2.10

# Information Management System (IMS)

### 2.10 Information Management System (IMS)

The Information Management standards highlight the fact that patient care is highly dependent upon information, and that the work of physicians and staff throughout the hospital must be facilitated by timely and accurate information to provide coordinated, integrated care. In addition, it is important to protect the privacy of the data collected and to limit unauthorized access.

Medical records serve many functions but their primary purpose is to support patient care. There is currently a major drive to computerize medical records, but without improvement in the quality of paper records the full benefits of computerization are unlikely to be realized. The onus for improving records lies with individual health professionals. Structuring the record can bring direct benefits to patients by improving patient outcomes and doctor performance.

# STANDARD-28. IMS-1: THE ORGANIZATION HAS A COMPLETE AND ACCURATE MEDICAL RECORD FOR EVERY PATIENT

### IND.144 EVERY MEDICAL RECORD HAS A UNIQUE IDENTIFIER

#### **Unique Patient Identifiers**

All documents of a patient must be consistently labelled with at least 1 unique identifier so that it can be verified that documents correspond to particular subjects. Computer Generated Unique ID Number is the easiest and correct Identification Method to be adopted as early as possible. The patient's medical record always becomes a focal point anytime there is a question regarding the care and treatment rendered. It is important that the medical record be kept accurately and timely.

The medical record serves three primary purposes: 1) to ensure quality patient care; 2) to provide documentary evidence of the patient's course of illness and treatment; and 3) to facilitate review.

One often thinks of the medical record as a means of protecting the hospital or providing a defense in a medical malpractice action. However, the purpose of the medical record is not to protect or to provide a defense. The purpose of the medical record, as it pertains to risk management, is to preserve the truth. In reality, a complete and accurate medical record will protect the legal interests of the patient, the hospital, and the responsible practitioner. The medical record will provide a justifiable defense, if one exists, or will indict the responsible party if there is no justifiable defense.

Accurate identification of a patient is the backbone of an effective and efficient medical record system. Correct identification is needed to positively identify the patient and ensure that each patient has one medical record number and one medical record with no more duplicates. In order to identify patients, we need a UNIQUE PATIENT CHARACTERISTIC. The type and number of unique patient characteristics used will change from one setting to other, and are defined as:

### Something about a patient that does not change.

Some useful unique patient characteristics are:

- i. Client/Patient full name
- ii. Gender
- iii. DoB
- National identification number (CNIC number)
- v. Mother's first name
- vi. Father's first name
- vii. Social security number
- viii. Health insurance number

- ix. In the case of a new-born infant a biological characteristic, e.g. fingerprint or footprint
  The following are NOTconsidered unique characteristics:
  - Where a person lives is NOT a unique patient characteristic because it can change.
  - b. A person's age is NOT a unique patient characteristic because it DOES change.
  - c. Although it should not change, it is important that a patient's birthplace is NOT used, as it is often identified by most people as being the place where they "come from" as opposed to the place where they were actually born.

### ORGANIZATION POLICY IDENTIFIES THOSE AUTHORIZED TO MAKE ENTRIES IN THE MEDICAL RECORD

#### **50Ps for Identification of Medical Record Entries**

i. The Organization maintains a list of authorized persons along with the details of documents which they can sign. The list also contains their specimen signatures, initials and the stamps they use. Any professional who, in the execution of his or her professional duties, signs official documents relating to patient care, such as prescriptions, certificates (excluding death certificates), patient records, hospital or other reports, shall do so by signing such a document and clearly writing his/her name, appointment and the date in block letters, stamping the same. A sample of such a list is given below;

### Table 27: Sample Authorized Personnel List

Sr.#	Particulars & Appointment	Authorization	Initials	Signatures	Stamp
1.	Prof. Dr(HOD Surgery)				
2.	Dr(Registrar)				
3.	Dr(PG Trainee)				

ii. The organization must provide the individual signatories a list of what they can sign and what not.

### IND.146 EVERY MEDICAL RECORD ENTRY IS DATED AND TIMED

### SOPs for Time Lining the Documentation

This indicator demands that every time an entry is made in the medical records, it is timed and dated along with the particulars of the person making the entry.

