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PARACENTESIS PRACTICE ASSESSMENT: IDENTIFYING PERI-PROCEDURAL VARIATIONS AND ADHERENCE TO MANDATED PROTOCOLS

ETIENNE M. HACHE¹, ANIA Z. KIELAR^{3,4},
ELIZABETH PAUL²

1. FACULTY OF MEDICINE, UNIVERSITY OF OTTAWA, OTTAWA, ON.
2. ROYAL COLLEGE OF SURGEONS IN IRELAND, DUBLIN, IRELAND
3. DEPARTMENT OF MEDICAL IMAGING, THE OTTAWA HOSPITAL, OTTAWA, ON.
4. OTTAWA HOSPITAL RESEARCH INSTITUTE, UNIVERSITY OF OTTAWA, OTTAWA, ON.



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DISCLOSURE

- The authors have nothing to disclose

OUTLINE

- Purpose
- PDSA cycle
- Data collection
- Results
- Impact
- Conclusion
- References

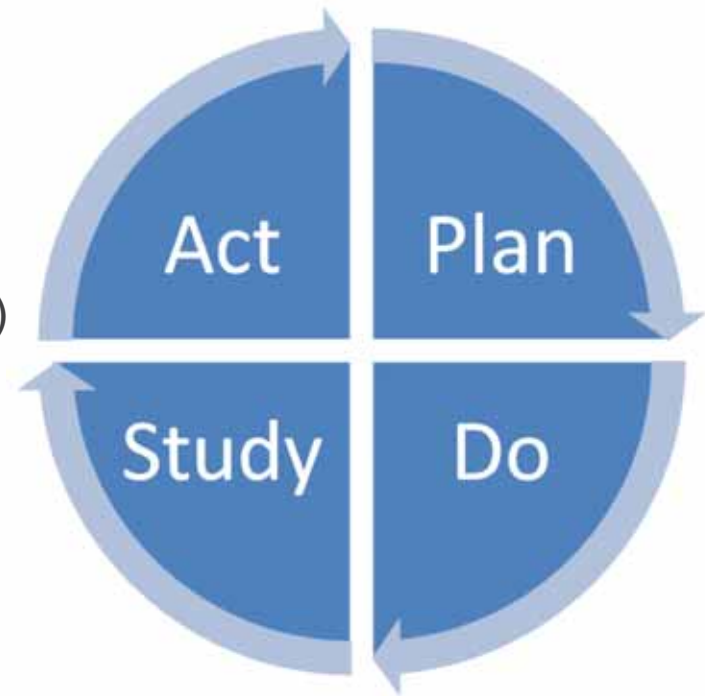


WHY WE UNDERTOOK THIS PROJECT?

- Increase implementation of preprocedural pause
 - Increases communication
 - Reduces flow disruptions and delays
- Identify procedural variabilities and overall time required for paracentesis
 - More efficient and standardized procedure
 - More efficient scheduling
- Assessment of patient comfort during and after the procedure

PDSA CYCLE

- Creation of objectives (Plan)
- 5 weeks of observation (Do)
- 1 week educational intervention (Study/Act)
- 6 weeks of observation (Do... again)
- Distribution of final results (Study/Act)

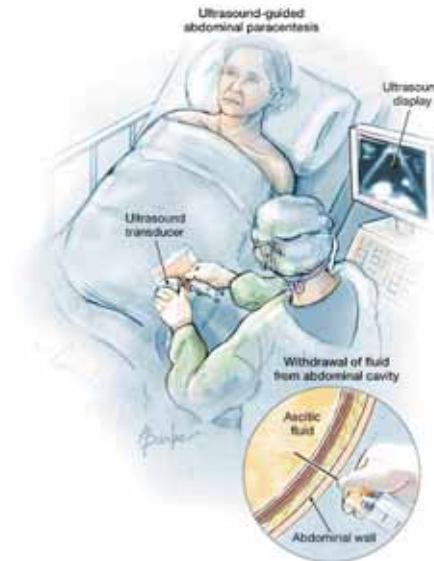


INTERVENTION AFTER INITIAL OBSERVATION

- Each radiologist received an email of their own results and anonymized group means (and ranges)
- An educational PowerPoint was created and presented at our monthly divisional meeting
- Emailed PowerPoint and link to YouTube videos about
 - Sterile technique
 - Preprocedural pause

DATA COLLECTION

- Medical students observed paracenteses at a quaternary facility over a period of 3 months



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STANDARDIZED FORM



Practice Assessment Tool: IOM Paracentesis

Date: _____ Start Time (press hour): _____ End time (write out): _____

Patient MN#: _____

Individual(s) performing paracentesis (initials): _____

Level of training: Staff _____ Fellow _____ Resident (year) _____

Ultrasound technologist: _____

Introduced themselves to patient: Yes / No _____

Consent:

Bleeding Risk	Risk of infection	Risk of damage to nearby structures	Risk of death/transfusion	Asked if at face questions
Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Asked about allergies	Asked about blood thinners	Blood work present (INR/PT)	Checked blood work (can be during procedural pause?)	Signed form
Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

