

Additional File 2 Trauma treatment early warning linkage system

	Grade I	Grade II	Grade III	Grade IV
Warning signal color	Green	Blue	Yellow	Red
Injury severity	Mild	Moderate	Severe	Critical
Disease condition	Injury at a single site, simply management only	Severe injury; functional impairment; basically stable vital signs, not life-threatening	Injury at one or multiple sites; unstable vital signs; may possibly die without treatment	Injury at one or multiple sites; extremely unstable vital signs; will die within 4 hours without management; irreversible dying state
Early warning response mode	Disposal in emergency treatment room; no need of multidisciplinary	Emergency physicians and related physicians ready for duty must arrive at the emergency	Emergency physicians and all related physicians ready for duty must arrive at the emergency room before the trauma	Emergency physicians, related physicians, and anesthetists ready for duty must arrive at the emergency room before the trauma victims arrive at the hospital; ensure

	consultation; outpatient treatment after discharge	room before the trauma victims arrive at the hospital; ensure that a variety of basic examinations are in standby; emergency surgery performed within 6 hours after patient arrival	victims arrive at the hospital; ensure that a variety of basic examinations are in standby; emergency surgery performed within 2 hours after patient arrival	that a variety of basic examinations are in standby; rescue performed within 3 minutes after patient arrival and surgery performed within 30 minutes after patient arrival
Treatment personnel requirements	Emergency physicians on duty, nurses	Emergency physicians on duty, nurses and related physicians	Emergency physicians on duty, nurses, and all related physicians ready for duty	Emergency physicians, all related physicians, and anesthetists, ready for duty

		ready for duty		
Emergency equipment	X-ray equipment, Doppler ultrasound machine, blood pressure monitoring instrument, electrocardiograph, surgical decontaminating apparatus, intravenous infusion pump	X-ray equipment, Doppler ultrasound machine, bloodpressure monitoring instrument, electrocardiograph, bone traction equipment, surgical decontaminating apparatus, intravenous infusion pump	Imaging examination equipment: MRI scanner, CT scanner, X-ray scanner, blood pressure monitoring instrument, electrocardiograph, cardiopulmonary resuscitation equipment, operating room, cardiopulmonary resuscitation equipment, respiratory control equipment, ventilator, blood oxygen monitor, aspirator, pulmonary function testing apparatus,	Imaging examination equipment: MRI scanner, CT scanner, X-ray equipment, blood pressure monitoring instrument, electrocardiograph, cardiopulmonary resuscitation equipment, operating room, cardiopulmonary resuscitation equipment for rescue, respiratory control equipment, ventilator, blood oxygen monitor, aspirator, pulmonary function testing apparatus,

			<p>concentration-controllable oxygen, cardioverter-defibrillator, intravenous infusion pump, rapid infusion device, surgical decontaminating apparatus, arterial catheters, bone traction equipment, blood bank, blood gas analyzer, blood type detection equipment, blood cross-matching equipment, continuous hemodynamic mon</p>	<p>ventilator, concentration-controllable oxygen, temporary pacemaker, cardioverter-defibrillator, central venous pressure monitor, intravenous infusion pump, rapid infusion device, surgical decontaminating apparatus, venous catheter, bone traction equipment, body temperature and infusion temperature controller, blood bank, blood gas analyzer, blood type detection equipment, blood cross-matching</p>
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