Recording of Date and Time starts from the time a patient enters the hospital and seeks care. The first such record is the Register at the Reception and the 'Parchi' issued for consulting a doctor. Then it is the turn of the attending doctor who should examine the patient, prescribe medicines or refer the patient to someone else, while putting the date and time along with his/her signatures on the slip. Similarly the pharmacist must sign and put the date and time after issuing the medicines. Similarly, in the indoor record, every entry is signed stamped, dated and timed by doctors, nurses, proceduralists and supervisors.

Accurate date and time recording is of paramount importance whenever there is a need to produce the documentation as a proof of certain action having been taken on time. It is a valuable source of data for coding, health research and a valuable source of evidence and rationale for funding and resource management. Hospital authorities shall make strategies to ensure implementation of this requirement.

### IND.147 THE AUTHOR OF THE ENTRY CAN BE IDENTIFIED

### Identification of the Author of Data/Record Entries

There is a process to ensure that only authorized individuals make entries in patient clinical records, and that each entry identifies the author of the entry and the date it was recorded.

The medical records service shall utilize systems to verify the author(s) of entries in the patients' medical records. Delegation of use of computer codes, signature stamps, or other authentication systems, to persons other than the author of the entry, is prohibited.

Link this indicator with Indicator No. 145.

### IND.148

# THE RECORD PROVIDES AN UP-TO-DATE AND CHRONOLOGICAL ACCOUNT OF PATIENT CARE

### **Up-to-date Chronological Record**

Information documented during or immediately after care is provided or an event has occurred that is considered to be more reliable and a more accurate record of care than information recorded later, based on memory.

Chronological entries present a clear picture of the sequence of care provided and events over time and facilitate better communication amongst and between care providers. Late entries should be appropriately recorded as soon as possible as to rectify the absence, but these should be endorsed by the in-charge.

Minimum Requirements for Patients' Medical Records 52. Upon completion, medical records for inpatients and outpatients shall contain, at a minimum, the documents as specified below. Records for patients at the hospital for other specialized services, such as emergency services or surgical services, shall contain such additional documentation as required for those services.

- Inpatient Records. Medical records for inpatients shall contain at least the following: i.
  - A unique identifying number and a patient identification form.
  - Name, address, DoB, sex, and person to be notified in an emergency.
  - The date and time of the patient's admission.
  - d. The admitting diagnosis and clinical symptoms.
  - e. The name of the attending physician.
  - f. Any patient allergies.
  - g. Documentation regarding advanced directives.
  - The report from the history and physical examination.
  - The report of the nursing assessment performed after admission.
  - j. Laboratory, radiological, electrocardiogram, and other diagnostic assessment data or reports as indicated.
  - k. Reports from any consultations.
  - The patient's plan of care.
  - m. Physician's orders or orders from another practitioner authorized by law to give medical or treatment orders.
  - n. Progress notes from staff members involved in the patient's care, which describe the patient's response to medications, treatment, procedures, anaesthesia, and surgeries.
  - Data, or summary data where appropriate, from routine or special monitoring.
  - p. Medication, anaesthesia, surgical, and treatment records.
  - q. Documentation that the patient has been offered the opportunity to consent to procedures for which consent is required.
  - r. Date and time of discharge.
  - s. Description of condition, final diagnosis, and disposition on discharge or transfer.
  - Discharge summary with a summary of the hospitalization and results of treatment.
  - u. If applicable, the report of autopsy results.

Authority O.C.G.A. Sec. 31-7-2.1. History. Original Rule entitled "Medical Records" adopted. F. Nov. 22, 2002; eff. Dec. 12, 2002.

- ii. Outpatient Records. Medical reports for outpatients shall contain at least the following:
  - A unique identifying number and a patient identification form.
  - b. Name, address, DoB, sex, and person to be notified in an emergency.
  - c. Diagnosis of the patient's condition.
  - d. The name of the physician ordering treatment or procedures.
  - e. Patient allergies.
  - Physician's orders or orders from another practitioner authorized by law to give medical or treatment orders as applicable.
  - g. Documentation that the patient has been offered the opportunity to consent to procedures for which consent is required by law/regulations.
  - h. Reports from any diagnostic testing.
  - Sufficient information to justify any treatment or procedure provided, report of outcome of the treatment or procedure, progress notes and the disposition of the patient after treatment.

