

*Tick all that apply.*

YES

NO

Comments

Presence of at least one certified technologist skilled in radiographic and angiographic imaging principles and techniques such as the performance of X-ray generators, cine-pulse systems, image intensification, video and digital image storage, radiation safety principles and pressure injection systems.



The responsibilities of technologists are defined including responsibility for the routine maintenance' of radiological equipment, monitoring radiation safety, management of blood samples and calculations, monitoring and recording of ECG and hemodynamic data, data storage, operation of other equipment



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**4. STANDARDS OF PRE-PROCEDURE PRACTICE**

Are the following standards of pre-procedure practice implemented at your CCL?

*Tick all that apply.*

	YES	NO	Comments
Acquiring Informed Consent	<input type="checkbox"/>	<input type="checkbox"/>	
Review of Ethical concerns	<input type="checkbox"/>	<input type="checkbox"/>	
Prior knowledge of allergies	<input type="checkbox"/>	<input type="checkbox"/>	
Analysis of lab values and outside reports	<input type="checkbox"/>	<input type="checkbox"/>	
Management of medications	<input type="checkbox"/>	<input type="checkbox"/>	
Documentation for allergic reactions	<input type="checkbox"/>	<input type="checkbox"/>	
Protocol for preventing contrast reactions	<input type="checkbox"/>	<input type="checkbox"/>	
Detail review of laboratory reports/values	<input type="checkbox"/>	<input type="checkbox"/>	

**5. STANDARDS OF INTRA PROCEDURE PRACTICE**

Are the following standards of intra-procedure practice implemented at your CCL?

*Tick all that apply.*

	YES	NO	Comments
Review of pre-procedure checklist	<input type="checkbox"/>	<input type="checkbox"/>	
Noninvasive hemodynamic and oximetric monitoring of patients	<input type="checkbox"/>	<input type="checkbox"/>	
Consideration of access related risks	<input type="checkbox"/>	<input type="checkbox"/>	

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**6. STANDARDS OF POST PROCEDURE PRACTICE**

Are the following standards of post-procedure practice implemented at your CCL?

*Tick all that apply.*

	YES	NO	Comments
Physician to Patient Communication	<input type="checkbox"/>	<input type="checkbox"/>	
Access Site Management and Closure Devices as per guideline	<input type="checkbox"/>	<input type="checkbox"/>	
Review of patient outcomes	<input type="checkbox"/>	<input type="checkbox"/>	

**7. MONITORING OF PATIENT OUTCOMES AS PER GUIDELINES**

Are the following standards for monitoring of patient outcomes implemented at your CCL?

*Tick all that apply.*

	YES	NO	Comments
Review of medical records for adverse in-hospital patient outcomes	<input type="checkbox"/>	<input type="checkbox"/>	
Participation in the NCDR or CROP-Cath PCI Registry	<input type="checkbox"/>	<input type="checkbox"/>	
In-hospital mortality assessment for patients with STEMI and without STEMI are assessed	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring rate of unplanned CABG	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring proportion of STEMI receiving immediate PCI within 90 minutes	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring rate of procedure-related q-wave MI or ischemia	<input type="checkbox"/>	<input type="checkbox"/>	
Establish system for followup of renal functions in high risk patient	<input type="checkbox"/>	<input type="checkbox"/>	

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**8. REPORTING OF RESULTS**

Is the reporting of results done at your CCL as per guidelines, including but not limited to the following?

*Tick all that apply.*

	YES	NO	Comments
Preliminary procedure reports are written or dictated immediately after the procedure	<input type="checkbox"/>	<input type="checkbox"/>	
The record clearly and completely provides information for post-procedure management	<input type="checkbox"/>	<input type="checkbox"/>	
Progress note immediately after the procedure is placed in the medical record providing pertinent	<input type="checkbox"/>	<input type="checkbox"/>	

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### 9. STANDARDS FOR RADIATION SAFETY

Are the following standards for radiation safety implemented at your CCL?

*Tick all that apply.*

	YES	NO	Comments
Presence of safety programme to document the radiation exposure to patients and staff.	<input type="checkbox"/>	<input type="checkbox"/>	
Established radiation safety education programme either in conjunction with the hospital Health Physics Department/ Medical Physicist and/or an outside consultant and/or assistance from a web-based tutorial	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring of staff radiation dose through the use of personal dose monitors	<input type="checkbox"/>	<input type="checkbox"/>	
All personnel in the room, wear personal protective equipment, including lead aprons and thyroid shields as well as radiation badges	<input type="checkbox"/>	<input type="checkbox"/>	
Documented surveillance program	<input type="checkbox"/>	<input type="checkbox"/>	
Monitoring of patient radiation dose	<input type="checkbox"/>	<input type="checkbox"/>	
Implementation of strategy to reduce radiation exposure	<input type="checkbox"/>	<input type="checkbox"/>	
All CCL procedures are perform with the goal of keeping radiation dosage as low as resonably achievable (ALARA)	<input type="checkbox"/>	<input type="checkbox"/>	

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Any Comments:

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