

Writing peer reviews

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A disclaimer

The following material was used during a live lecture. Without the accompanying oral comments and discussion, the text is incomplete as a record of the presentation. A full recording may be found via Zoom on the course Sakai site.

What even is peer review?

Peer review is the "expert assessment of submitted materials" (Walker) and is used to help ensure that published materials are of high quality and free from mistakes. It is used to maintain quality standards and credibility in shared results. Many times peer review is blinded, which allows for more honest and constructive comments.

Peer review is *not* limited to academic settings and journal submissions!

What even is peer review?

Peer reviewers are tasked with providing a dispassionate evaluation of the work in question - this review is often used for decision-making purposes on behalf of a larger institution.

Useful peer reviews provide helpful feedback (both positive and negative) about the relative strengths and weaknesses of the piece being reviewed.

Just because there are no mistakes doesn't necessarily mean that an article is worthy of publication!

Dos and don'ts of peer review

Always keep the overall goal in mind: to provide an objective evaluation of the work in question

- See Sakai for further resources and items to consider (we won't discuss in class; there are interactive activities to do!)
- Use Case 00 peer review checklist and questions asked in assignment repositories as the basis for your own peer review!
- **Describe - Evaluate - Suggest** framework

Example 1

Junod Perron et al. BMC Health Services Research 2013, **13**:125
<http://www.biomedcentral.com/1472-6963/13/125>



RESEARCH ARTICLE

Open Access

Text-messaging versus telephone reminders to reduce missed appointments in an academic primary care clinic: a randomized controlled trial

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Example 1

Abstract

Background: Telephone or text-message reminders have been shown to significantly reduce the rate of missed appointments in different medical settings. Since text-messaging is less resource-demanding, we tested the hypothesis that text-message reminders would be as effective as telephone reminders in an academic primary care clinic.

Methods: A randomized controlled non-inferiority trial was conducted in the academic primary care division of the Geneva University Hospitals between November 2010 and April 2011. Patients registered for an appointment at the clinic, and for whom a cell phone number was available, were randomly selected to receive a text-message or a telephone call reminder 24 hours before the planned appointment. Patients were included each time they had an appointment. The main outcome was the rate of unexplained missed appointments. Appointments were not missed if they were cancelled or re-scheduled before or independently from the intervention. We defined non-inferiority as a difference below 2% in the rate of missed appointments and powered the study accordingly. A satisfaction survey was conducted among a random sample of 900 patients (response rate 41%).

Results: 6450 patients were included, 3285 in the text-message group and 3165 in the telephone group. The rate of missed appointments was similar in the text-message group (11.7%, 95% CI: 10.6-12.8) and in the telephone group (10.2%, 95% CI: 9.2-11.3 p = 0.07). However, only text message reminders were cost-effective. No patient reported any disturbance by any type of reminder in the satisfaction survey. Three quarters of surveyed patients recommended its regular implementation in the clinic.

Conclusions: Text-message reminders are equivalent to telephone reminders in reducing the proportion of missed appointments in an academic primary care clinic and are more cost-effective. Both types of reminders are well accepted by patients.

Keywords: Reminders, Telephone, Text-message, Missed appointments, Primary care, Randomized controlled trial

Example 1

Outcome measures

The primary outcome was the rate of unexplained missed appointments. Appointments that were cancelled or rescheduled before the planned appointments were not considered as missed. The rate of cancelled or rescheduled appointments the day before and the day of the appointment as well as the number of reallocations were collected as secondary outcomes. The variables collected in the satisfaction survey are detailed in the previous section.

Statistical analysis

Stata software was used for the analysis. Analyses were performed by a researcher (DHH) who was neither involved in the study implementation or in the data collection, nor in the administrative routine work of the clinic or in patient care. The statistical analysis was conducted according to the “intention to treat” principle and included all appointments once randomization had occurred, excluding appointments that were cancelled before or independently from the intervention. We compared patient and health care providers’ baseline characteristics between groups by means of Chi square tests for categorical variables and Student’s-t-test for continuous variables. We compared the rate of missed appointments between both groups and calculated odds ratios and confidence interval. P values of 0.05 or less were considered statistically significant.

Example 2

International Journal of Injury Control and Safety Promotion, 2013
Vol. 20, No. 2, 121–133, <http://dx.doi.org/10.1080/17457300.2012.692694>



Fatal accident distribution by age, gender and head injury, and death probability at accident scene in Mashhad, Iran, 2006–2009