# STANDARD-29. IMS-2: THE MEDICAL RECORD REFLECTS CONTINUITY OF CARE

IND.149

THE MEDICAL RECORD CONTAINS INFORMATION REGARDING REASONS FOR ADMISSION, DIAGNOSIS AND PLAN OF CARE

#### Scope of Medical Records

Accurate medical record documentation should comply, minimally, with the following principles of medical record documentation:

- i. The medical record should be complete and legible.
- ii. The documentation of each patient encounter should include: the reason for the encounter and relevant history; physical examination findings and prior diagnostic test results; assessment, clinical impression, or diagnosis; plan for care, date and legible identity of the observer.
- iii. If not documented, the rationale for ordering diagnostic and other ancillary services should be easily inferred. Past and present diagnoses should be accessible to the treating and/or consulting physician.
- iv. Appropriate health risk factors should be identified. The patient's progress, response to and changes in treatment and revision in diagnosis should be documented.

The hospital has a complete and accurate medical record for every individual assessed or treated. Every medical record entry is timed, dated and initialed, its author identified and when necessary and the treatment noted.

### Contents of the Medical Record

- a. The content of the medical record, which includes written and electronic documents, must be sufficiently detailed, legible and organized to enable:
  - The practitioner responsible for the patient to identify the patient, provide continuing care, determine the patient's condition at a specific time, review the diagnosis and therapeutic procedures performed and the patient's response to treatment.
  - A consultant to render an opinion after a patient examination and review of the medical record.
  - 3. Another practitioner to assume patient care at any time.
  - Retrieval of information required for utilization review, quality review and transfer recommendations, etc.

- b. The medical record contains the following clinical information:
  - The reason(s) for admission for care, treatment and services.
  - 2. The patient's initial diagnosis, diagnostic impression(s) or conditions(s).
  - Findings of assessments and reassessments.
  - 4. Any allergies to food or latex.
  - 5. Any allergies to medication.
  - Conclusions or impressions drawn from the patient's medical history and physical examination.
  - Diagnoses or conditions established during the patient's course of care, treatment, and services.
  - 8. Any consultations reports.
  - 9. Any observations relevant to care, treatment and services.
  - 10. The patient's response to care, treatment and services.
  - Any emergency care, treatment and services provided to the patient before his or her arrival.
  - 12. Progress notes.
  - 13. All orders.
  - Medications ordered or prescribed.
  - Medications administered, including the strength, dose, frequency and route.
  - Any access site for medication, administration devices used and rate of administration.
  - Any adverse drug reactions.
  - Readmission notes.
  - Shifting record from one department to another department.
  - Treatment goals, plan of care, and revisions to the plan of care.
  - Results of diagnostic and therapeutic tests and procedures.
  - Medications dispensed or prescribed on discharge.
  - 23. Discharge diagnosis.
  - 24. Discharge plan and discharge planning evaluation.

- 25. Follow-up plans.
- 26. Referral letters.
- c. The medical record contains the following information as needed to provide care, treatment and services:
  - 1. Any advance directives (Before admission of patient).
  - 2. Informed consent, when required by hospital policy.
  - 3. Any records of communication with the patient, such as telephone calls or email.
  - Any patient-generated information.
- d. The medical record of a patient who receives urgent or immediate care, treatment and services contain all of the following:
  - 1. The time and means of arrival.
  - 2. Indication that the patient left against medical advice, when applicable.
  - Conclusions reached at the termination of care, treatment and services, including the patient's final disposition, condition and instructions given for follow-up care, treatment and services.
  - A copy of information made available to the practitioner or medical organization providing follow-up care, treatment or services.
- e. A summary list is initiated for the patient by his or her third visit which contains the following information:
  - 1. Any significant medical diagnoses and conditions.
  - 2. Any significant operative and invasive procedures.
  - Any adverse or allergic drug reaction.
  - 4. Any current medications, over-the-counter medications and herbal preparations.

