

# **Infection Control Licensing in The Era of COVID-19**

## **A Challenge..... A Golden Chance**



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An illustration of three healthcare workers, likely nurses or doctors, standing in a circular frame. They are all wearing blue scrubs, blue surgical masks, and blue bouffant caps. The worker on the left is looking down, the worker in the center is looking forward and has a beard and glasses, and the worker on the right is looking forward. They are all wearing stethoscopes around their necks. The background is a light gray with a white circular frame.



# Infection Prevention Training and Education

Prevention of infections is **THE COMMON PRIMARY AIM** of healthcare services, regardless which service is presented. Thus, HCP need an understanding of how infections occur, how different micro-organisms spread, and the role they play in preventing the transmission of pathogenic microorganisms. In addition, they need to be aware of the national regulatory or statutory requirements.

## Improving Infection Prevention Practices



# Competencies

They are the **measurable** or **observable** knowledge, skills and behaviors that HCP demonstrate as part of their job performance.

In healthcare, patients rely on HCP to be competent within their roles including role specific infection prevention practices. It is critical that healthcare personnel perform the competencies required to deliver appropriate evidence-based care to patients. Competency is measured by assessing performance criteria that depends on evidence based standards.



# Definition of Competency

“The knowledge, skills, ability and behaviors that a person possesses in order to perform responsibilities correctly and skillfully.”

(O'Shea K, Hanley & Belfus, 2002)

# Competency-Based Training for Infection Prevention

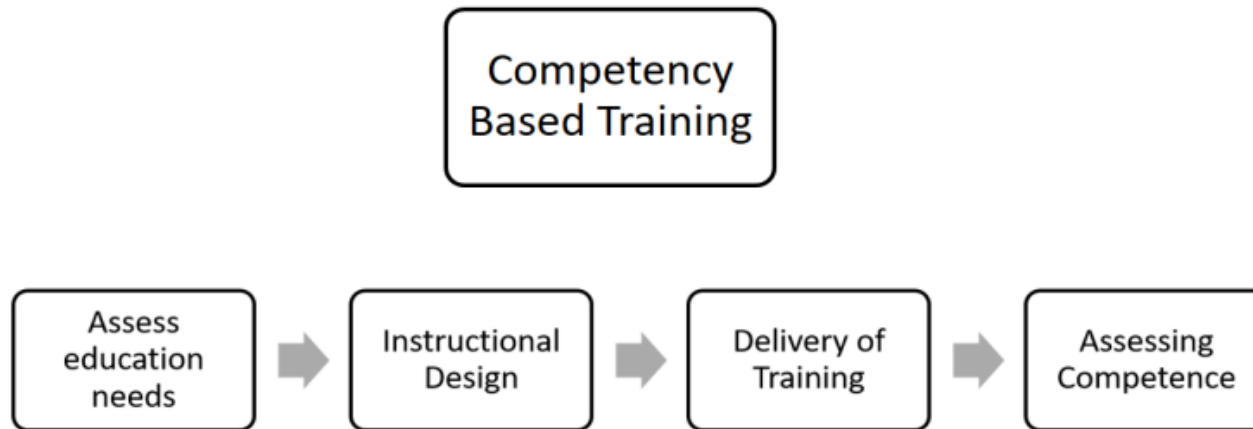
## CDC/STRIVE Infection Control Training

- ▶ Education and training is essential to ensure that staff have the knowledge and skills to protect patients, visitors, their colleagues and themselves.
- ▶ Competency-based training in healthcare should be designed in way that allows flexibility to tailor the training to the different competency needs of different categories of HCP within an organization. To ensure that this education and training is translated effectively to practice, audits and feedback which can promote adherence with standards of care and help sustain effective practices.

<https://www.cdc.gov/infectioncontrol/training/strive.html>



# Components of Competency-Based Training



# Competency Assessment

Competency assessment is an ongoing process of initial education, maintenance of knowledge and skills, evaluation and improvement as needed.

