



Radiology Trainee Involvement
Does Not Increase the Length
of Procedure, Moderate Sedation,
or Fluoroscopy in Common
Interventional Radiology
Procedures



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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

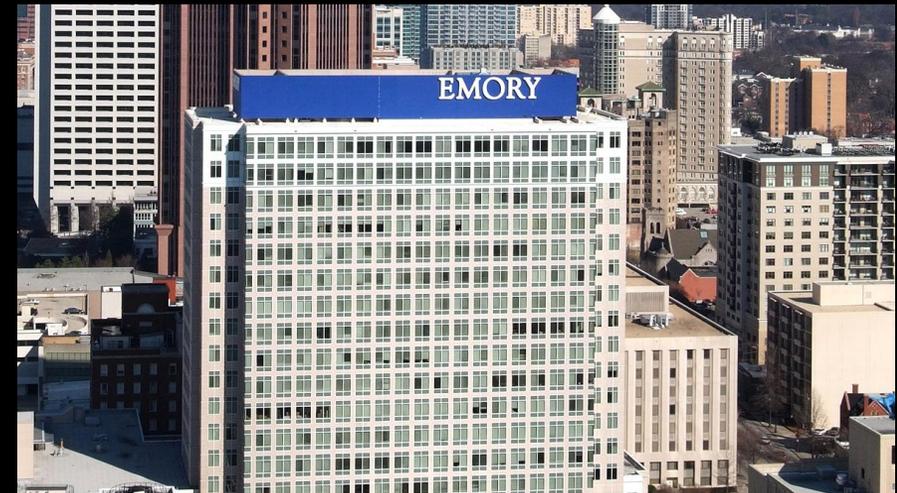


An IRB-approved retrospective review of the radiology data repository was performed for the following procedures:

- 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

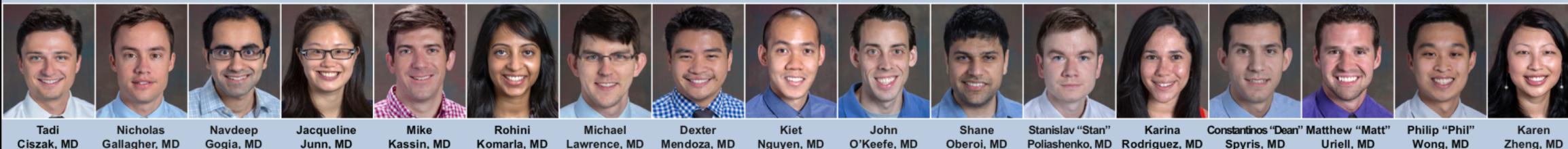
Outcomes were examined using analysis of variance (ANOVA)

Statistical significance: $p \leq 0.05$

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Diagnostic Radiology Residents 2017-2018

R4 Residents



R3 Residents



Ryan Beck, MB, BCh, BAO	Darragh Brady, MB, BCh, BAO	Stephen C...	Kevin Crawford, MD	Bradley Goetz, MD	Sean Zimas, Good...	Ryan Gray...	Adam Heiney, MD	Ryan Key, MD	Nikhar ...	Alexa ...	Daniel "Dan" ...	Abdul Q. Nasir	Peter Park, MD	Ryan Tade, MD	David Theriot, MD
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Trainees were involved in 199 (78.3%) of cases

R2 Residents



Patricia Balthazar, MD	Hernan Bello Velez, MD	Frederic Bertino, MD	Maria Braileanu, MD	Ashwani Gore, MD	Daniel Hampton, MD	Thaddeus D. Hollingsworth, MD	Hena Joshi, MD	Omar Kallas, MD	Jennifer Laporte, MD	Timothy Machen, MD	Dhruv Patel, MD	Christopher T. Stuart, MD	Anna Trofimova, MD, PhD
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R1 Residents



