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Improvement Objective: Decrease morbidity and mortality for adults hospitalized for Acute Coronary Syndrome (ACS) via high-impact initial treatment, in-hospital & discharge intervention packages (hospital)

Table 1: High Impact ACS Treatment & Surveillance Interventions by Phase of Care: at admission (where the first contact to patient takes place), Initial clinical assessment & treatment, Ongoing clinical evaluation and treatment and Discharge.

Phase of Hospital Care	Basic Interventions	Components/Activities
Immediate assessment of patient's condition by qualified doctor/nurse within 10 minutes from presentation	Assessment of disease history and acute pre-hospitalization course (<i>assessment of particular components as feasible should be performed immediately or necessarily during later stages of initial assessment</i>)	<ul style="list-style-type: none"> • Documentation of time of development of symptoms related to ischemia; • Symptom-based Triage – assessment of chief symptom: chest pain, dyspnea, syncope/pre-syncope, shock • Query/documentation of prior history of CAD; • Assessment of personal history of cardiovascular disease and its risk-factors • Triage level decision.
	Rapid Assessment	<ul style="list-style-type: none"> • Assessment of Airway, Breath and Circulation (ABC) • Assessment/ vital signs: heart rate (HR'), blood pressure (BP), respiratory rate (RR') and body temperature (t°C); • Assessment of pulseoxymetry (SaO₂); • Determination of locus and grade of clinically significant disorders; • Assessment of indices of volemia and systemic perfusion
Specialist-led comprehensive assessment	Physical assessment	<ul style="list-style-type: none"> • Repeated Assessments/monitoring of vital signs: heart rate (HR'), blood pressure (BP), respiratory rate (RR') and body temperature (t°C); • Repeated Assessments/monitoring of pulseoxymetry; • Detection/assessment of objective clinical findings of the case • Detection of clinically significant disorders by body systems; • Assessment of structural damage of heart; • Assessment of indices of volemia and systemic perfusion; • Assessment of neurologic status: <ul style="list-style-type: none"> • sensory • motor

		<ul style="list-style-type: none"> • cognitive deficit • Differential diagnosis with other diseases masked by symptoms of myocardial ischemia; • Assessment of conditions limiting anticoagulation and antithrombotic therapy
	ECG assessment	<ul style="list-style-type: none"> • Assessment and interpretation of pre-hospital 12-lead ECG; • Recording and interpretation of 12-lead ECG within 10 minutes from presentation • Tracking of 12-lead ECG and its interpretation in every 15-30 minutes; • Cardio-monitoring _ interpretation of ECG events; • ECG qualification of the clinical case /event or ECG event in reasonable time period and its documentation (date, time, qualifiers)
	Assessment of biomarkers of myocardial damage:	<ul style="list-style-type: none"> • Tn-I or T after reasonably estimated time (according to assay type used) from ischemia-related symptoms and if negative repeated measurement after 8-12 hours from ischemia-related symptoms
	assessment of early risk (all-cause mortality, non-fatal ischemic cases)	<ul style="list-style-type: none"> • Use of standard assessment Tables and Scores; • Grouping clinical factors and markers of acute thrombotic processes and calculation of risk score via multi-variant algorithms - TIMI (all-cause mortality, new or recurrent MI, or severe recurrent ischemia requiring urgent revascularization) and/or GRACE (6-month mortality after discharge from ACS hospitalization). • Decision on a treatment option and patient disposition in services of hospital care according to the risk assessed.
arInitial treatment/intervention	Initial anti-ischemic treatment	<ul style="list-style-type: none"> • Initial anti-ischemic treatment and detection/documentation of conditions and results of treatment and existed contraindications <ul style="list-style-type: none"> • pain management with opioid analgesics; • oxygenation if SaO2<95%; • titrated nitrate; • initiation of aspirin treatment • Initiation of anticoagulation/antithrombotic treatment and detection/documentation of conditions and results of treatment and existed contraindications
	Revascularization	<ul style="list-style-type: none"> • Decision/delivery on reperfusion intervention and Documentation of terms and conditions for reasoning <ul style="list-style-type: none"> • Fibrinolysis • PCI;

		<ul style="list-style-type: none"> • CABG
On-going care	On-going monitoring	<ul style="list-style-type: none"> • Daily and clinical event related ECGs with interpretation recorded in chart and at the time of every clinical/ECG event; • Vital signs (BP, HR, RR, temp) recorded in patient chart at least twice per day • Physician assessment at least twice a day + as necessary <ul style="list-style-type: none"> • assessment clinical stabilization; <ul style="list-style-type: none"> • detection of risk/complications; <ul style="list-style-type: none"> • Arrhythmias • Heart failure • Ongoing ischemia • Renal failure • Cerebral vascular complications
	On-going treatment	<ul style="list-style-type: none"> • Administration of basic medication bundle and detection/documentation of conditions and results of treatment and existed contraindications <ul style="list-style-type: none"> • Aspirin • Tienopiridines • Beta blocker • ACE-I/ARB; • Statin • Ongoing anticoagulation treatment until discharge • Control of Symptoms related to ischemia and complications • Treatment of HTN (if BP \geq140/90 mmHg) • Medication for arrhythmia control and documentation of related conditions and results; • Medication for Heart Failure control and documentation of related conditions and results; • Medication for Control of other complications and documentation of related conditions and results;
Discharge planning	Forming/assessment of short and long-term monitoring goals	<ul style="list-style-type: none"> • Formulation and communication to the patient/family ACS complications, occurred in any phase of hospital treatment, co-morbid diseases/conditions, significant clinical events, clinical outcomes of hospital treatment (including performed interventional procedures, medication treatment and tolerance to it); • Establishing partnering communication with patient/family and formulating assessment and monitoring plans for symptom control, rehabilitation, improvement of quality of life, medication treatment, drug side effects etc.
	Assessment/modification of CVD risk factors;	<ul style="list-style-type: none"> • Assessment/documentation of behavioral (tobacco, diet, physical activity, alcohol) and physiologic (BMI, Lipid profile, BP, Blood Glucose level) CVD risk factor and formulation of

		modification plans.
discharge	Prescription, recommendations monitoring plan	<ul style="list-style-type: none"> • Pre-discharge counseling all patients: <ul style="list-style-type: none"> • ACS diagnosis • Personal CVD risk factors (HT, Hyperlipidemia, tobacco use, alcohol abuse, dietary counseling, physical activity); • Summary of self-management priorities for patients and families (including lifestyle changes; daily medications: indications, goals of treatment and possible adverse effects, monitoring plan) • Prescription high-impact medication bundle documentation of related conditions and existed contraindications (Aspirin, Beta blocker, Statin and ACE-I/ARB) • Prescription of medications for other co-morbid conditions and complications • Defining follow-up time & place (communication with PHC physician) • Issue of standardized discharge form containing essential components (final diagnosis, discharge medications, dosage and length of treatment, modifiable risk-factor control plan, follow up time & place).

Acronyms:

ACE-I=Angiotensin-Converting Enzyme Inhibitor

ACS=acute coronary syndrome

BP=blood pressure

CP=chest pain

ECG=electrocardiogram

HT hypertension

HR=heart rate

ICU=intensive care unit

IV=intravenous

NSTEMI=non-ST elevation Myocardial Infarction

RR=respiratory rate;

SOB =shortness of breath

STEMI=ST elevation Myocardial Infarction