- Initial or Core Competency
  - Orientation
- Ongoing competency
  - Annually or when new skills/knowledge is introduced
  - Periodic competency assessment is mandated by regulatory bodies.
- Specialized competency
  - Reserved for those who work within a defined practice area or field such as infection prevention or critical care.



# Levels of Infection Control Training

Training offered to health-care workers must be pertinent and relevant to the tasks that each worker is required to perform.

- ❖ Basic Infection Control Training.
- ❖ Specialized infection control training.
- ❖ Advanced Infection Control Training.

# Basic Infection Control Training

- ▶ For all staff ( standard precautions )
  
- ▶ Indications :-
  - ❑ Pre- employment
  - ❑ Refreshing courses annually
  - ❑ When required as when there is a new infection control policy or observed malpractices.

# Specialized Infection Control Training



- ▶ Specific IPC knowledge and skills required for staff working in specialist areas or roles (e.g., sterile services, operating theatres, hygiene services, hemodialysis, and laboratories).
- ▶ E.g.  
Workers in specialized areas as ICUs and NICUs , should receive additional training as regard surveillance and bundle of care in addition to basic infection control training.

# Advanced Infection Control Training for Infection Control Practitioners (ICPs):

- ▶ WHO hand hygiene program
- ▶ Occupational health program
- ▶ Infection control in high risk areas
- ▶ Management of outbreaks
- ▶ Surveillance of hospital acquired infections
- ▶ MDRO
- ▶ Electronic programs for reporting infection surveillance data or occupational exposure
- ▶ Standards for accreditations of health care facilities

# Basic Infection Control Skills license (BICSL)

Basic Infection Control Skills license (BICSL) certificate was a prerequisite (HCWs) to complete hospital orientation and starting duty for all newly hired healthcare works at the tertiary hospital, south Jeddah, Saudi Arabia.

<b>BASIC INFECTION CONTROL SKILLS LICENSE (BICSL)</b> 			المديرية العامة للشؤون الصحية قسم الشؤون الأكاديمية والتدريب <b>BICSL CARD</b>		
اسم المتدرب: <input type="text"/>			Trainee's Name: <input type="text"/>		
<b>RESPIRATOR FIT TESTING</b>					
Fit		Non-Fit			
✓		✗			
Model	Type	Size			
3M	Cup Shape 1860	Regular			
<b>HAND HYGIENE</b>		<b>PPE</b>	<b>VISUAL TRIAGE</b>		
✓		✓	✓		
<b>VACCINATIONS</b>					
Meningococcal		Influenza			
✓		✓			
Date of Issue:		12/11/1440	15/7/2019		
Date of Expiry:		11/11/1441	2/7/2020		
MOH No.:		2527347			
SCFHS No.:		11JD0049063			
BICSL Instructor:					

# BICSL Components:

For fulfilling the requirements of the license certificate, health care workers were required to;

**First,** complete the educational and training session for hand hygiene indications and proper technique and proper use of personal protective equipment (PPE).

**Next,** they should have their fit test done and the size of the required high efficiency respiratory protection documented.

**Finally,** they should complete their mandatory vaccination, namely meningitis and influenza vaccines, at the occupational health clinic.



# BICSL Coverage

BICSL training program and fit testing was provided by the infection control department (ICD) on weekly basis for new HCWs and for annual renewal of previously licensed staff.

Average staff coverage of valid BICSL certificates was 65% to 75% of HCWs with some employees failing to apply for annual renewal of their BICSL certificates under the pressure of heavy work load.

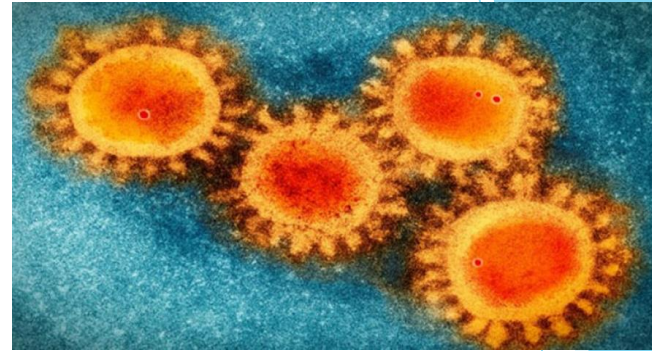




# BICSL & COVID 19 Preparedness Plan:

By the beginning of 2020, with the accelerating epidemiological scenario of COVID-19 pandemic, the COVID-19 guideline released by the Saudi Center for Disease Prevention and Control (SaudiCDC) February 2020, mandated IC training for all HCWs.

