National Centre for Disease Informatics and Research

Indian Council of Medical Research, Bengaluru

(A Study on the Magnitude and Pattern of Causes of Heart Failure – A Feasibility Study)

I IDENTIFYING INFORMATION

1. Name of Participating Centre .....Centre Code ☐☐☐

2. HF Registration Number ☐☐☐☐☐☐☐

(First 2 digits are for year of registration and the next 5 digits for actual registration number)

3.1 Name of the Source of Registration (OPD/ICU/Ward Name) .....

3.2 Hospital Registration Number 3.2.1 OPD Number .....

3.2.2 IPD Number.....

4. Date of hospital admission / attendance d d m m y y

5. Full Name of the Patient *(at least one name is compulsory)*

....

First Name Second Name Last Name

6. Place of Residence: *Place of Usual Residence* *(where the person has been residing for the past one year, at least)*

Urban / Semi-Urban Areas (Town / Mandal / Block) ○	***Rural Areas (Gram Panchayat / Hamlet)*** ○
House No. and Ward	House No. and Ward .....
Road / Street Name.....	Name of Gram Panchayat / Village, etc:
Area / Locality.....	.....
Name of City / Town	Name of Sub-Unit of District (Taluk / Tehsil / Other):
	.....

Name of District *(In Capitals)* ..... Postal Pin Code ☐☐☐☐☐☐

Mobile No. (patient) ..... Mobile No. (primary caregiver) .....

Email ID ..... Aadhaar No. *(If available)*.....

7. Date of Birth d d m m y y 7.1. Completed Age *(In Years)* ☐☐

(darken ● the appropriate circle below)

8. Education (1) Illiterate ○ (2) Primary ○ (3) Secondary ○ (4) Graduate & Higher ○

9. Gender (1) Male ○ (2) Female ○ (88) Others ○

II History and Clinical Examination *multiple choice, tick (✓) on all applicable options*

10. Family History of, (1) Diabetes ☐ (2) Hypertension ☐ (3) CAD ☐

(4) Stroke ☐ (5) Sudden Death ☐ (6) Cardiomyopathy ☐

11 Risk Factors *(darken ● the appropriate circle below)*

	Status			Duration in Years for current users
	Current	Past	Never	
11.1 Tobacco Smoking	○	○	○	
11.2 Tobacco Smokeless	○	○	○	
11.3 Alcohol Intake	○	○	○	
11.4 History of Chemotherapy ○Yes ○No				

12. Etiology of Current Episode *multiple choice, tick (✓) on all applicable options*

(1) Ischemic Heart Disease ☐ (2) Cardiomyopathies ☐

(3) Rheumatic Heart Disease ☐ (4) Non Rheumatic VHD ☐

(5) Hypertensive Heart Disease ☐ (6) Tachyarrhythmias ☐

(7) Congenital Heart Disease ☐ (8) Inflammatory Myocarditis ☐

(9) Miscellaneous ☐ (88) Others (specify) ..... ☐

13. *(only if 12.2 is selected)* In case of Cardiomyopathy being etiologic factor, define the type of cardiomyopathy *(darken ● the appropriate circle below)*

Alcoholic ○ Dilated ○ Hypertrophic ○ Peripartum ○ Restrictive ○

Arrhythmogenic right ventricular cardiomyopathy ○ Others (Specify) ○ .....

14.Co-morbidities *multiple choice, tick (✓) on all applicable options*

(1) Diabetes ☐ (2) Hypertension ☐ (3) Anemia ☐

(4) Chronic Kidney Disease ☐ (5) COPD ☐ (6) Hyperthyroidism ☐

(7) Hypothyroidism ☐ (8) HIV ☐ (9) Sleep Apnea ☐

(10) Takayasu Arteritis ☐ (88) Others (Specify)..... ☐

Clinical Examination *(in case, any vitals values are missing write 999)*

Vitals At Admission		***Vitals At Discharge***	
15. Weight (in Kg.)		15.1. Weight (in Kg.)	
16. Height (in Cm.)			
17. Heart Rate (per minute)		17.1.Heart Rate (per minute)	
18. Systolic Blood Pressure (mmHg)		18.1.Systolic Blood Pressure (mmHg)	
19. Diastolic Blood Pressure (mmHg)		19.1.Diastolic Blood Pressure (mmHg)	
20. NYHA Class (I, II, III, IV)		20.1 NYHA Class (I, II, III, IV)	

21. Clinical Symptoms and Signs at the time of diagnosis *Tick (✓) wherever applicable*

(1) Dyspnea		(8) S3 Sound	
(2) Peripheral Oedema		(9) Murmur	
(3) Paroxysmal Nocturnal Dyspnea		(10) Pleural Effusion/ Ascites	
(4) Orthopnea		(11) Elevated Jugular Venous Pressure	
(5) Fatigue		(12) Hepato Jugular Reflex	
(6) Palpitations		(13) Cardiomegaly	
(7) Lung Rales		(14) Hepatomegaly	