Pre-Procedure Pause: Yes/No _____

Ultrasound guidance: Used for identification of fluid: Yes/No _____

Colour used to check for presence/absence of vessels at intended/puncture site: Yes/No _____

Skin marked: Yes/No _____

(ask tech after) Fluid present: Yes/No _____ Small/moderate/large amount _____

Procedure performed: Yes/No _____

Local anesthesia: Yes/No _____

How many vials of anesthesia 1, 2 _____ Bicarbonate: Yes/No _____

Is anesthesia given under ultrasound visualization: Yes/No _____

Sequence of anesthesia and prep VS prep then anesthesia _____

Paper drape (white) vs cloth drape (green) vs no drape _____

Used ultrasound probe to guide insertion of catheter: Yes/No _____

Used ultrasound to check for post-procedure complication (hematoma, bleed):

Grayscale: Yes/No _____

Colour: Yes/No _____

Debrided skin prior to procedure: Yes / No _____

Sterile gloves: Yes / No _____

Mask: Yes/No _____

Sterile technique used: Yes / No _____ Details: _____

Samples sent (if diagnostic pars was requested): Yes/No _____

Post-Procedure orders and requisitions (if applicable) completed: Yes/No _____

Complications: Yes / No: Bleeding _____ Pain _____ Hypotension _____ Other: _____

Details: _____

If yes: try to time how much time the complication took _____

Disposed of sharps in sharps container: yes / no _____

Dressing placed: By radiologist/resident _____ By technologist _____ By nurse _____

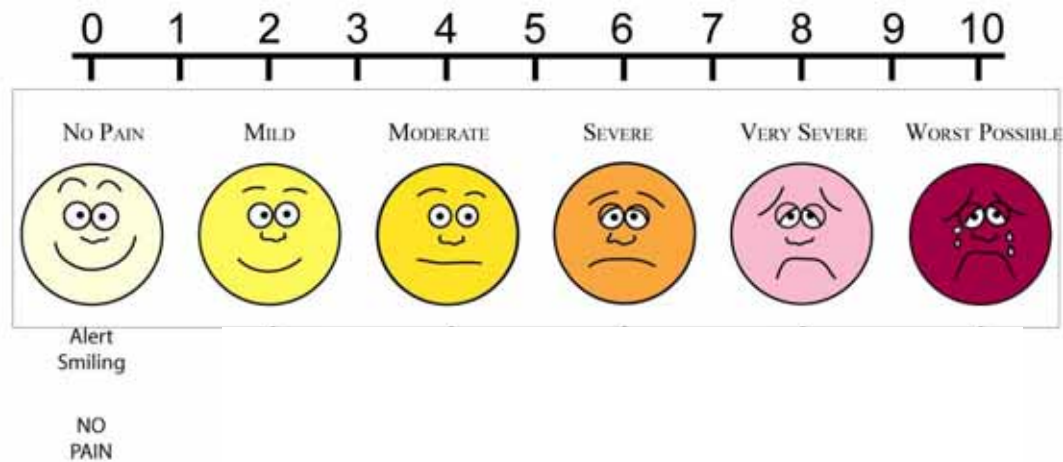
Glue used: Yes / No _____

Other details: _____



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LIKERT PAIN SCALE FILLED OUT BY PATIENTS



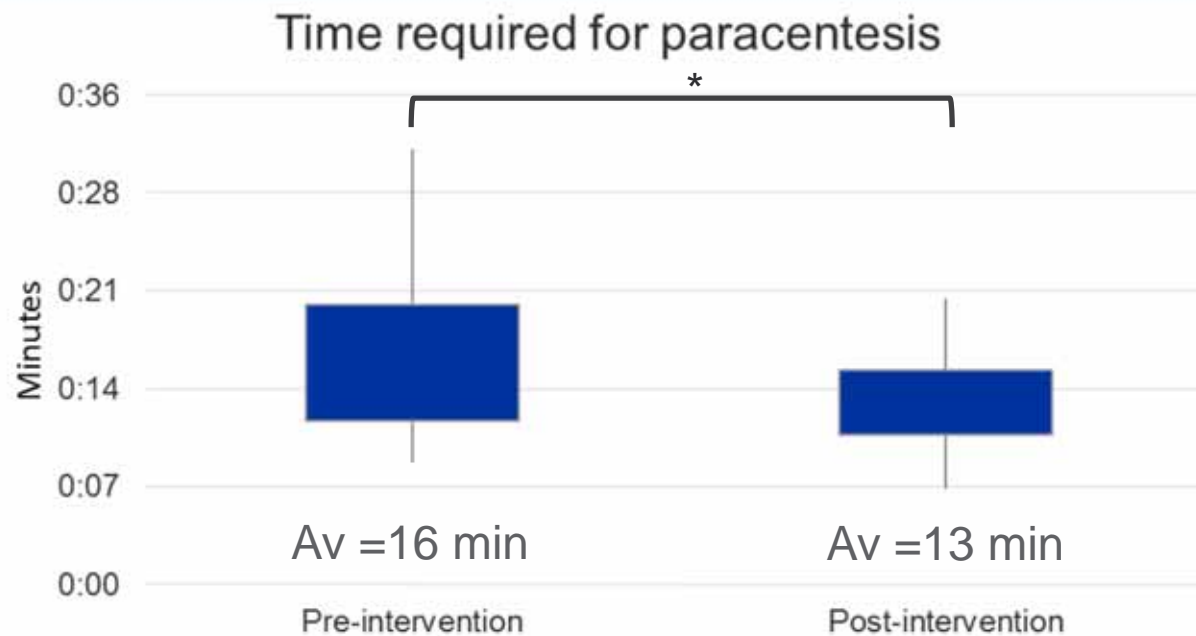
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PRACTICE ASSESSMENT RESULTS

