

Ergonomic (MSI) Risk Factor Identification and Assessment

Ergonomics Risk Assessment Project

Department/Work Area: Laboratory Specific Location: Assessed By:	Occupation: Laboratory Assistant Contact Name: Assessment Date:
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Task List Worksheet

Job Summary: Performs tests such as urine analysis and glucose monitoring and operates related equipment. Takes blood from patients, collects and prepares blood and other specimens for analysis.

Where possible, transfer list of job tasks from job description onto this sheet. Determine whether ergonomics (MSI) risk assessment is required, if no, provide rationale.

Tasks and Description of Activities	Frequency/Duration	Risk Assessment Required?
1. Takes blood samples from patients and labels relevant information.		
2. Prepares and analyze specimens e.g. blood and urine analysis, checking specimen identification with requisitions, performing duties such as separating serum/plasma from cells by centrifugation.		
3. Accessioning area: Batches specimens for distribution to various areas or laboratories for testing ("box" area)		
4. Receives patients, obtains information required from patients such as demographics.		
5. Cleans work area, including storing of specimens for which analysis has been completed and discarding outdated specimens as directed, cleaning wash-up area and frozen section room.		
6. Performs clerical functions such as recording unit values of test results by entering information from requisitions, telephoning test results as required, making appointments, typing and filing.		
7. Prepares staining solutions; stains, mounts and labels slides. Prepares media and performs specimen plating.		
8. Performs routine lab tests such as urine tests for protein and/or glucose by procedures such as using colour coded dips stick, urine analysis machine and glucometer.		
TOTAL	100%	

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Description of workstation: Hours of Work/Shift Schedule: Discomfort noted on surveys:

Tasks for Ergonomics Risk Assessment (from Task Analysis worksheet):	Frequency of Task:
1. Taking blood samples. 2. Accessioning area: batching specimens for distribution. 3. Receiving patients. 4. Cleaning equipment. 5. Performing various clerical duties e.g. entering requisitions; answering phone etc.	

	Task	Risk Factors	Freq/Dur	Mag/Range		Assessment / Observations / Comments	
IDENTIFICATION	Taking blood samples	<ul style="list-style-type: none"> Awkward posture 			ASSESSMENT	<ul style="list-style-type: none"> Variety of postures required when taking blood samples depending on the position (e.g., in bed, in wheelchair, in out-patient lab) and location of patients (e.g. tight corners in Emergency cubicles, crowded in 4-bed rooms with furniture). May get in awkward postures to retrieve supplies from cart while taking sample. Out-patient labs have height adjustable chairs and stools available to improve positioning; arm rests can be raised to reduce trunk flexion and to allow for sitting or standing posture; adjustable stretcher (can adjust height); and moveable table on casters. May be in awkward postures (e.g. leaning) when taking samples from patients. Need to consider proper body mechanics (sitting or standing posture). Use chairs/stools for sitting instead of bending and leaning and bedside tables for writing as appropriate. Adjust bed heights to improve positioning. Portable stools may be useful for longer rounds. 	Risk Factors to consider: - Joint posture: wrist, elbow, shoulder, neck, back, knees - Awkward posture: reach, twist, bend, stoop, squat, climb, static - Force: lift, lower, carry, push/pull, pinch or power grip, surface - Repetition, frequency, duration, exposure - Object weight, location, size, shape, handles, stability - Work height, layout, seating, space - Tool/equipment use - Contact Stress - Environment: layout, flooring, temp., noise, light, glare, vibration - Work Organization: recovery, schedule, workload, task variability, pace, PPE use, interruptions - Psychosocial variables - Other
		<ul style="list-style-type: none"> Static posture Force 				<ul style="list-style-type: none"> Posture may be sustained while drawing sample for 2-3 minutes, must also apply force (e.g., put on tourniquet, apply pressure). Other postures including walking are interspersed between taking samples; especially on rounds. Consider proper body mechanics to optimize posture. 	

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	Task	Risk Factors	Freq/Dur	Mag/Range		Assessment / Observations / Comments
IDENTIFICATION	Taking blood sample (continued)	• Force (push/pull)			ASSESSMENT	• Carts modified with improved handle; raised to provide additional clearance for leg room.
		• Force (pinch grip)				• Push/pull forces are within guideline limits (Snook).
		• Work Organization				• ECU cart could be modified with bigger wheels (required to go outdoors).
		• Environment (lighting)				• Handwriting required for each patient; e.g. labels, results. Need to use special marker to prevent smudging.
	Accessioning area: batching specimens (the "box" area)	• Awkward posture				• Lab assistants are not always aware of patient/resident; can consult ADL or Cardex. Purple dot system may need to be reviewed with staff.
		• Awkward posture				• Subsequent to site visit, rotation has changed in ECUs (more frequent trips doing fewer residents). In addition, the need to perform specific procedures per resident was reviewed and some were eliminated.
		• Force (lifting)				• Lighting may be poor in some patient/resident rooms making it difficult to see.
		• Workspace layout				• Overhead lighting should be used as available.
		• Environment (noise)				• Various postures associated with labelling, wrapping and packing specimens; and receiving and filling out requisitions.
						• Postures vary and are not sustained.
			• Single user computer workstation; keyboard drawer does not fit mouse. Monitor height is appropriate. Headset and footrest available.			
			• Boxes handled; individual items are placed in boxes at discretion of the packer.			
			• Lack of space reported.			
			• Clutter under and around work area, especially when specimens come in.			
			• Employee reported noise from centrifuges. Headset used does block out some of the noise.			

