Enhancement of Family Bonding with Internet Video Stream of Hospitalized Neonates

INTRODUCTION
This project’s aim was to determine the utility and feasibility of internet-enabled video cameras placed at bedsides in the NICU and the effect of viewing the infant has on family bonding with their hospitalized neonate.

BACKGROUND
Existing technologies, such as Skype™ and FaceTime, allow for real-time video conferencing via internet-enabled devices. Since most neonates admitted to a NICU have a length of stay that exceeds that of the mother, it forces the families to leave their hospitalized infant in the care of the NICU staff. An internet-enabled video camera located at the bedside would allow for the families to view their hospitalized infant when they cannot be physically present in the NICU, allowing for the parents and the extended family to continue the bonding process.

METHOD
UMass Memorial Health Care purchased 49 video-only NicView web cameras and installed them at each bedside in the NICU. Families were invited to utilize the system and those interested were given a discrete username and password for their infant’s camera. Families and nursing staff established the viewing times, which would last for 1-4 hours per viewing period and families could have multiple viewing periods per day. A ten-question online survey using a Likert scale was embedded on the viewing screen and families would complete the survey during or after the viewing period. The Likert scale utilized a 5 point system with a score of 5 signifying that the respondent strongly agreed with the statement and a score of 1 that the respondent strongly disagreed with the statement.

During the period from October 2012 — October 2013, there were 95 completed surveys out of 352 potential families that utilized the NicView web camera system. The families agreed (average rating of 3.96 out of a maximum score of 5) that the viewing system met their expectations and they agreed (4.01) that the system strengthened family bonding. Respondents also agreed (4.2) that the viewing provided them with extra peace of mind concerning the baby’s status. However, the families disagreed (1.98) with the statement that these video sessions would reduce their visits to the NICU. Lastly, the respondents strongly agreed (4.35) that the video sessions overall were beneficial to their families.

RESULTS
Since the survey period, there have been logins to our NicView systems from 186 cities and towns in Massachusetts, 45 states in the US, and 31 countries and territories around the world.

CONCLUSION
This project demonstrated that internet-enabled web cameras located at each bedspace in a NICU are beneficial to families and can increase family bonding, while decreasing family stress concerning a hospitalized neonate without reducing parental visitation to the NICU.

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