The patient's summary list is updated whenever there is a change in diagnoses, medications or allergies to medications and whenever a significant procedure is performed.

### IND.150

### OPERATIVE AND OTHER PROCEDURES PERFORMED ARE INCORPORATED IN THE MEDICAL RECORD

### Incorporation of Operative and Procedure Notes

An operative or other high-risk procedure report is written or dictated upon completion of the operative or other high-risk procedure before the patient is transferred to the next level of care or immediately after transferring the patient. The progress note and dictated operative report should be part of the patient's medical record and must include the following:

- Name(s) of the independent practitioner(s) who performed the procedure and his or her assistant(s).
- ii. Name of the procedure performed.
- iii. A description of the procedure.
- iv. Findings of the procedure.
- V. Whatever is done in a procedure.
- Vi. Estimated blood loss.
- vii. Any specimens removed.
- viii. The postoperative diagnosis.
- ix. Complications during and after surgery, if any.

The surgeon must authenticate the completed operative report as soon as possible after surgery/procedure.

WHEN A PATIENT IS TRANSFERRED TO ANOTHER HOSPITAL, THE MEDICAL IND.151 RECORD CONTAINS THE DATE OF TRANSFER, THE REASON FOR THE TRANSFER AND THE NAME OF THE RECEIVING HOSPITAL

#### SOPs for Transfer of Patients

Following the decision to refer a patient to another hospital, there should be a written communication sent from the referring facility and a copy of the same should be retained in the medical record of the patient.

If the patient has been transferred at his/her own request, a note to that effect may be added in the patient's record. In such cases the name of the receiving hospital would be of the onewhere the patient desires to go to. However, if the patient has been transferred by the HCE, it shall have acknowledgement from the receiving hospital.

Any element of care/treatment carried out during patient transfer must be documented.

### ND.152

# THE MEDICAL RECORD CONTAINS A COPY OF THE DISCHARGE NOTE DULY SIGNED BY APPROPRIATE AND QUALIFIED PERSONNEL

### Discharge Summary Record

A discharge summary is a summary of the patient's stay in the hospital written by the attending doctor. The summary should contain following minimum details:

- i. Patient identification.
- ii. Reason for admission.
- iii. Examinations and findings.
- iv. Treatment while in hospital.
- v. Proposed follow up.
- vi. Medications.
- vii. Diet and instructions to maintain health status.

A discharge summary may be written on a pre-printed form or on plain paper and typed or word processed in the Medical Record Department/room. Alternatively, the attending doctor writes a discharge summary in duplicate when the patient is discharged. The original is kept in the medical record and the copy given to the patient.

On discharge/death of the patient the medical record, including ALL forms relating to the admission plus any previous records, should be sent to the Medical Record Department/room as soon as possible or within 72 hours. The medical record should remain in the Medical Record Department/room.

Medical record staff responsible for the discharge procedure should be trained to ensure that the medical records are completed promptly and correctly.

Discharge lists should be kept in order of date in the Medical Record Department. The list should contain the patient's name, age, treating doctor, ward, and service, i.e., medical, surgical, obstetric, orthopaedic, etc., and whether the patient is alive or dead. Discharge lists are usually used to prepare the hospital inpatient statistics.

By using the discharge list, the staff responsible for the discharge procedure in the Medical Record Department can check to see if they have all the medical records of discharged/dead patients from the previous day. If any are missing, they should contact the ward to find them. Once a patient has been discharged, the medical record should be returned promptly to the

Medical Record Department and acknowledgement to this effect should be received. Failure to do so may result in a missing medical record. Once the patient is no longer in the ward, their medical record can easily be misplaced.

Any qualified and trained individual can compile the discharge summary such as the patient's physician or a house medical officer.

