Radiology Trainee Involvement Does Not Increase the Length of Procedure, Moderate Sedation, or Fluoroscopy in Common Interventional Radiology Procedures
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There are no relevant financial disclosures
To examine if the presence of trainees (diagnostic radiology (DR) residents and interventional radiology (IR) fellows) impact the length of patient sedation, fluoroscopy or overall procedure time
Materials and Methods

An IRB-approved retrospective review of the radiology data repository was performed for the following procedures:

• central venous access
• port placement
• gastrostomy tube placement
• gastrostomy tube exchange

Time frame: 12/2016 - 3/2017
Location: single academic hospital
Procedure-related metrics were acquired by the IR technologist at the time of the procedure:

- time patient arrives and leaves IR suite
- start and end time of moderate sedation
- start and end time of the procedure

Outcomes were examined using analysis of variance (ANOVA)

Statistical significance: $p \leq 0.05$
Trainees were involved in 199 (78.3%) of cases.
No statistically significant mean sedation time difference was found for:

- central venous access ($p=0.138$)
- port placement ($p=0.686$)
- gastrostomy tube placement ($p=0.59$)
No statistically significant mean fluoroscopy time difference was found for:

- central venous access ($p=0.278$)
- port placement ($p=0.291$)
- gastrostomy tube placement ($p=0.78$)
No statistically significant mean sedation time difference was found for:

- central venous access ($p=0.105$)
- port placement ($p=0.905$)
- gastrostomy tube placement ($p=0.641$)
There was a significantly significant decrease in procedure length ($p=0.013$), fluoroscopy time ($p=0.007$), and sedation length ($p=0.009$) observed for gastrostomy tube exchanges when a trainee was involved.
The level of involvement was not accounted for, and in many cases trainees may have been primarily observing, particularly residents.

The study period was in the middle of the academic year, when fellows are more experienced with the most common procedures.
✓ Attending IRs working in large training programs may have learned to maintain a similar level of efficiency while supervising or teaching a procedure

✓ Differences found in gastrostomy tube exchange may be explained by outliers within the no-trainee group, and small sample size
Trainee involvement does not significantly increase the mean length of procedure, moderate sedation, or total fluoroscopy time in the included common interventional radiology procedures.
Thank you