

CASE STUDY - 5 Calling (Telephone Use)

TASK TITLE: Telephone Use

Task Description:	<p>Telephone use may involve the use of a hand set or a head set. The base of the telephone may be a push button or rotary phone. The length of time of telephone use varies significantly for calling tasks as well as the type of work that is typically performed. Information provided over the telephone may be written out by hand or entered into the computer.</p> <p>Typical jobs in which calling is performed include (not necessarily limited to):</p> <ul style="list-style-type: none">• customer service• general administrative support
Job Performance Measures Most often impacted by Calling:	Error rates, number of calls taken and recorded/processed.
Typical Employee Comments about Calling:	Employees typically complain about discomfort and/or stiffness in the shoulders/neck.
Suggested Level II Analysis:	Postural analysis, light level analysis.

Case Study 5 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
1. Arms held away from body	<ul style="list-style-type: none"> Telephone not positioned close to the body (See Figure 5.1) Person dials frequently  <p>Figure 5.1</p>	43. Move telephone in work zone: <ul style="list-style-type: none"> move telephone closer to body and into the primary work zone (see work zone specifications, modifications section); move telephone so reaching is not required to dial the phone or access the hand set. 	✓		low	low	low
2. Repeated reaching	<ul style="list-style-type: none"> Telephone not positioned close to the body (See Figure 5.1) Person dials frequently 	43. Move telephone in work zone: <ul style="list-style-type: none"> move telephone closer to body and into the primary work zone (see work zone specifications, modifications section); move telephone so reaching is not required to dial the phone or access the hand set. 	✓		low	low	low
3. Shrugging: working with the shoulders shrugged	<ul style="list-style-type: none"> Rarely occurs 	N/A					
4. Repeated arm forces	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Case Study 5 (continued)

Shoulder/Neck

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
5. Holding/ carrying materials	<ul style="list-style-type: none"> Rarely occurs 	N/A					
6. Cradling the telephone between the neck and shoulder	<ul style="list-style-type: none"> Talking on the telephone (using a handset) while both hands are occupied (e.g., keying or doing paper work) 	83. Provide telephone headset: <ul style="list-style-type: none"> provide a selection of head set types to choose from (e.g., over-the-head, over-the-ear). 		✓	med	med	med
		101. Use an available telephone headset	✓		low	med	med
7. Head bent down, up or neck twisted	<ul style="list-style-type: none"> Number display and buttons on telephone are positioned flat 	3. Angle telephone base slightly: <ul style="list-style-type: none"> tilt the base slightly toward the person; avoid angling the base too much to avoid causing a bent wrist while dialing. 	✓		low	low	low

Case Study 5 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
8. Bent wrists	<ul style="list-style-type: none"> • Telephone too far away • Person tends to rest the wrist on the front edge of the phone while dialing 	43. Move telephone in work zone: <ul style="list-style-type: none"> • move telephone closer to body and into the primary work zone (see work zone specifications, modifications section); • move telephone so reaching is not required to dial the phone or access the hand set. 	✓		low	low	low
		96. Train proper keying style: <ul style="list-style-type: none"> • encourage person to maintain straight wrists while keying; • encourage person to keep wrists free while keying ; • encourage person to avoid bending the wrists while resting the hands; • rest hands in lap or on arm rests while pausing. 	✓		low	med	med
		67. Program macro keys to reduce keying: <ul style="list-style-type: none"> • provide speed dial functions for commonly used functions; • employ computer-based dialing for highly repetitive dialing. 	✓		low	high	high

Case Study 5 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
9. Repeated wrist movements	<ul style="list-style-type: none"> Rarely occurs 	N/A					
10. Repeated finger movements	<ul style="list-style-type: none"> Person makes many phone calls and dials many number throughout the day 	67. Program macro keys to reduce keying: <ul style="list-style-type: none"> provide speed dial functions for commonly used functions; employ computer-based dialing for highly repetitive dialing. 	✓		low	high	high
		13. Incorporate health comfort strategies: <ul style="list-style-type: none"> – breath frequently – alternate tasks; – stretch; – take rest pause. 	✓		low	med	med
11. Hyperextension of finger/thumb	<ul style="list-style-type: none"> Person has tendency to hyperextend the index finger while dialing Use of a rotary phone 	96. Train proper keying style: <ul style="list-style-type: none"> encourage person to avoid extending fingers while keying; encourage person to keep all of the fingers curled under and together. 	✓		low	med	med
		21. Install a push button phone: <ul style="list-style-type: none"> provide a touch-tone phone. 		✓	med to high	med	med
		67. Program macro keys to reduce keying:	✓		low	high	high