### IND.153

# IN THE CASE OF DEATH, THE MEDICAL RECORD CONTAINS A COPY OF THE DEATH CERTIFICATE INDICATING THE CAUSE, DATE AND TIME OF DEATH

### Death Certificate Record

In case of death, details of circumstances leading to the death of patients like primary and secondary cause of death should be mentioned. The death certificate must be signed and stamped by registrar and dead body handed over to blood relations like father, mother, spouse etc.

On the death of the patient, the medical record including ALL forms relating to the admission plus any previous records should be sent to the Medical Record Department as soon as possible or within 72 hours.

All deaths occurring in hospital, either inpatient or outpatient must be documented in the Medical Record Department.

### IND.154

# WHENEVER A CLINICAL AUTOPSY IS CARRIED OUT, THE MEDICAL RECORD CONTAINS A COPY OF THE REPORT OF THE SAME

### **Autopsy Report Record**

Clinical autopsies serve two major purposes. They are performed to gain more insight into pathological processes and determine what factors contributed to a patient's death. Autopsies are also performed to ensure the standard of care at hospitals. Autopsies can yield insight into how patient deaths can be prevented in the future.

### IND.155 CARE PROVIDERS HAVE ACCESS TO CURRENT AND PAST MEDICAL RECORDS

### Access to Medical Record

The medical record serves as the central repository for planning patient care and documenting communication amongst the patient and HCP and professionals contributing to the patient's care.

In addition to facilitating high quality patient care, an appropriately documented medical record serves as a legal document to verify the services provided. The medical record may be used to validate the site of the service, the medical necessity and appropriateness of the diagnostic and/or therapeutic services provided, and also to validate that the services have been reported accurately.

Organization policy identifies those care providers who have access to the patient's record to ensure confidentiality of patient information.

# STANDARD-30. IMS-3: THE ORGANIZATION REGULARLY CARRIES OUT REVIEW OF MEDICAL RECORDS

### IND.156 THE MEDICAL RECORDS ARE REVIEWED PERIODICALLY

### Periodical Review for M&E of Medical Record

Each hospital determines the content and format of the patient clinical record and has a process to assess the content and completeness of records. That process is a part of the hospital's performance improvement activities and is carried out regularly. Patient clinical record review is based on a sample representing the practitioners providing care and the types of care provided. The review process is conducted by the medical staff, nursing staff, and other relevant clinical professionals who are authorized to make entries in the patient record. The review focuses on the timeliness, completeness, legibility, and so forth of the record and clinical information. Clinical record content required by any existing law or regulation is included in the review process.

The hospital's clinical record review process includes records of patients currently receiving care as well as records of the patients who have been discharged or died in the HCE.

### IND.157 THE REVIEW USES A REPRESENTATIVE SAMPLE BASED ON STATISTICAL PRINCIPLES

### Sampling Policy for Record Review<sup>53</sup>

- Medical records shall be randomly selected using methodology decided upon by the reviewer/s.
- Sample size determination is a mathematical process to decide how many subjects are needed in order to make a reasonably sound judgment about a hypothesis.
- iii. How the sample size is calculated depends on the statistical tests used in the analyses. Generally, results are reported with Confidence Intervals (CIs) around the summary measure. Therefore, the sample size should be based on the desired CI width (usually 95%).
- iv. The formulas for sample size calculations are found in most health research statistics books and automated methods of computing them can be found at a number of Web sites. There are no published recommendations for what proportion of the abstracted data should be randomly checked for accuracy of abstraction. Generally 10% data can be used for review of the record in a small hospital, while 5% data is to be used for large hospitals.

<sup>&</sup>lt;sup>53</sup>Academic Emergency MedicineVol. 11(2). (February, 2004), Retrieved from www.aemj.org

## THE REVIEW IS CONDUCTED BY IDENTIFIED CARE PROVIDERS AND HEALTH PROFESSIONALS

### Policy on Authorization to Review Medical Record

Access to information is based on needs and defined by job title and functions, including students in an academic setting. An effective review process defines following parameters;

- Who has an access to information.
- The information to which an individual has access.
- iii. The user's obligation to keep information confidential.
- The process followed when confidentiality and security are violated.
- v. One aspect of maintaining the security of patient information is to determine who is authorized to obtain a patient's clinical record for review. The organization develops a policy to authorize such individuals (e.g., doctors, nurses, statisticians etc.) and makes SOPs for the review process.

