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**Figure 1.**  Prevalence of musculoskeletal discomfort that exceeds 50% is consistently found in studies of various types of imaging technologists.

**Figure 2.** Mammographer positioning patient to acquire a CC view (a); black arrow points to paddle that compresses the breast after it is positioned on the receptor plate (white arrow). Image source: <http://www.cdc.gov/cancer/breast/basic_info/mammograms.htm> Simulation of mammographer positioning patient to acquire an MLO view (b); black arrow points to tube head at 45 deg angle for this view, white arrows point to foot controls. Simulation of mammographer positioning patient to acquire a 90 deg. (lateral) view (c).

**Figure 3.**  Mammographers’ evaluations of the intervention concepts. Evaluation score scale for overall usability, usefulness, and desirability: 1=very poor, 7=very good. Green dots refer to the number of priority votes each concept received from participants; contrast these with the barriers to use/implementation projected by participants.

**Figure 4.**  Prototype pair of mirrors used in the field study (a); design refinements seen in the system that is currently in use were based on field study experience (b).

**Figure 5.**  Simulation of the mirrors being used for CC view (a), MLO view (b), and 90 deg. (lateral) view (c).

**Appendix Figure.** An example of one of the posters created for the concept review sessions.

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**Table 1.** Results of needs assessment analysis of focus group (Phase 1) data from mammographers.

**Table 2.** Concepts presented to the mammographers in the concept review sessions.