

designsafe Report

Application: Liver Assist Device Analyst Name(s): Arjun Bahl, Cameron Hinkel, Ben Jiang
 Description: Company: Hoganson Lab
 Product Identifier: Facility Location: Whitaker Hall
 Assessment Type: Detailed Washington University in St. Louis
 Limits: Partial to Complete Assessment based on proposed design
 Sources: BME 562 Term Papers
 Risk Scoring System: ANSI B11.0 (TR3) Two Factor

Guide sentence: When doing [task], the [user] could be injured by the [hazard] due to the [failure mode].

Item Id	User / Task	Hazard / Failure Mode	Initial Assessment		Risk Reduction Methods /Comments	Final Assessment		Status / Responsible /Reference
			Severity Probability	Risk Level		Severity Probability	Risk Level	
1-1	Doctor take vitals	<None>						
1-2	Doctor conduct tests	<None>						
1-3	Doctor diagnose patients	<None>						
1-4	Doctor trouble shooting / problem solving	<None>						
1-5	Doctor operate on patients	<None>						
1-6-1	Doctor pre-op patients	biological / health : bacterial Unsanitary surgical procedure	Serious Remote	Low			Serious	
1-6-2	Doctor pre-op patients	biological / health : viral Unsanitary surgical procedure	Serious Remote	Low			Serious	
1-7	Doctor apply / remove medical monitoring equipment	<None>						
1-8	Doctor calibrate / test / troubleshoot medical monitoring equipment	<None>						

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			Severity Probability	Risk Level		Severity Probability	Risk Level	
1-9	Doctor monitor patients	<None>						
1-10	Doctor monitor machines	<None>						
2-1	Nurse lift / reposition patients	<None>						
2-2	Nurse take vital statistics on patients	<None>						
2-3	Nurse draw blood samples	<None>						
2-4	Nurse test machine functionality	<None>						
2-5	Nurse clean / sterilize instruments / equipment	<None>						
2-6	Nurse prepare / administer IV injections	<None>						
2-7	Nurse monitor patients	<None>						
2-8	Nurse monitor machines	<None>						
3-1	Surgical Technician setup supplies / equipment / instruments for operation	<None>						
3-2	Surgical Technician prepare patient for surgery	<None>						

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			Severity Probability	Risk Level		Severity Probability	Risk Level	
3-3	Surgical Technician assist doctor with surgery	<None>						
3-4	Surgical Technician monitor patients	<None>						
4-1-1	Patient rest	biological / health : hazardous biological waste Unsanitary/Dead cells	Serious Unlikely	Medium	warning label(s)	Serious		
4-1-2	Patient rest	biological / health : bacterial Infected cells	Catastrophic Unlikely	Medium	warning label(s)	Catastrophic		
4-1-3	Patient rest	biological / health : viral Infected cells	Catastrophic Unlikely	Medium	warning label(s)	Catastrophic		
4-2	Patient moving	<None>						
4-3	Patient eating	<None>						
4-4	Patient waiting / delay	<None>						