# IND.159 THE REVIEW FOCUSES ON THE TIMELINESS, LEGIBILITY AND COMPLETENESS OF THE MEDICAL RECORDS

### Scope of Review of Medical Records

All entries must be legible, signed and dated. Signature includes the first initial, last name and title. Initials may be used only if signatures are specifically identified elsewhere in the medical record (e.g. signature page). Stamped signatures are acceptable, but must be authenticated.

Methods used to authenticate signatures in electronic medical records will vary, and must be individually evaluated by reviewers. Date includes the day/month/year. Only standard abbreviations are used. Entries are in reasonable consecutive order by date. Handwritten documentation, signatures and initials are entered in ink that can be readily copied. Handwritten documentation does not contain skipped lines or empty spaces where information can be added later on. Entries are not backdated or inserted into spaces above previous entries. Omissions are charted as a new entry. Late entries are explained in the medical record, signed and dated 54.

Note: Legibility means the record entry is readable by a person other than the writer.

Although assessment of legibility may be subjective to a degree, the criterion for readability is simple: a notation can either be clearly and easily read or not.

<sup>&</sup>lt;sup>56</sup>Glondys, B. (May 2003). "Ensuring Legibility of Patient Records (AHIMA Practice Brief)." Journal of AHIMA 74, no.5: 64A-D.

HCPs who work together regularly may become accustomed to each other's handwriting. Even though a record may be readable between healthcare coworkers, the same concessions may not apply in legal actions. Records must be objectively reviewed for legibility.

If a record fails to be readable at any level, hospital policy and medical staff bylaws should guide resultant actions. Offenders should be formally notified, corrective action taken, and improvements monitored.

It is important for the HCE management to ensure the legibility of records. Illegibility patterns in patient records should be seriously considered during re-credentialing activities for credentialed and professional staffs.

Although legibility is addressed primarily as a physician issue, a number of allied health professionals have record documentation authority as well. Among them are nurses, therapists, and technicians. Legibility should be objectively measured in performance improvement activities and addressed in performance reviews as appropriate for all responsible health professionals.

# THE REVIEW PROCESS INCLUDES RECORDS OF BOTH ACTIVE (CURRENT) AND DISCHARGED PATIENTS

#### **Extent of Review Process**

This indicator demands that in the review process all the documentation pertaining to patients who are currently in the hospital and of those who are discharged is included. Review of documents of those patients who are admitted should be done strictly based on a SOP clearly dividing the stay in three stages i.e.

- i. On admission
- During stay
- On discharge

Typically, the review at admission and discharge should be done by the MS and AMS and the HoD must review the record for all aspects of care during stay to ensure that quality care is delivered. However the management should devise other means to have a counter check randomly, which should be recorded too.Regular review of records of patients should be done by a committee.

### IND.161 THE REVIEW IDENTIFIES, AND DOCUMENTS ANY DEFICIENCIES IN THE RECORD

### Identification and Documentation of Deficiencies in Records

The person who makes the documentation error corrects the error. A single line is drawn through the error, with "error" written above or near the lined-through incorrect entry. The corrected information is written as a separate entry and includes date of the entry, signature (or initials), and title. There are no unexplained cross-outs, erased entries or use of correction fluid. Both the original entry and corrected entry are clearly preserved. Reviewers must determine method(s) used for correction of documentation errors in computerized records on a case to case basis <sup>55</sup>.

Note: No information or entry may be removed from a health record.

# APPROPRIATE CORRECTIVE AND PREVENTIVE MEASURES UNDERTAKEN ARE DOCUMENTED

### **Documentation of Corrective and Preventive Measures**

Errors inevitably occur in any medical record. They may be minor errors in transcription, inadvertently omitted test results, physicians' orders, other information omitted or deliberate falsifications.

First, deliberate falsifications must be avoided at all costs. This will most likely lead to allegations of a cover up which will at best, create a prima facie case of negligence.