- ✓ Training and educational lectures regarding infection control policy and procedures, Covid-19 case definition, PPE proper Donning & Doffing and BICSL certification.
- Scheduled education sessions.
- On Job Training
- COVID Competency evaluation
- ✓ Training triage staff about respiratory precautions, triage process and Respiratory Triage Score.





# Respiratory Protection

Fit-testing and respiratory protection training were provided for all staff categories to ensure proper use of N95/PAPR respirators.



# COVID-19 Critical Care Crash Course

- ▶ COVID-19 Critical Care Crash Course was organized for all COVID-19 frontliners.
- ▶ COVID-19 preparedness orientation scope was widened to cover basic IC training, COVID-19 case definition and triaging procedures, universal masking, extended use of PPE and management of HCWs COVID-19 exposure.



## < COVID-19 Critical Care Crash Course...

57 of 61

Oxygen delivery system		Preferable senior with clinical/education experience							
Facility requirement		Ventilator (Invasive ventilator)							
		NIV (non- invasive ventilator)							
		HFNC (High flow nasal cannula)							
		Ventilator circuit							
		Endotracheal tube							
		Viral filter							
		Artificial lung / high fidelity manikin							
		Clamp							
		Power source							
		Air/oxygen source in needed							
Skills session: Personal protective equipment application and donning/doffing.	Trainer requirement	Experience in: Infection prevention (Recommend: Nurse, infection control specialist, Emergency medicine, ICU)							
		Preferable senior with clinical/education experience							
	Facility requirement	Head covers							
		Face shield							
		Masks Surgical							
		N95 masks							
		Gloves							

# Competency Assessment

Based on the recommendations of the Central Board for Accrediting Healthcare Institutions (CBAHI), COVID-19 competency assessment was done for all HCWs specially in high-risk departments as emergency, intensive care and isolation wards.

- COVID 19 competency form.
- HH and PPE competency form.
- Triage competency form.

COVID 19 Competency Checklist		
#	Questions	Answer
1	Are HCWs aware about the accessibility of infection prevention and control policy and procedure?	
2	Are HCWs aware about MERS CoV & nCoV policy and procedure, and how to find it?	
3	Are the HCWs aware about the flowchart and case definition of suspected MERS CoV & nCoV cases?	
4	Are HCWs aware about the filling forms and case definition of suspected MERS CoV & nCoV cases?	
5	Are HCWs aware MERS CoV clearance forms?	
6	Are HCWs aware about the notification forms of suspected MERS CoV & nCoV cases?	
7	Are HCWs aware about the advice about hand	

وزارة الصحة  
Hand Hygiene & PPE Competency Evaluation  
HH 5 moments compliance / HH Steps/ PPE Donning & Doffing  
Evaluator: *Somai Khair*  
26-02-2020

Department	Name	ID	Category	HH Compliance	HH Competency	PPE	SIGNATURE
				M NM DEMO	Done Failed	Don. Doff.	
Emergency	Joshi, Sagar	5150410					
Emergency	Joshi, Jore	55309					
ICU	Vijai, Jagan	0114062					
ICU	Pillai, Hussain	7016515					
ICU	Joshi, Sunil	010405					
ICU	Madhukar, A. Suresh	73453					
ICU	Anna, Gokul	011404					
ICU	Murugan, Raju	40408					
ICU	Narayan, Sankar	011405					
ICU	Chandra, Suresh	40407					
ICU	Sachin, Manjunath	53408					
ICU	Chandra, Suresh	40408					
ICU	Sunil, Suresh	60408					
ICU	Anand, Suresh	011406					
ICU	Arjun, Suresh	011407					
ICU	Arjun, Suresh	011408					
ICU	Arjun, Suresh	011409					
ICU	Arjun, Suresh	011410					
ICU	Arjun, Suresh	011411					
ICU	Arjun, Suresh	011412					
ICU	Arjun, Suresh	011413					
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ICU	Arjun, Suresh	011471					
ICU	Arjun, Suresh	011472					
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ICU	Arjun, Suresh	011497					
ICU	Arjun, Suresh	011498					
ICU	Arjun, Suresh	011499					
ICU	Arjun, Suresh	011500					

KING ABDEL AZIZ HOSPITAL - JEDDAH

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**TRIAGE STAFF COMPETENCY ASSESSMENT CHECKLIST**

Position: \_\_\_\_\_ Staff Name: \_\_\_\_\_ Unit: \_\_\_\_\_ ID No.: \_\_\_\_\_

A. KNOWLEDGE:	✓ if met	Comments
1 Define Triage.		
2 Enumerate the purpose of Triage.		
3 State the importance of Triage.		
4 Identify the different levels of Triage		
B. SKILLS:	✓ if done	Comments
1 Greet client and family in a warm empathetic manner.		
2 Performs brief visual assessments for all patients.		
3 Documents the respiratory assessment clearly in triage form		
4 Triage patients into priority groups using CTAS		
5 Transport client to treatment area when necessary		
6 Give report to the treatment nurse or emergency physician, documents to whom report was given to and returns to the triage area.		
7 Keep patients and families aware of delays		
8 Reassess patients according to their triage level.		
9 Instruct patients to notify triage nurse of any change in condition.		
C. ATTITUDE:	✓ if observed	Comments
1 Maintain privacy throughout the procedure.		
2 Data / information obtained are analyzed and verified for accuracy before completion.		
3 Respect patient's right and accepts behavior in response to procedure.		
4 Conduct the entire assessment meticulously and systematically.		
5 Maintain standard precaution of infection control all times during nursing care.		



# Training Monitoring & Documentation

Central monitoring of BICSL training by the Saudi Ministry of Health was accomplished through the Health Electronic Surveillance Network (HESN), where all trainee data and evaluation was entered and periodically updated by infection control practitioners (ICPs).

Electronic BICSL certificates were issued.

المنظمة العامة للصحة  
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**Basic Infection Control Skills License ( BICSL ) Card**

Employee Name: \_\_\_\_\_

Employee ID No: \_\_\_\_\_

HESN ID No: 5149300

HealthCare Facility: Makkah City Preventive Medicine Directorate

**Respirator :**

Respirator N95 Type: 3M 1860

N95 Fit Test Date : 25-Nov-2019

**Vaccinations :**

✓ Influenza Vaccine	Date: 25-Nov-2019
✓ Allergy To Influenza Vaccine	
✓ Proof Influenza	
✓ Meningococcal Vaccine	Date: 30-Nov-2019
✓ Allergy To Mening Vaccine	Reviewer: rabha bakur
✓ Proof Meningococcal Vaccine	

**Competencies :**

✓ Hand Hygiene	✓ PPE
Date: 25-Nov-2019	Date: 25-Nov-2019
Trainer Name: rabha bakur	Trainer Name: rabha bakur
Trainer ID: _____	Trainer ID: _____

Issue Date: 04-Dec-2019

Created By: \_\_\_\_\_ Confidential 5/1

Record type: Encounter  
Record ID: 29882  
Record Name: encounter

**General**

Job Catagory: \_\_\_\_\_

Specify if other: \_\_\_\_\_

Department: \_\_\_\_\_

Specify if other: \_\_\_\_\_

**Respiratory Fit Screening**

Respiratory Fit screening Date: 5/7/2019  
Delete

Does the employee have any current medical problem that causes of breath , wheezing ,constant runny nose ,or repeated cough ?( examples: asthma COPD , chronic bronchitis ,severe allergies ) \_\_\_\_\_

Does the employee have a rash on the face or any skin condition likely to be aggravated or irritated a mask rubbing on it? \_\_\_\_\_