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	Task	Risk Factors	Freq/Dur	Mag/Range		Assessment / Observations / Comments
IDENTIFICATION	Receiving patients	<ul style="list-style-type: none"> • Awkward posture 			ASSESSMENT	<ul style="list-style-type: none"> • Computer workstations for receiving patients: • Seated posture; keyboard drawer, flat screen monitor provides for ease of movement of the monitor and is at appropriate height. • Additional workstation has a keyboard drawer that does not fit the mouse (minimal use reported). • Adjustable chairs available for Lab Assistants (back rest height and angle, seat pan height and angle).
		<ul style="list-style-type: none"> • Contact stress 				<ul style="list-style-type: none"> • Rounded counter edges preferred or keyboard wrist rests provided.
	Cleaning equipment	<ul style="list-style-type: none"> • Awkward posture 				<ul style="list-style-type: none"> • Variety of postures required for various duties; not in one posture for an extended period of time.
		<ul style="list-style-type: none"> • Force • Awkward posture 				<ul style="list-style-type: none"> • In wash-up area, handling pipette washers and basket. • Counter height is appropriate. Bucket is positioned in back corner. • Look for better positioning of pipette washer (maybe move to front of counter and relocate the paper towel dispenser).
		<ul style="list-style-type: none"> • Force 				<ul style="list-style-type: none"> • Opening and closing autoclave door. Low frequency of use.
	Cleaning equipment (continued)	<ul style="list-style-type: none"> • Awkward posture 				<ul style="list-style-type: none"> • In frozen section room duties involve checking stock, emptying and refilling chemicals. Two sets of holders are available so that one can be soaked while the other is in use (reduces manual effort for cleaning).
Performing various clerical duties	<ul style="list-style-type: none"> • Awkward posture (neck) 			<ul style="list-style-type: none"> • Phone calls tend to be of short duration. • Staff is reminded to not crook the handset between the ear and shoulder. 		
Section head computer workstation	<ul style="list-style-type: none"> • Awkward posture 			<ul style="list-style-type: none"> • Computer workstation meets ergonomics guidelines. Adjustable chair, desk is appropriate with adjustable tray that fits keyboard and mouse. Monitor height is appropriate. • No concerns noted. 		

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**Control Priority Note: 1 = recommended for implementation to reduce risk factors; 2 = optional, for consideration as a means of reducing risk factors; 3 = not for immediate action but for future consideration as appropriate.*

	Risk Factor	Potential Cause	Recommended Controls	Control Priority	Responsible Person	Status
CONTROLS	• Awkward posture	• Taking blood samples	1. Information on working tips to be provided e.g. adjusting bed heights, lowering rails for better positioning, getting needed supplies before taking sample (to reduce reaching), sitting for longer procedures and/or using available equipment such as chairs and tables, considering best posture at all times. 2. Trial portable stools. Information/sample to be provided.			
	• Static posture	• Taking blood samples	3. Information on stretching exercises to be provided.			
	• Force	• Pushing and pulling ECU cart outside	4. Consider replacing ECU cart wheels with larger rubber wheels that are more suitable for outdoor use. Staff is also considering use of baskets and eliminating the need to take cart to ECU.			
	• Work Organization	• Looking for ECU patients	5. Subsequent to site visit, routine for ECUs has changed. There are now more frequent visits with fewer residents to do each visit. In addition, specific procedures per resident were reviewed to maintain only necessary lab work. This should be revisited occasionally.			
	• Awkward posture	• Keyboard drawer at "box" is not adjustable	6. Due to the frequency of use at this workstation, an adjustable keyboard tray is recommended.			
	• Work space • Noise	• Location of "box" area	7. Continue to consider alternate locations for this workstation so that it is not near equipment and not in an aisleway. Additional working space would also be beneficial.			
	• Awkward posture, contact stress	• Computer workstation in main lab	8. Remove drawer underneath. Add corner maker and keyboard wrist rest.			
	• Force • Awkward posture	• Handling baskets and buckets for pipette cleaning	9. Review current placement of pipette cleaning station; relocate paper towel holder and move the buckets to the front of the counter (to reduce reaching back); relocate hot plate.			

Additional Comments: