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## 42 A Real “Push” for Medical Education: A Pilot Comparison Between SMS Texting and Email for Emergency Medicine Residents’ Knowledge Retention

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**Background:** Technological advancements have generated many new methods of information distribution. Email and SMS texting are types of “push” technology utilized by educators. SMS texting is effective in patient education but has yet to be firmly utilized in graduate medical education. If effective, this may enhance health professionals’ learning and retention of information.

**Objectives:** To evaluate the knowledge retention of information delivered via bi-daily text messages as compared to a single e-mail to emergency medicine (EM) residents.

**Methods:** This is a prospective, randomized controlled study in an ACGME accredited academic center. Sixteen EM residents were randomized within each year of training into two groups to receive educational information via a twice-daily text message (n=7) or a one-time email handout (n=9). Knowledge retention was assessed with a 30-question test administered two weeks before and after information delivery. Data was analyzed using t-test analysis. The study received IRB approval.

**Results:** The average level of education was a second year EM resident. Between the two groups, the mean age was similar, with males more prevalent than females. In the SMS text group, the mean pretest score was 75.46 and the post-test score was 76.19. In the email group, the mean pretest score was 77.49 and the post-test score was 71.47. Results showed that the mean post-test score in the text group increased 0.73 (95% CI -11.80 to 13.26) when compared to the pretest score, whereas the mean post-test score in the email group decreased 6.02 (95% CI -10.99 to -1.06) from the pretest score (p=0.21). Test scores showed a trend in improvement in the text group compared to the email group.

**Conclusions:** The preliminary study results illustrate that SMS text messages show a promising trend in improving knowledge retention and may possibly be a valuable education tool for graduate medical education.