Alexander Castilho, MD	Ling-Chen (Janet) Chien, MD	Ross Christopher, MD	Charlotte Chung, MD, PhD	Alexander Dabrowiecki, MD	Ryan Dolan, MD	Mohammad Elsayed, MD	Christopher Alan Hesh, MD	Jun Sik Lee, MD	Taejin Min, MD, PhD	John Morsek, MD	Krish Singhal, MD	Dean Thongkham, MD	Karen Wong, MD
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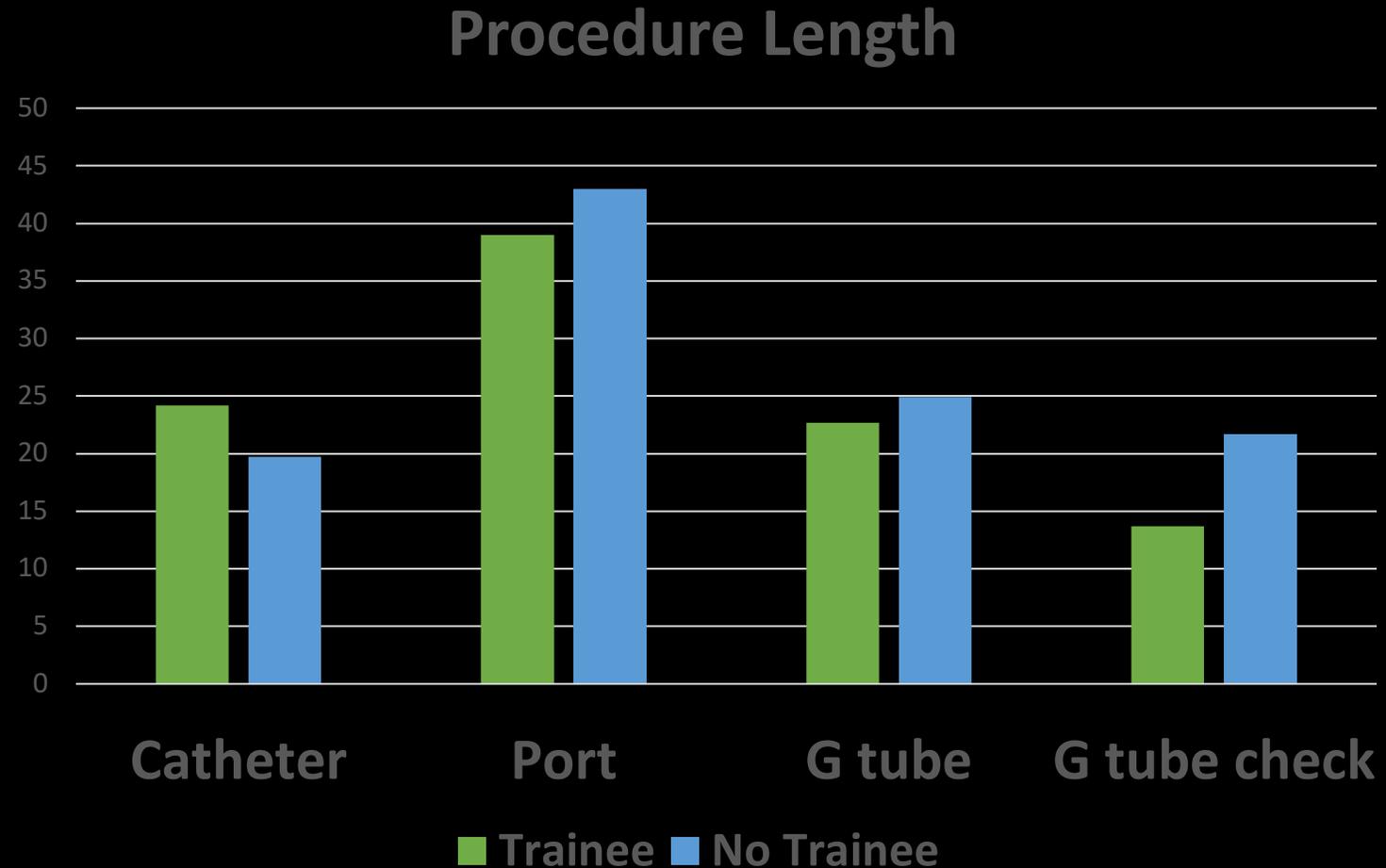