Clinical Diagnosis *(darken ● the appropriate circle below)*

22. Type of HF, Acute de novo HF ○ Acute Decompensated HF ○ Chronic HF ○

23. Date of Diagnosis d d m m y y

III Diagnostic Workup

24. Date of Investigation | d | d | m | m | y | y |

In case of any investigation not done write 999 in corresponding box (ex- Hb not done write 999)

25. Complete Blood Count		**27. Lipid Profile**	
25.1 Hemoglobin (g/dL)		27.1 Cholesterol (mg/dl)	
25.2 Packed Cell Volume (%)		27.2 Triglycerides (mg/dl)	
25.3 RBC Count (million/mm^3)		27.3 HDL (mg/dl)	
25.4 Total Leucocyte Count (1000/mm^3)		27.4 LDL (mg/dl)	
25.5 Lymphocytes (%)		**28. Urine Analysis**	
25.6 Monocytes (%)		28.1 Micro Albumin (mg/dl)	
25.7 Neutrophils (%)		28.2 Albumin (mg/dl)	
25.8 Eosinophils (%)		28.3 Urine Sugar (Nil/Trace/++/+++)	
25.9 Basophils (%)		**29. Thyroid Hormones**	
25.10 Random Blood Glucose (mg/dl)		29.1 T3 (ng/dl)	
25.11 Platelet Count (lakhs/mm^3)		29.2 T4 (ng/dl)	
26. Electrolytes		29.3 Thyroid Stimulating Hormone (μIU/ml)	
26.1 Blood Urea Nitrogen (mEq/L)		**30. Biomarkers and Cardiac Enzymes**	
26.2 Serum Creatinine (mg/dl)		30.1 BNP (pg/ml)	
26.3 Serum Sodium (mEq/L)		30.2 NT-proBNP (pg/ml)	
26.4 Serum Potassium (mEq/L)		30.3 Creatinine Kinase – MB (IU/L)	
26.5 Serum Chloride (mEq/L)		30.4 Troponin T / Troponin I (ng/dl)	
26.6 Bicarbonates (mEq/L)		**31. Iron Deficiency Anemia**	
26.7 Serum Magnesium (mEq/L)		31.1 Ferritin (ng/ml)	
26.8 Serum Calcium (mEq/L)		31.2 Transferrin (mg/dl)	
32 Other tests if any done (Specify)			

33. Lead ECG date | d | d | m | m | y | y | *(darken ● the appropriate circle below)*

ECG Findings	
33.1 Rhythm	(1) Sinus Rhythm ○ (2) Atrial Fibrillation/Flutter ○ (3) Pacemaker Rhythm ○ (4) Complete Heart Block ○
33.2 Bundle Branch	(1) None detected ○ (2) LBBB ○ (3) RBBB ○
33.3 QRS Width	(1) 100-120 ms ○ (2) >120 ms ○
33.4 QT Interval	(1) ≤400 ms ○ (2) >400 ms ○
33.5 Left Ventricular Hypertrophy	(1) Yes ○ (2) No ○
33.6 Right Ventricular Hypertrophy	(1) Yes ○ (2) No ○
33.7 Left Atrial Enlargement	(1) Yes ○ (2) No ○
33.8 Right Atrial Enlargement	(1) Yes ○ (2) No ○
33.9 Premature Ventricular Contraction	(1) Yes ○ (2) No ○

34. Chest X-ray, available ○, date d d m m y y

not available ○ (if not available selected then skip to 35)

34.1 Chest X-ray findings *(darken ● the appropriate circle below)*			
(1) Normal ○	(2) Cardiomegaly ○	(3) Pulmonary Congestion ○	(4) Pleural Effusion ○
(5) Pulmonary Hypertension ○	(88) Others (Specify) ..... ○		

35. Two Dimensional Echocardiogram with Doppler, Date d d m m y y

Two dimensional Echocardiogram findings				
35.1 Left Ventricular EF value (%)				
35.2 Left Ventricular diastolic function (darken ● the appropriate circle below)	(1) Normal ○ (2) Grade I (abnormal relaxation pattern) ○ (3) Grade II (pseudo normal filling dynamics) ○ (4) Grade III (reversible restrictive filling) ○ (5) Grade IV (irreversible restrictive filling) ○			
35.3 Left ventricular wall motion (darken ● the appropriate circle below)	(1) Score 1 (Normokinesis) ○ (2) Score 2 (Hypokinesis) ○ (3) Score 3 (akinesis) ○ (4) Score 4 (dyskinesis) ○ (5) Score 5 (aneurysm) ○ (9) Not Available ○			
35.4 Valve Dysfunction				
	Mitral Valve	Tricuspid Valve	Semilunar (Aortic)	Semilunar (Pulmonary)
35.4.1 Regurgitation (None/Mild/Moderate/Severe)				
35.4.2 Stenosis (None/Mild/Moderate/Severe)				
35.4.3 Mechanical Valve Dysfunction (None/Mild/Moderate/Severe)				
35.5 Pericardial Effusion	(1) None ○ (2) Mild ○ (3) Moderate ○ (4) Severe ○			