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Example 2

Several studies have investigated road traffic deaths, but few have compared by road user type. Iran, with an estimated 44 road traffic deaths per 100,000 population in 2002 had higher road traffic deaths than any other country for which reliable estimates can be made. So, the present study was conducted on road death data and identified fatal accident distribution by age, gender and head injury as well as the influences of age and gender on deaths at accident scenes for all road user groups. Data used in this study are on fatal road accidents recorded by forensic medicine experts of the Khorasan Razavi province in Mashhad, the capital of the province, the second largest city and the largest place of pilgrimage, immigration and tourism in Iran. Chi-square test and odds ratio were used to identify the relation of death place with age and gender in 2495 fatal road accidents from 2006 to 2009. The *t*-test and analysis of variance were employed for continues variable, age, to compare males' and females' mean age for all road user categories. For two genders, all three groups of fatalities (pedestrian, motorcyclist and motor vehicle occupant) had a peak at the ages of 21–30. The youngest were male motorcyclists (mean age = 28). Old pedestrians were included in road deaths very much, too. Male/female overall ratio was 3.41 and the highest male/female ratio was related to motorcyclists (14). The overall ratio of head injury to other organ injuries (torso and underbody) was 2.51 and pedestrians had the largest amount of head injury (38.2%). Regarding death at accident scene, for all road users, gender did not have any significant relation with death at the scene (P -value > 0.1); on the contrary, age had significant relation (P -value < 0.05). Females were more vulnerable at accident scenes (male/female ratio at accident sense < 1). Pedestrians aged 21–30, motorcyclists 41–50 and motor vehicle occupants 31–40 died the most at accident scenes. Identifying the most endangered groups of road accident fatalities, which was conducted in this study, is invaluable for the appropriate design of prevention strategies and allocation of financial resources for each group of road user fatalities – since in developing nations, there are insufficient financial resources to traffic safety and we should consider superiorities, i.e. the most risky groups. Steps which may contribute to safety promotion for local conditions include suitable facilities for old pedestrians, a training course before obtaining motorcycle license for motorcyclists, informing young road users by provincial media about death risk of road users and improving management of the head-injured patients. Finally, suggestions for future researches were made.

Keywords: accident scene; death probability; fatality; age; gender; head

Example 2

Statistical analysis

A Chi-square test was used for the analysis of odds ratio (OR) to identify the relations of death place with age and gender. Clearly, a road user who dies at the scene of accident has the most severe accident and the variable of death place can indicate accident severity. Therefore, the relations of death place, as dependent variable, with gender and age, as independent variables, have been examined to know which of them is effective on accident severity.

The *t*-test and analysis of variance were employed for continues variable, age, to compare the mean of males' and females' age among all road user categories. SPSS 18 was used for data analysis. The level of significance in this article was 0.05.

Analysis of odds ratio for death probability at accident scene

To further understand the problem, death place was used as a criterion for examining the correlation of accident severity, or death at accident scene, with gender and age. As it shown in Table 3, gender has no significant relation with death at the scene (*P*-value 0.189 for pedestrian, 0.390 for motorcyclist, 0.143 for motor vehicle occupant). Quite the contrary, age has significant relation with death at the scene on account of its *P*-value for all road users. Although males are more frequent than females, but they survive more than females at accident scenes, because of the OR of male to female for deaths at accident scenes (OR 0.813 for pedestrian, 0.787 for motorcyclist, 0.790 for motor vehicle occupant). Pedestrian and motorcyclist aged more than 70 and motor vehicle occupant aged ≤ 10 have the least severe accidents at the scenes in their groups. Pedestrians of 21–30 (OR = 2.984), motorcyclists of 41–50 (OR = 10.000) and motor vehicle occupants of 31–40 (OR = 5.236) years old have the most severe accidents in their groups, dying at accident scenes the most.

Example 3



Available online at www.sciencedirect.com

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www.jcma-online.com

Original Article

Role of endoscopic papillary balloon dilation in patients with recurrent bile duct stones after endoscopic sphincterotomy

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Example 3

Abstract

Background: Endoscopic sphincterotomy (ES) is an established treatment for patients with choledocholithiasis or common bile duct stones (CBDS), but further management of patients after ES with recurrent CBDS remains controversial. Endoscopic papillary large balloon dilation (EPLBD) has been used safely and effectively for stone removal in patients after ES with recurrent CBDS. The aim of this study was to evaluate the clinical efficacy of EPLBD in patients after complete ES with recurrent CBDS.

Methods: Records of 891 patients with CBDS after complete ES from January 1991 to December 2008 were reviewed. Of 133 patients with recurrent CBDS, 122 had complete endoscopic bile duct clearance. Twenty-three patients (Group 1) underwent EPLBD and 99 (Group 2) underwent stone extraction without dilatation. Basic demographics and endoscopic findings at the first recurrence were recorded and analyzed. The primary end point was the second CBDS recurrence.

Results: No statistical differences were observed between the two groups, except for larger CBDS size in Group 1. The bile duct clearance rate was 96% in Group 1 and 91% in Group 2. No complications such as pancreatitis, perforation, and bleeding were noted in Group 1, and one patient in Group 2 suffered from bleeding after stone extraction. The rate of second recurrent CBDS after endoscopic clearance for the first recurrent CBDS was 17% in Group 1 and 60% in Group 2 ($p < 0.001$). There were two independent factors for the second recurrence, including cirrhosis (odds ratio 4.734, $p = 0.023$) and stone extraction directly without major papilla expansion (odds ratio 6.050, $p = 0.003$).