Results - Procedure Length



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)





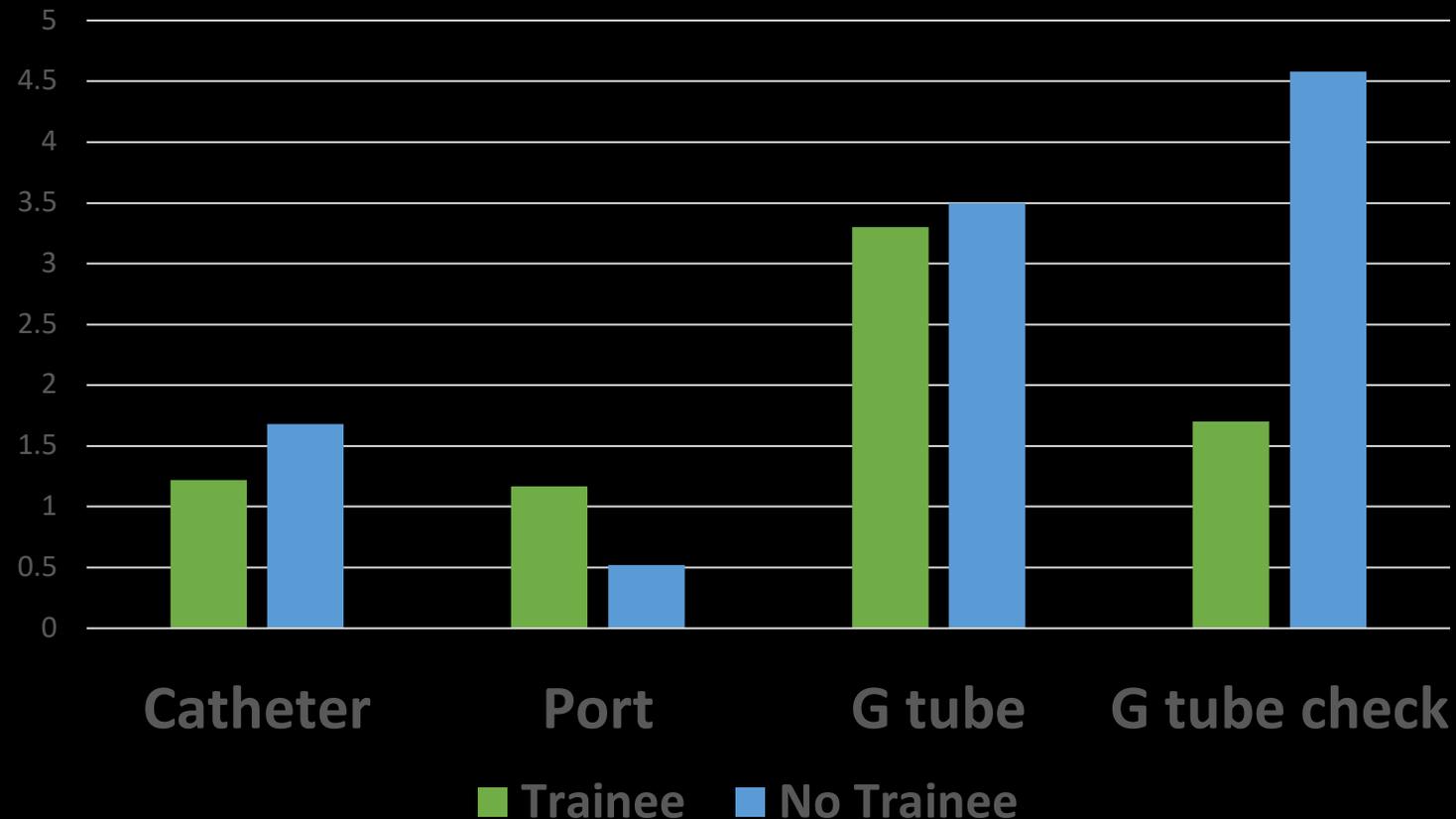
Results - Fluoroscopy Length



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)