Areas of Interest	Frequency Before Intervention (n)	Frequency After Intervention (n)	Significance (P-value)
Outlined risk of damage to nearby structures	24% (n=8)	54% (n=14)	0.02*
Outlined risk of infection	82% (n=27)	100% (n=26)	0.022*
Outlined risk of bleeding	91% (n=30)	100% (n=26)	0.11
Inquired about patient allergies	36% (n=12)	54% (n=14)	0.18
Inquired about patient use of blood thinners	67% (n=22)	88% (n=23)	0.051*
Inquired about patient bloodwork	42% (n=14)	77% (n=20)	0.0078*
Gave patient the opportunity to ask questions	73% (n=24)	100% (n=26)	0.0038*
Performed pre-procedural pause	22% (n=6)	85% (n=22)	3.91E-07*

PRACTICE ASSESSMENT RESULTS

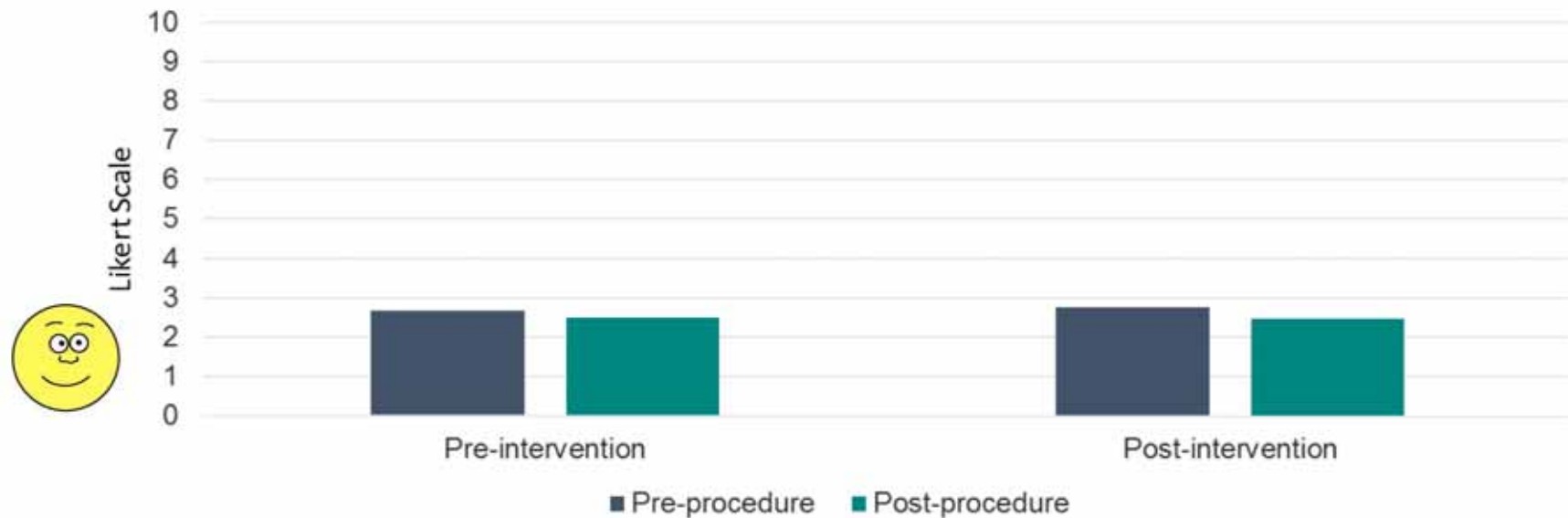


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PRACTICE ASSESSMENT RESULTS

Pain perceived by patients



IMPACT

- Successful implementation of institutionally mandated preprocedural pause
 - Allows for more robust communication
 - No effect on patient comfort (high overall)
 - Room for improvement
- Identification and improvement of variations in paracentesis procedures
 - Allows for a more efficient and standardized procedure
- Accurately determined the length of time required of a paracentesis
 - Allows for more efficient scheduling

LIMITATIONS

- Variable radiologist scheduling
- Two students involved in practice assessment observations
 - Mitigated by meeting prior to starting

CONCLUSION

- Successful utilization of PDSA cycle to:
 - Improve implementation of preprocedural pause
 - Reduce peri-procedural variabilities
 - Determine time required for procedure

THANK YOU!



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