Echo Dimensions *(in case any dimensions not available write 999 in corresponding box)*											
35.6 LVDD (mm)				35.7 LVSD (mm)				35.8 IVS (mm)			
35.9 LVPWD (mm)				35.10 LV mass (g)				35.11 LAD (mm)			

36. Coronary angiogram, done Yes ○ No ○ (If No selected skip to 37)

36.1 Left Coronary Artery (LCA),

Normal ○ Abnormal (Specify) ○ .....

36.2 Right Coronary Artery (RCA),

Normal ○ Abnormal (Specify) ○ .....

36.3 Left Anterior Descending Artery (LAD),

Normal ○ Abnormal (Specify) ○ .....

36.4 Circumflex Artery (LCX),

Normal ○ Abnormal (Specify) ○ .....

36.5 Please mention final impression of the coronary angiogram report.....

.....

37. Other investigations (MRI/CT Scan), done Yes ○ No ○ *(If No selected skip to 38)*

If yes mention the findings (MRI, CT Scan) (Please mention final impression of the report) .....
.....
.....
.....

38. Final Diagnosis (before treatment initiation) .....
.....

38.1 How was diagnosis of HF, confirmed *(multiple choice, tick (✓) on all applicable options)*

Clinically ☐ Echocardiogram ☐ Biomarker ☐

IV HF Directed Treatment

39. Pharmacologic/Implantable devices Treatment (Tick (✓) wherever applicable) applicable to admitted patients only			
(1) Loop Diuretics		(10) Digoxin	
(2) ACE Inhibitors		(11) Statins	
(3) β Blockers		(12) Nitrates	
(4) Angiotensin Receptor Blocker		(13) Anticoagulants	
(5) Mineralocorticoid Receptor Antagonist		(14) Inotropic Support	
(6) Angiotensin Receptor-Neprilysin Inhibitor		(15) Cardiac resynchronization therapy	
(7) Ivabradine		(16) Implantable Defibrillator	
(8) Hydralazine		(17) Pacemakers	
(9) Other Diuretics		(88) Others (Specify)	

40. Pharmacologic Treatment at discharge / OPD (Tick (✓) wherever applicable)			
(1) Loop Diuretics		(9) Other Diuretics	
(2) ACE Inhibitors		(10) Digoxin	
(3) β Blockers		(11) Statins	
(4) Angiotensin Receptor Blocker		(12) Nitrates	
(5) Mineralocorticoid Receptor Antagonist		(13) Anticoagulants	
(6) Angiotensin Receptor-Neprilysin Inhibitor		(14) Inotropic Support	
(7) Ivabradine		(88) Others (Specify)	
(8) Hydralazine			

41.Non Pharmacologic Treatment (Tick (✓) wherever applicable)			
(1) Education of monitoring symptoms		(7) Education on physical activity	
(2) Education on Wt. Maintenance		(8) Physiotherapy	
(3) Sodium restriction		(9) Social Support	
(4) Cardiac Rehabilitation		(10) Fluid Restriction	
(5) Continuous Positive Airway Pressure		(88) Others (Specify)	
(6) Compliance with medication			

V Outcome

42. Outcome - Discharge ○ / Death ○ *(darken ● the appropriate circle below)*

42.1 Date of Discharge d d m m y y 42.2 Date of Death d d m m y y

In case of death, please mention

42.2.1 Cause of Death – Progressive Heart Failure ○ Not Related to Heart Failure ○

Sudden Cardiac ○ Sudden Non Cardiac ○

Unknown ○ Others (Specify)..... ○

42.2.2 Cause of Death as per Medical Certificate of Cause of Death (MCCD)

Immediate Cause .....

State the disease, injury or complication due to (or as a consequence of) which caused death, not the mode of dying such as heart failure, asthenia, etc.

Antecedent cause .....

Morbid conditions, if any, giving rise to (or as a consequence of) the above Cause, stating underlying conditions

Other significant conditions contributing to the death but not related to the disease or conditions causing it .....