Fluoroscopy Time



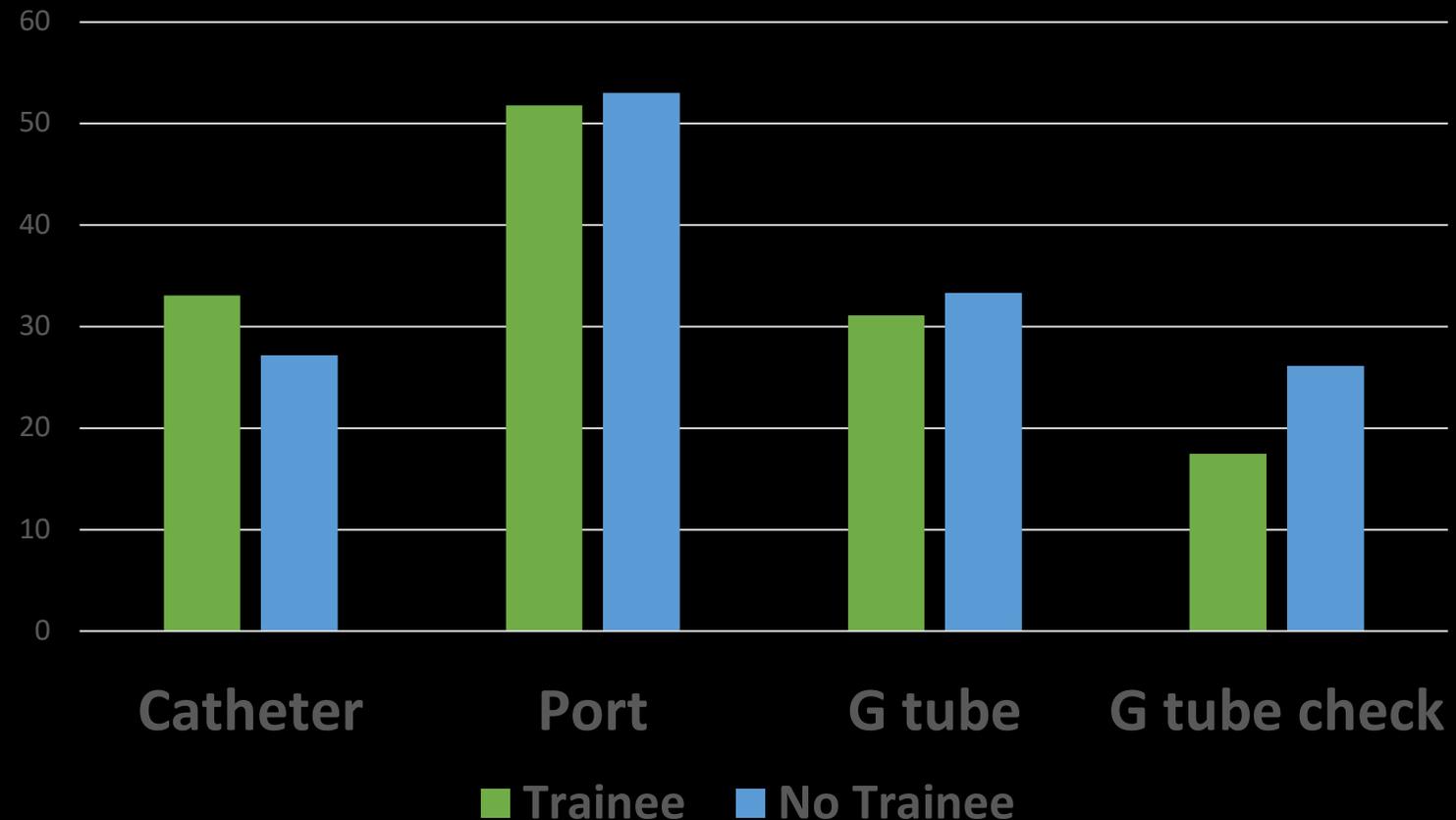
Results - Sedation length



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)

Moderate Sedation Time





Results - Sedation length



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



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Thank you