Case Study 5 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
		<ul style="list-style-type: none"> provide speed dial functions for commonly used functions; employ computer-based dialing for highly repetitive dialing. 					
12. Hand forces	<ul style="list-style-type: none"> Poor typing style (e.g., hit keys hard) Keys stiff Lack of appropriate tactile feedback (e.g., a “click”) 	96. Train proper keying style: <ul style="list-style-type: none"> encourage person to practice using as light a touch as possible on buttons. 22. Install push button phone: <ul style="list-style-type: none"> provide a keypad which does not require excessive forces to actuate; keys should provide adequate auditory and tactile feedback when pressed. 67. Program macro keys to reduce keying: <ul style="list-style-type: none"> provide speed dial functions for commonly used functions; employ computer-based dialing for highly repetitive dialing. 	✓		low	med	med
				✓	med to high	med	med
			✓		low	high	high

Case Study 5 (continued)

Hands/Wrists/Arms

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
13. Hard edges	<ul style="list-style-type: none"> Person tends to rest the wrist on the front edge of the phone while dialing Front edge of phone has a hard edge 	18. Install palm rest: <ul style="list-style-type: none"> cover the hard edge with a small palm rest for frequent dialers. 	✓		low	med	med
		67. Program macro keys to reduce keying: <ul style="list-style-type: none"> provide speed dial functions for commonly used functions; employ computer-based dialing for highly repetitive dialing. 	✓		low	high	high
14. Repeated forearm rotation	<ul style="list-style-type: none"> Rarely occurs 	N/A					
15. Leaning forward/no back support	<ul style="list-style-type: none"> Chair arms interfere with moving chair closer 	90. Remove or lower armrests: <ul style="list-style-type: none"> remove or adjust armrests, pencil drawers or other obstructions if they prevent the person from moving close enough to the workstation. 	✓		low to med	low	med
		78. Provide proper chair: <ul style="list-style-type: none"> provide a chair in which the armrests can be adjusted or removed. 		✓	med	low	low

Case Study 5 (continued)

Back/Torso

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
16. Repeated bending	<ul style="list-style-type: none"> Reaching for items too far from body  <p>Figure 5.2</p>	43. Move telephone in work zone: <ul style="list-style-type: none"> move telephone closer to body and into the primary work zone (see work zone specifications, modifications section); move telephone so reaching is not required to dial the phone or access the hand set. 	✓		low	low	low
17. Lifting Forces	<ul style="list-style-type: none"> Rarely occurs 	N/A					
18. No foot support	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Case Study 5 (continued)

Legs/Feet

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
19. Edge of seat or work surface presses into legs	<ul style="list-style-type: none"> Rarely occurs 	N/A					
20. Hard floor surfaces	<ul style="list-style-type: none"> Rarely occurs 	N/A					
21. Kneeling/squatting	<ul style="list-style-type: none"> Rarely occurs 	N/A					

Case Study 5 (continued)

Head/Eyes

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
22. Staring at screen or document	Rarely occurs	N/A					
23. Glare	Glare reflects off of plastic phone cover	3. Angle telephone base slightly: <ul style="list-style-type: none"> • angling the base may eliminate the exposed glare; • if this is unsuccessful, remove plastic phone cover. 	✓		low	low	low
		31. Lower light levels: <ul style="list-style-type: none"> • turn off task light; • 50-100 fc is an appropriate range of light levels for using a phone; • remove pairs of fluorescent light bulbs from overhead fixtures. Note: this should be done with the assistance of appropriate technical assistance and the agreement of co-workers in the area; • provide alternative light fixtures for overhead lights (parabolic louver fixtures are recommended when computer work is the predominant activity.) Note: this should also be performed by the appropriate personnel. 		✓	low to med	med	med

Case Study 5 (continued)

Head/Eyes

Job Factor	Potential Causes	Corrective Action	Level of Changes		Cost	Impact On	
			✓ Minor Modification	✓ Major Change		Quality	Productivity
24. Light levels	<ul style="list-style-type: none"> Rarely occurs 	N/A					
25. Screen distance	<ul style="list-style-type: none"> Rarely occurs 	N/A					
26. Difficult to read	<ul style="list-style-type: none"> Rarely occurs 	N/A					