# Appendix A: Photographs of Patient Rooms



Figure A1: Hospital A patient room showing the wall-mounted luminaire at the headwall. The luminaire is hinged so that the light from the upper section (shown directed upwards here) can be directed towards the bed during an examination.



Figure A2: Hospital A patient room showing the recessed linear luminaires providing general room lighting.

Figure A3: Hospital A patient room showing the step-light style wall-recessed amber nightlight near the door to the patient bathroom.



Figure A4: Hospital B patient room showing the multi-function recessed luminaire above the bed. This was the only luminaire in the rooms originally. A later upgrade added the wall sconce luminaire for the guest area, a recessed downlight in the doorway entry area, and a step-light-style nightlight recessed into the wall.

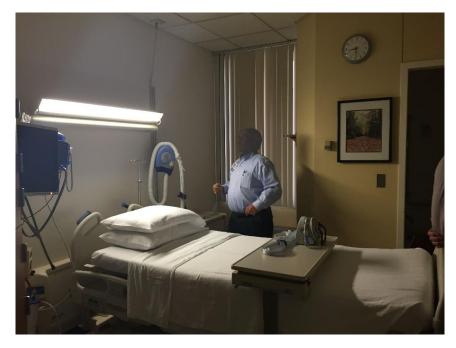Figure A5: Hospital B wall controller located near the entry door.



Figure A6: Hospital C patient room showing the wall-mounted luminaire with a hinged uplight section. The uplight section is in the examination position, directing its light toward the patient bed. The wall-mounted luminaire is the only electric lighting in the room.

Figure A7: Hospital D patient room showing the recessed round downlight luminaires for general room lighting, the recessed linear luminaires over the bed, the wall-mounted linear luminaire for patient reading, and the wall sconce luminaire in the guest area.



Figure A8: Hospital D patient room showing the entry area with separate sink light and push-button controller near the door.

Figure A9: Hospital D patient room push-button lighting controller. HOB refers to the "head of bed" wall-mounted luminaire while "BED" refers to the recessed ceiling lighting over the bed. "CEILING" refers to the recessed downlight luminaires providing general room lighting.

# Appendix B: Content analysis details for comments related to lighting attributes

This table shows the emerging themes and sub-categories per hospital for comments made by participants responding to the item: "For a typical patient room in which you work during the day/night, please indicate whether each attribute hinders, is neutral or helps your ability to perform your professional duties."

| Hospital | Theme | Freq. | % | Sub-Category | Freq. | % |
|---|---|---|---|---|---|---|
| A | Accessibility | 0 | 0.00% | | | |
| | Brightness | 4 | 44.44% | Additional Lighting | 1 | 100.00% |
| | Color | 0 | 0.00% | | | |
| | Controls | 4 | 44.44% | Brightness | 2 | 100.00% |
| | | | | Accessibility | 0 | 0.00% |
| | | | | Directional Lighting | 0 | 0.00% |
| | Directional Light | 0 | 0.00% | | | |
| | Flicker | 0 | 0.00% | | | |
| | General Negative | 0 | 0.00% | | | |
| | Glare | 0 | 0.00% | | | |
| | Lighting Source | 1 | 11.11% | Fluorescent Lighting | 0 | 0.00% |
| | | | | Task Lighting | 1 | 100.00% |
| | | | | Overhead Lighting | 0 | 0.00% |
| | Maintenance | 0 | 0.00% | | | |
| **Hospital** | **Theme** | **Freq.** | **%** | **Sub-Category** | **Freq.** | **%** |
| B | Accessibility | 3 | 15.00% | | | |
| | Brightness | 2 | 10.00% | Additional Lighting | 0 | 0.00% |
| | Color | 1 | 5.00% | | | |
| | Controls | 8 | 40.00% | Brightness | 4 | 100.00% |
| | | | | Accessibility | 0 | 0.00% |
| | | | | Directional Lighting | 0 | 0.00% |
| | Directional Light | 0 | 0.00% | | | |
| | Flicker | 2 | 10.00% | | | |
| | General Negative | 1 | 5.00% | | | |
| | Glare | 0 | 0.00% | | | |
| | Lighting Source | 1 | 5.00% | Fluorescent Lighting | 0 | 0.00% |
| | | | | Task Lighting | 1 | 100.00% |
| | | | | Overhead Lighting | 0 | 0.00% |
| | Maintenance | 2 | 10.00% | | | |
| **Hospital** | **Theme** | **Freq.** | **%** | **Sub-Category** | **Freq.** | **%** |
| C | Accessibility | 0 | 0.00% | | | |
| | Brightness | 3 | 18.75% | Additional Lighting | 0 | 0.00% |