Does the employee have a facial deformity, past major surgery to the face, or an unusually small jaw? (These factors may make fitting a mask more difficult.) \_\_\_\_\_

Has the employee worn a respirator before? If so, has he or she experienced problems wearing a respirator? \_\_\_\_\_

For men only: Does the employee have beard and is not willing to shave it off? \_\_\_\_\_

Is the employee being treated for a breathing disorder or lung disease? \_\_\_\_\_

Is there any medical reason that may prevent employee from wearing N95 respirator on the job? \_\_\_\_\_

Add

**Size and Model of Respirator**

Date of Fit: 5/7/2019  
Delete

N95 Respirator Fit: \_\_\_\_\_

Type of N95: \_\_\_\_\_

Specify if other: \_\_\_\_\_

If the answer to any screening question is Yes, then a PAPR (Powered Air Purifying Respirator) is Provided: \_\_\_\_\_

Add

**Hand Hygiene and PPE Competencies**

Hand Hygiene Competency Done: \_\_\_\_\_  
Delete

Date: 5/7/2019

Trainer: \_\_\_\_\_

Trainer ID Number: \_\_\_\_\_

PPE Competency: \_\_\_\_\_

PPE Competency Done: \_\_\_\_\_

Date: 5/7/2019

Trainer: \_\_\_\_\_

Trainer ID Number: \_\_\_\_\_

Add

**Vaccination Review**

Review Date: 5/7/2019  
Delete

Influenza Vaccine: \_\_\_\_\_

Date of last vaccine: 5/7/2019

Allergy to Influenza Vaccine: \_\_\_\_\_

Proof to Influenza Vaccine Allergy/ Provided: \_\_\_\_\_

Meningococcal Vaccine/change ( Mandatory For Hajj): \_\_\_\_\_

Date of last vaccine: 5/7/2019

Allergy to Meningococcal Vaccine: \_\_\_\_\_

Proof to Meningococcal Vaccine Allergy/ Provided: \_\_\_\_\_

Reviewer: \_\_\_\_\_

Add



# Target Achieved

,,,, Achievers recognized:

- ▶ With the growing awareness of all HCWs about the pivotal role of IC training, ICPs became busy enrolling more and more staff in the BICSL and COVID-19 orientation programs.
- ▶ Around the midyear of 2020, 100% coverage of HCWs IC training was achieved ensuring that the staff will have the knowledge and skills to protect patients, visitors and themselves.



# **Steps for Developing A Successful Training Plan**

# 1. Situation analysis and educational needs assessment.

- ▶ Educational needs assessment to identify deficiencies in knowledge, skills, or attitude.
- ▶ Needs assessment should be according to infection control competencies required by different staff categories .

# Methods of Educational Needs Assessment

1. **Questionnaire** :- to identify areas of learning deficiencies.
2. **Personal interviews:-** to determine the learning needs.
3. **Direct observation of practices:-** e.g. hand washing compliance in critical care units, use of personnel protective equipment , use of aseptic technique etc.
4. **Review of internal reports:** incident reports, occupational injury and illness reports.
5. **Review of hospital acquired infection rates.**



## 2. Designing a training program.

- ❑ Analysis of training needs and setting priorities.
- ❑ Putting the annual training program based on the previous analysis.
- ❑ Getting approval of the training plan from high authorities .

### 3. Contents of training plan.

Each program include the following points:-

❖ Goals :-

Infection control building capacity for all categories of staff working in the hospital.

❖ Intended learning objectives :-

- ▶ The specific actions the learner will perform as a result of instruction.
- ▶ It should include the **knowledge**, **skills** and **attitudes** required to be gained by attendee of the program.