Conclusion: EPLBD is a safe and effective endoscopic treatment for recurrent CBDS in patients after ES. It can also facilitate complete clearance of CBDS and prevent further CBDS recurrence.

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Keywords: endoscopic papillary large balloon dilation; endoscopic retrograde cholangiopancreatography; endoscopic sphincterotomy; recurrent common bile duct stone

Example 3

2.4. Statistical analysis

All statistical analyses were performed with the SPSS program (version 12.0.1C). The values were expressed as mean \pm standard deviation. Categorical variables were tested by the chi-square test or using Fisher's exact test. Continuous values were analyzed by Mann–Whitney *U* test. Cumulative re-recurrence was analyzed by the Kaplan–Meier method and log rank test. A *p* value of <0.05 was considered significant.

Table 2

Outcomes of two groups of patients after endoscopic treatment.

	Group 1	Group 2	<i>p</i>
Complication	0	1% (1/99)	> 0.99
Complete bile duct clearance	96% (23/24)	91% (99/109)	0.688
Complete clearance in one session	87% (20/23)	80% (79/99)	0.561
Lithotripsy	13% (3/23)	7% (7/99)	0.397
Second recurrence of CBDS	17% (4/23)	60% (60/99)	< 0.001
Interval between two recurrence (mo)	20 \pm 22.9	24 \pm 28.5	0.967
Follow-up time (mo)	95 \pm 58.1	90 \pm 45.3	0.761

CBDS = common bile duct stones.

Table 4

Multivariate analysis of the risk factors for recurrent common bile duct stones.

	OR	95% CI	<i>p</i>
Cirrhosis	4.734	1.236–18.138	0.023
Endoscopic management without EPLBD	6.050	1.880–19.469	0.003

CI = confidence interval; ERCP = endoscopic retrograde cholangiopancreatography; OR = odds ratio.

Example 4

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Clinical Science

Predictive factors for failure of percutaneous drainage of postoperative abscess after abdominal surgery



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Example 4

KEYWORDS:

Percutaneous drainage;
Imaging guidance;
Postoperative abscess

Abstract

BACKGROUND: The aims of this study were to assess the efficacy of percutaneous drainage of post-operative abscess after abdominal surgery and to identify factors predictive of failed drainage.

METHODS: Data from 81 patients with postoperative abdominopelvic abscesses treated with percutaneous drainage were reviewed. Percutaneous drainage failure was considered when surgery was needed to control the sepsis. Predictive variables were sought using univariate and multivariate analyses with logistic regression models.

RESULTS: Successful drainage requiring 1 ($n = 46$) or 2 ($n = 17$) procedures was observed in 63 patients (78%; 95% confidence interval, 67%–86%). Surgery was needed in 18 patients (22%; 95% confidence interval, 14%–38%). Residual collection after a first percutaneous drainage was the single predictive factor for failed drainage on univariate and multivariate analyses ($P = .0275$).

CONCLUSIONS: Percutaneous imaging-guided drainage is a feasible and effective method for the treatment of abdominopelvic abscess, with a success rate of 78%. Residual collection is an independent predictor of unfavorable outcome after percutaneous drainage.

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Example 4

Statistical analysis

A medical statistician with 25 years' experience in medical statistics performed all statistical analyses. Descriptive statistics were calculated for all variables in the 2 groups of patients (ie, success group and failure group; [Table 2](#)). Quantitative data are expressed using means, standard deviations, and ranges. Categorical data are expressed using proportions and frequencies.

To identify factors associated with failed percutaneous drainage, we compared patients with favorable outcome after percutaneous drainage (group 1) and patients who required surgery because of failed percutaneous drainage (group 2). Categorical variables were compared using chi-square or Fisher's exact test when any expected number was <5 . Quantitative variables were compared using Student's *t* tests or Mann-Whitney tests when the distribution was not normal. The relationships between each variable and patient outcomes were tested using univariate analysis. Univariate logistic regression analysis was performed to calculate the odds ratios and corresponding 95% confidence intervals. Variables with *P* values $<.20$ on univariate analysis were

entered into multivariate logistic regression analysis to search for independent factors predictive of outcomes. A stepwise procedure was used for model selection with entry and retention levels of .05 significance.

Statistical analysis was performed using SAS version 9.2. (SAS Institute, Inc, Cary, NC). All statistical tests were 2 tailed, and *P* values $<.05$ were considered to indicate significant differences.

Predictive variables

The results of the univariate analysis for comparison of the predictive variables (demographic characteristics, pre-procedural CT findings, and procedure-related factors) with clinical outcomes are reported in [Table 2](#). On univariate analysis with logistic regression, residual collection after a first percutaneous drainage was the single predictor of failed percutaneous drainage ([Table 3](#)). Multivariate analysis showed that residual collection (odds ratio, .296; 95% Wald confidence interval, .100–.874) was the single independent predictor of failure of percutaneous drainage (*P* = .0275).