| Hospital | Theme | Freq. | % | Sub-Category | Freq. | % |
|---|---|---|---|---|---|---|
| | Color | 1 | 6.25% | | | |
| | Controls | 2 | 12.50% | Brightness | 1 | 100.00% |
| | | | | Accessibility | 0 | 0.00% |
| | | | | Directional Lighting | 0 | 0.00% |
| | Directional Light | 3 | 18.75% | | | |
| | Flicker | 0 | 0.00% | | | |
| | General Negative | 0 | 0.00% | | | |
| | Glare | 5 | 31.25% | | | |
| | Lighting Source | 2 | 12.50% | Fluorescent Lighting | 0 | 0.00% |
| | | | | Task Lighting | 0 | 0.00% |
| | | | | Overhead Lighting | 2 | 100.00% |
| | Maintenance | 0 | 0.00% | | | |
| **Hospital** | **Theme** | **Freq.** | **%** | **Sub-Category** | **Freq.** | **%** |
| D | Accessibility | 0 | 0.00% | | | |
| | Brightness | 0 | 0.00% | Additional Lighting | 0 | 0.00% |
| | Color | 0 | 0.00% | | | |
| | Controls | 6 | 66.67% | Brightness | 1 | 50.00% |
| | | | | Accessibility | 1 | 50.00% |
| | | | | Directional Lighting | 0 | 0.00% |
| | Directional Light | 0 | 0.00% | | | |
| | Flicker | 0 | 0.00% | | | |
| | General Negative | 0 | 0.00% | | | |
| | Glare | 1 | 11.11% | | | |
| | Lighting Source | 1 | 11.11% | Fluorescent Lighting | 0 | 0.00% |
| | | | | Task Lighting | 1 | 100.00% |
| | | | | Overhead Lighting | 0 | 0.00% |
| | Maintenance | 1 | 11.11% | | | |

Note: Freq. = Frequency count

# Appendix C: Content analysis details for comments related to supplemental lighting

This table shows the emerging themes and sub-categories per hospital for comments made by participants responding to the item: "For a typical patient room in which you work during the day/night, do your professional duties require additional lighting beyond what is provided by the built-in patient room lighting? (If yes or sometimes, please explain the supplemental lighting below. Examples include a task light that you bring into the room, or a flashlight / mobile phone light.)

| Hospital | Theme | Freq. | % | Sub-Category | Freq. | % |
|---|---|---|---|---|---|---|
| A | Control | 1 | 2.70% | Dimming | 1 | 50.00% |
| | | | | Patient Bed | 1 | 50.00% |
| | General Duties | 14 | 37.84% | Examination | 6 | 42.86% |
| | | | | Procedures | 8 | 57.14% |
| | Insufficient Light | 6 | 16.22% | Equipment | 1 | 16.67% |
| | | | | Foot of Bed | 1 | 16.67% |
| | | | | Direct Light | 0 | 0.00% |
| | | | | Nighttime | 0 | 0.00% |
| | | | | Nightlight | 1 | 16.67% |
| | | | | Nurse Work Area | 0 | 0.00% |
| | | | | Overhead Lighting | 1 | 16.67% |
| | | | | Patient Bed | 2 | 33.33% |
| | | | | Wall Base | 0 | 0.00% |
| | Nighttime Duties | 1 | 2.70% | | | |
| | Room Lights | 0 | 0.00% | | | |
| | Supplemental Light | 15 | 40.54% | Flashlight | 10 | 50.00% |
| | | | | Penlight | 6 | 30.00% |
| | | | | Task Light | 1 | 5.00% |
| | | | | Spot Light | 1 | 5.00% |
| | | | | Bathroom Light | 1 | 5.00% |
| | | | | Mobile | 1 | 5.00% |
| | | | | Adjustable Light | 0 | 0.00% |
| | | | | Scammer | 0 | 0.00% |
| | | | | Gooseneck | 0 | 0.00% |
| | | | | Exam Light | 0 | 0.00% |
| | | | | Equipment | 0 | 0.00% |
| Hospital | Theme | Freq. | % | Sub-Category | Freq. | % |
| B | Control | 0 | 0.00% | Dimming | 0 | 0.00% |
| | | | | Patient Bed | 0 | 0.00% |
| | General Duties | 16 | 40.00% | Examination | 6 | 30.00% |
| | | | | Procedures | 14 | 70.00% |