Effort should be made to avoid other types of errors. However, in the event an error occurs, they can be corrected legally by the following procedure:

- The person who made the incorrect entry should change it and initial the correction.
- ii. The person making the change should cross out the incorrect entry with a single line, enter the correct information, and enter the date and time of the correction.
- iii. If the correction requires more than the available space, a supplement should be prepared and a reference to the supplement should be made in the available space by the erroneous entry.
- iv. The original entry should not be obliterated or erased and following should be ensured;
  - Never use pencil to write entries.
  - b. Never use "white-out".
  - Do not alter past-dated notes, chart notes/progress notes (e.g., by writing alongside or adding to prior entries).

Medical Record Review Guidelines California Department of Health Services. Medi-Cal Managed Care Division.

ND.162

 Error corrections that are not done according to procedure will result in inadequate source documentation.

Guidance for when to state a reason for changes in documentation is as follows:

- If it is something a reviewer can "see" or is obvious, such as a transcription error, then it
  needs no explanation. For example, if the site corrected a lab value that was transcribed
  incorrectly, then an explanation for the correction is not necessary as long as it can be
  verified with the original lab report.
- If it is not clear, like a diagnosis or symptom that was deleted after initial entry, then there should be a rationale for the change.

### 3. MSDS REFERENCE MANUAL DEVELOPMENT TEAM

### **Technical Experts**

Sr. #	Name	Designation	
1.	Dr. Mushtaq Ahmed Salariya	Director (Clinical Governance and Organizational Standards)	
2.	Dr. Anees Ahmed Qureshi	Additional Director (Clinical Standards Development)	
3.	Dr. Shahid Ahmad	TRF Consultant	
4.	Dr. Majed Latif	Additional Director (Internal and External Training)	
5.	Dr. Saad Ullah Khan Sumbal	Expert Surveyor	
6.	Dr. Syed Khurram Raza	Expert Surveyor	
7.	Mr. Farooq Ahmad Randhawa	Senior Manager (HR)	

### **Editing, Designing and IT Support**

Sr. #	Name	Designation
8.	Faisal Majeed	Hardware Support Technical Expert
9.	Amina Farman Ali	Research Assistant (COO Office)
10.	Muhammad Anwar	Database Assistant
11.	Muhammad Majid	Graphic Designer
12.	Rana Muhammad Hassan	Research Officer