# Infection control training objectives

Topic	Objectives		
	Knowledge	Attitude ( core concepts)	Skills
Hand hygiene	<ul style="list-style-type: none"> <li><input type="checkbox"/> The scientific evidence base supporting the effectiveness of hand hygiene in preventing infection.</li> <li><input type="checkbox"/> When hand hygiene is required.</li> <li><input type="checkbox"/> The appropriate use of hand hygiene products.</li> <li><input type="checkbox"/> How to undertake hand hygiene.</li> <li><input type="checkbox"/> The importance of skin care</li> </ul>	Hand hygiene as the single most important practice in reducing the spread of microorganisms.	Demonstrate an effective hand hygiene technique
Personal Protective Equipment	<ul style="list-style-type: none"> <li>• The different types of PPE.</li> <li>• How to determine when and what type of PPE is required.</li> <li>• How to don PPE.</li> <li>• When and how PPE should be removed.</li> <li>• Why hand hygiene is required after removing PPE.</li> <li>• Why gloves do not replace the need for hand hygiene.</li> <li>• How to safely remove PPE.</li> </ul>	Realize the role of wearing of personal protective equipment (PPE) as an infection prevention and control measure to protect healthcare workers and their patients.	Demonstrate donning & doffing of PPE safely

Topic	Objectives		
	Knowledge	Attitude (core concepts)	Skills
Safe Use and Disposal of Sharps Including Use of Safety Devices	<ul style="list-style-type: none"> <li><input type="checkbox"/> The safe use of needle free/needle safe devices.</li> <li><input type="checkbox"/> The safe use of sharps.</li> <li><input type="checkbox"/> The responsibility of the person using a sharp to ensure its safe disposal.</li> </ul>	<p>The role of Safe Use and Disposal of Sharps</p> <p>Including Use of Safety Devices as a means of occupational safety and prevention of sharp injury.</p>	<ul style="list-style-type: none"> <li>• Demonstration of safe handling of sharps</li> <li>• Training on mechanism of activation of protective mechanism in safety device use</li> </ul>
Aseptic technique	<p>An understanding of:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> What aseptic technique is.</li> <li><input type="checkbox"/> Undertaking a risk assessment to determine when aseptic technique is required.</li> <li><input type="checkbox"/> The role of aseptic technique to minimize the risks of HCAI.</li> <li><input type="checkbox"/> The key principles of aseptic technique including a clean and dirty workflow.</li> </ul>	<p>Aseptic technique as critical to prevent HCAI.</p>	<ul style="list-style-type: none"> <li>• Demonstrate the application of aseptic technique</li> <li>• Aseptic technique in obtaining laboratory specimen</li> </ul>

## 4. Evaluation,, Motivation & Appreciation.

- ▶ **Pre and post test** to assess the appropriateness of the material presented for a particular audience and whether learning has occurred and evaluate the knowledge gained by the attendees.
- ▶ **Changes of practices as a result of training** which can be evaluated by **direct observation** of the practices , noting behavioral changes that are a result of the course (e.g. demonstration of proper use of protective barriers).

## ► Monitoring of practices:

Measuring effect of training on infection control practices as:-

- Hand hygiene compliance before and after training.
- Compliance of staff with PPE or isolation precautions before and after training.

## ► Motivation:

Relevant Key Performance Indicators (KPIs)

- Healthcare associated Infections (HAIs).
- HCWs COVID 19 infections.

## ► Recognition and appreciation of achievers:

Celebrate the champions and partners of success.




# Essential Elements to Address

## Pillars of a Successful IPC Training Program.



- ▶ Evaluate the training needs of the healthcare organization and of HCWs through surveys and gap analysis.
- ▶ All relevant healthcare personnel should be included in training.
- ▶ Select and provide appropriate training modalities to achieve expected outcomes.
- ▶ Integrate basic knowledge and awareness of infection control issues within the healthcare organization's training program for new employees.
- ▶ Evaluate the impact of the training sessions.

- 
- ▶ Training should be conducted upon hire and before provision of care or specific procedures
  - ▶ At least annually refresher and when new protocols are introduced
  - ▶ Specific elements of competency by domain should be Included.
  - ▶ Require healthcare personnel to demonstrate competency following each training.
  - ▶ System of documentation of competency for each healthcare personnel.



# CONCLUSION

Hospitals conduct quality improvement studies, like root cause analysis, annual infection control risk assessments and gap analysis, and based on the outcomes of those analyses, new or additional training may be indicated to target areas of risk.

Infection prevention process and outcome data can always indicate additional training needs.