| Hospital | Theme | Freq. | % | Sub-Category | Freq. | % |
|---|---|---|---|---|---|---|
| | Insufficient Light | 5 | 12.50% | Equipment | 1 | 20.00% |
| | | | | Foot of Bed | 2 | 40.00% |
| | | | | Direct Light | 0 | 0.00% |
| | | | | Nighttime | 0 | 0.00% |
| | | | | Nightlight | 0 | 0.00% |
| | | | | Nurse Work Area | 0 | 0.00% |
| | | | | Overhead Lighting | 1 | 20.00% |
| | | | | Patient Bed | 0 | 0.00% |
| | | | | Wall Base | 1 | 20.00% |
| | Nighttime Duties | 1 | 2.50% | | | |
| | Room Lights | 1 | 2.50% | | | |
| | Supplemental Light | 17 | 42.50% | Flashlight | 9 | 56.25% |
| | | | | Penlight | 3 | 18.75% |
| | | | | Task Light | 0 | 0.00% |
| | | | | Spot Light | 0 | 0.00% |
| | | | | Bathroom Light | 0 | 0.00% |
| | | | | Mobile | 0 | 0.00% |
| | | | | Adjustable Light | 1 | 6.25% |
| | | | | Scanner | 0 | 0.00% |
| | | | | Gooseneck | 1 | 6.25% |
| | | | | Exam Light | 2 | 12.50% |
| | | | | Equipment | 0 | 0.00% |
| **Hospital** | **Theme** | **Freq.** | **%** | **Sub-Category** | **Freq.** | **%** |
| C | Control | 0 | 0.00% | Dimming | 0 | 0.00% |
| | | | | Patient Bed | 0 | 0.00% |
| | General Duties | 6 | 35.29% | Examination | 3 | 33.33% |
| | | | | Procedures | 6 | 66.67% |
| | Insufficient Light | 5 | 29.41% | Equipment | 1 | 25.00% |
| | | | | Foot of Bed | 0 | 0.00% |
| | | | | Direct Light | 1 | 25.00% |
| | | | | Nighttime | 0 | 0.00% |
| | | | | Nightlight | 0 | 0.00% |
| | | | | Nurse Work Area | 0 | 0.00% |
| | | | | Overhead Lighting | 2 | 50.00% |
| | | | | Patient Bed | 0 | 0.00% |
| | | | | Wall Base | 0 | 0.00% |
| | Nighttime Duties | 1 | 5.88% | | | |
| | Room Lights | 0 | 0.00% | | | |
| | Supplemental Light | 5 | 29.41% | Flashlight | 4 | 57.14% |
| | | | | Penlight | 2 | 28.57% |
| | | | | Task Light | 0 | 0.00% |
| | | | | Spot Light | 0 | 0.00% |
| | | | | Bathroom Light | 0 | 0.00% |
| | | | | Mobile | 0 | 0.00% |
| | | | | Adjustable Light | 0 | 0.00% |
| | | | | Scanner | 1 | 14.29% |
| | | | | Gooseneck | 0 | 0.00% |
| | | | | Exam Light | 0 | 0.00% |
| | | | | Equipment | 0 | 0.00% |
| **Hospital** | **Theme** | **Freq.** | **%** | **Sub-Category** | **Freq.** | **%** |
| D | Control | 0 | 0.00% | Dimming | 0 | 0.00% |

| | Freq. | % | | Freq. | % |
|---|---|---|---|---|---|
| | | | Patient Bed | 0 | 0.00% |
| General Duties | 4 | 19.05% | Examination | 2 | 40.00% |
| | | | Procedures | 3 | 60.00% |
| Insufficient Light | 3 | 14.29% | Equipment | 0 | 0.00% |
| | | | Foot of Bed | 0 | 0.00% |
| | | | Direct Light | 0 | 0.00% |
| | | | Nighttime | 1 | 33.33% |
| | | | Nightlight | 0 | 0.00% |
| | | | Nurse Work Area | 1 | 33.33% |
| | | | Overhead Lighting | 1 | 33.33% |
| | | | Patient Bed | 0 | 0.00% |
| | | | Wall Base | 0 | 0.00% |
| Nighttime Duties | 5 | 23.81% | | | |
| Room Lights | 0 | 0.00% | | | |
| Supplemental Light | 9 | 42.86% | Flashlight | 7 | 58.33% |
| | | | Penlight | 4 | 33.33% |
| | | | Task Light | 0 | 0.00% |
| | | | Spot Light | 0 | 0.00% |
| | | | Bathroom Light | 0 | 0.00% |
| | | | Mobile | 0 | 0.00% |
| | | | Adjustable Light | 0 | 0.00% |
| | | | Scanner | 0 | 0.00% |
| | | | Gooseneck | 0 | 0.00% |
| | | | Exam Light | 0 | 0.00% |
| | | | Equipment | 1 | 8.33% |

Note: Freq. = Frequency count