### 4. CONTRIBUTORS/REVIEWERS OF THE MSDS REFERENCE MANUAL

Sr. #	Name	Designation	
1.	Dr. Naeem uddin Mian	CEO, Contech International; Member PHC Board of Commissioners	
2.	Prof. Dr. Abdul Majeed Ch.	Professor of Surgery and Principal LMDC; Member PHC TAC	
3.	Prof. Dr. Shahida Khawaja	Professor of Anaesthesia, AIMC; Member PHC TAC	
4.	Dr. Faisal Sultan	CEO, SKMCH&RC Member PHC TAC	
5.	Dr. Mohammad Anwar Janjua	Additional Secretary (Tech), DoH Punjab; Member PHC TAC	
6.	Mrs. Nighat I. Durrani	Registrar, Pakistan Nursing Council; Member PHC TAC	
7. –	Mr. Naziruddin Ahsan	Secretary, Pharmacy Council of Pakistan; Member PHC TAC	
8.	Prof. Dr. Mahmood Ayyaz	Professor of Surgery, SIMS	
9.	Prof. Dr. Khalid Bashir	Professor of Anesthesia, Lahore General Hospital	
10.	Mr. Latif Sheikh	Director Clinical Pharmacy, Agha Khan Network Karachi	
11.	Prof. Dr. Rakhshanda Tayyab	Gynaecologist, Ex-Principal FJMC	
12.	Prof. Dr. Zohra Khanum	Associate Professor of Gynaecology, SIMS	
13.	Dr. Rizwan Naseer	Director General Rescue 1122, Punjab Emergency Services	
14.	Dr. Nisar Cheema	Director General Health Services Punjab, DoH, Punjab	
15.	Dr. Najam Uddin	Radiologist, Aznostic Diagnostics	
16.	Prof. Dr. Muhammad Ashraf Majhrooh	HoD Community Medicine, AIMC	
17.	Prof. Dr. Rubina Sohail	Associate Professor of Gynaecology, SIMS	
18.	Dr. Zahid Pervaiz	Medical Superintendent, Mayo Hospital	
19.	Dr. Mahfooz-ur-Rahman	Director BTS Punjab, Institute of Blood Transfusion Services	
20.	Dr. Shehzad Awan	DCOO (Operations), Contech International	
21.	Dr. Muhammad Ashraf Ch.	Public Health Consultant, AIMC	
22.	Dr. Hamid Mahmood	Additional Medical Superintendent, PIC	
23.	Dr. Muhammad Hanif Sethi	Hospital Manager, Ittefaq Hospital (Trust)	
24.	Ms. Nusrat Saeeda	DD Nursing, Directorate General Nursing Services, Punjab.	
25.	Ms. Rukhsana Kamal	DG Nursing, Directorate General Nursing Services, Punjab.	
26.	Dr. Zahid Mohyuddin	Administrator, Doctors Hospital	
27.	Dr. Shabbir Ahmad	Additional Medical Superintendent, DHQ Hospital Gujranwala	
28.	Dr. Muhammad Yahya Butt	PMO Rescue 1122, Punjab Emergency Services	
29.	Dr. Muddasar Ahmed	PGMO/SR, Nishtar Hospital Multan	
30.	Mr. Hussain A. Qadri	Manager, SKMCH&RC	
31.	Dr. Omar Chughtai	Lab Director, Chughtai's Lahore Lab	
32.	Dr. Mohsin M. Sarwar	Deputy Secretary Technical, DoH, Punjab	
33.	Engr. Humayun Sarwar	Quality Manager/Biomedical Engineer, PIC	
34.	Hasnain Javed	Microbiologist, Institute of Public Health	

### 5. MSDS REFERENCE MANUAL CONSULTATIVE WORKSHOP FACILITATORS

### **Experts**

Sr. #	Name	Designation	
1.	Dr. Muhammad Ajmal Khan	COO, PHC (Technical Backstopping)	
2.	Dr. Riaz Ahmad Tasneem	Director, Patient Rights and Complaints, PHC	
3.	Dr. Mushtaq Ahmed Salariya	Director (Clinical Governance & Organizational Standards), PHC	
4.	Dr. Riaz Chaudhary	Additional Director(Licensing), PHC	
5.	Dr. Anees Ahmed Qureshi	Additional Director (Clinical Standards Development), PHC	
6.	Dr. Qamar Salman	Provincial Coordinator, TRF	
7.	Dr. Shahid Ahmad	TRF Consultant	
8.	Dr. Majed Latif	Additional Director (Internal and External Training), PHC	
9.	Shamshad Qureshi	Additional Director (Community Relations), PHC	
10.	Dr. Syed Shamaun Masood	Additional Director (Complaints), PHC	
11.	Dr. Shabana Haider	Additional Director (Media and PR), PHC	
12.	Dr. Saad Ullah Khan Sumbal	Expert Surveyor, PHC	
13.	Dr. Tariq Latif	Case Worker, PHC	
14.	Dr. Mubashir Nadeem	Case Worker, PHC	
15.	Dr. Syed Khurram Raza	Expert Surveyor, PHC	

### **IT Support**

Sr. #	Name	Designation
1.	Faisal Majeed	Hardware Support Technical Expert, PHC
2.	Noor Ali Chagani	Software Support Technical Expert, PHC
3.	Rana Muhammad Hassan	Admin Assistant, PHC
4.	Muhammad Anwar	Database Assistant, PHC

### **Management Support**

Sr. #	Name	Designation
1.	Malik Muhammad Javed	Project Officer, TRF
2.	Ghulamuddin Hunzai	Manager Admin, PHC
3.	Yaser Nazir Chaudhary	Personal Secretary to the COO, PHC
4.	Sheraz Ahmad Cheema	Admin Assistant, PHC
5.	Muhammad Asif	Staff, TRF