43. Name of Person Completing Form (in capitals) .....

43.1Signature of PI/Co-PI..... 43.2 Date d d m m y y

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[Follow-up form]

I IDENTIFYING INFORMATION

1. Name of Participating Centre ..... Centre Code ☐☐☐

2. HF Registration Number ☐☐☐☐☐☐☐
   (Use the number allocated during admission to the patient)

3. Full Name of the Patient (at least one name is compulsory)

....
First Name Second Name Last Name

II FOLLOW-UP DETAILS *(darken ● the appropriate circle below)*

4. Follow up at ≤ 30 days' post discharge/ attendance of registration episode ○	5. Follow up at 31 ≤ 90 days' post discharge/ attendance of registration episode ○	6. Follow up at 90 ≤ 180 days' post discharge/ attendance of registration episode ○
4.1 Follow-up date d d m m y y	5.1 Follow-up date d d m m y y	6.1 Follow-up date d d m m y y
4.2 Type of visit Hospital ○ Home ○ Telephone ○ Postal ○	5.2 Type of visit Hospital ○ Home ○ Telephone ○ Postal ○	6.2 Type of visit Hospital ○ Home ○ Telephone ○ Postal ○
4.3 Status of Patient at follow-up Alive ○ Dead ○ Not Known ○	5.3 Status of Patient at follow-up Alive ○ Dead ○ Not Known ○	6.3 Status of Patient at follow-up Alive ○ Dead ○ Not Known ○

If Dead selected as status at follow up in 4.3/5.3/6.3, skip to 7.1 and mention the date of death and ascertain the cause of death. For Not known cases at 4.3/5.3/6.3 skip to 8 and end the form

4.4 NYHA classification Class I ○ Class II ○ Class III ○ Class IV ○	5.4 NYHA classification Class I ○ Class II ○ Class III ○ Class IV ○	6.4 NYHA classification Class I ○ Class II ○ Class III ○ Class IV ○
4.5 If Echo done at follow-up, mention Ejection fraction (%) ☐☐☐	5.5 If Echo done at follow-up, mention Ejection fraction (%) ☐☐☐	6.5 If Echo done at follow-up, mention Ejection fraction (%) ☐☐☐
4.6 Current Medication 1) Loop Diuretics ☐ (2) ACE Inhibitors ☐ (3) β Blockers ☐ (4) Angiotensin Receptor Blocker ☐	5.6 Current Medication 1) Loop Diuretics ☐ (2) ACE Inhibitors ☐ (3) β Blockers ☐ (4) Angiotensin Receptor Blocker ☐	6.6 Current Medication 1) Loop Diuretics ☐ (2) ACE Inhibitors ☐ (3) β Blockers ☐ (4) Angiotensin Receptor Blocker ☐

Follow up at ≤ 30 days	Follow up at 31 ≤ 90 days	Follow up at 90 ≤ 180 days
(5) Mineralocorticoid Receptor Antagonist ☐	(5) Mineralocorticoid Receptor Antagonist ☐	(5) Mineralocorticoid Receptor Antagonist ☐
(6) ARNI ☐	(6) ARNI ☐	(6) ARNI ☐
(7) Ivabradine ☐	(7) Ivabradine ☐	(7) Ivabradine ☐
(8) Hydralazine ☐	(8) Hydralazine ☐	(8) Hydralazine ☐
(9) Other Diuretics ☐	(9) Other Diuretics ☐	(9) Other Diuretics ☐
(10) Digoxin ☐	(10) Digoxin ☐	(10) Digoxin ☐
(11) Statin ☐	(11) Statin ☐	(11) Statin ☐
(12) Nitrates ☐	(12) Nitrates ☐	(12) Nitrates ☐
(13) Anticoagulants ☐	(13) Anticoagulants ☐	(13) Anticoagulants ☐
(14) Inotropic Support ☐	(14) Inotropic Support ☐	(14) Inotropic Support ☐

4.7 Outcome at follow-up	5.7 Outcome at follow-up	6.7 Outcome at follow-up
OP Consultation & sent back ○	OP Consultation & sent back ○	OP Consultation & sent back ○
Re-admission ○	Re-admission ○	Re-admission ○
Date of Readmission	Date of Readmission	Date of Readmission
d d m m y y	d d m m y y	d d m m y y
IPD Number	IPD Number	IPD Number .....

If readmission selected in 4.7/5.7/6.7 then enter the date of readmission along with IPD number and fill the new form for the particular readmission event with same HF registration number and skip to 8 and end the current form.

7. In case of death please provide the following information (darken ● the appropriate circle below)

7.1 Date of Death d d m m y y

7.2 Cause of Death – Progressive Heart Failure ○ Not Related to Heart Failure ○

Sudden Cardiac ○ Sudden Non Cardiac ○ Unknown ○

Others (Specify) ○ .....

7.3 Cause of Death as per Medical Certificate of Cause of Death (MCCD)

Immediate cause .....

Antecedent cause .....

Other significant conditions contributing to the death but not related to the disease or conditions causing it .....

8. Name of Person Completing Form (in capitals) .....

8.1 Signature of PI/Co-PI..... 8.2 Date d d m m y y