USING DOPS (DIRECTLY OBSERVED PROCEDURAL SKILLS) FOR ASSESSMENT OF FLUOROSCOPIC PROFICIENCY OF RADIOLOGY RESIDENTS: INITIAL EXPERIENCE

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OBJECTIVE

• Purpose of this study is to assess feasibility and potential benefits of DOPS in assessment of fluoroscopic proficiency of radiology residents in comparison with traditional end of rotation feedback.
MATERIALS AND METHODS

- Fluoroscopic manual designed by senior radiologist which elucidated departmental protocols of fluoroscopy.
- A hands-on 3 day fluoroscopic work shop conducted to ensure uniformity in image acquisition in fluoroscopic procedures.
- Later two Radiologists carried out DOPS assessment session.
- A single station was made with procedures performed on a mock patient (healthy volunteer) without active fluoroscopy. Assessment was marked on a pre designed Performa.
- A post DOPS questionnaire was given to participating residents to give their opinion on this newer system.
RESULTS

- Twelve out of thirteen radiology residents were evaluated.
- Seventeen percent (n=2) of residents were ranked very good (can perform procedure independently),
- 42% (n=4) were ranked as good (can perform under indirect supervision),
- 33% (n=4) as satisfactory (can perform under direct supervision)
- 8% (n=1) as below expectation. (Needs remedial work before handling patient) (Figure 1)
RESULTS

• Post DOPS questionnaire given to participating residents to give their opinion on this newer system with 100% response rate (n=12).

• Ninety one percent (n=11) residents said that this new tool was effective in improving their fluoroscopic skills (Figure 2).

• 100% (n=12) thought that this session had allowed them to identify their shortcomings related to fluoroscopic procedures (Figure 3).

• Regarding adequacy of fluoroscopic manual, 91% (n=11) agreed that it provides adequate baseline for performing good quality fluoroscopic procedures (Figure 4).

• All residents (n=12) agreed that DOPS is better than conventional end of rotation written feedback for fluoroscopy and should be implemented in future. (Figure 5)
**FIGURE 1.** GRAPH SHOWING THE PERFORMANCE OF RESIDENTS IN FLUOROSCOPIC DOPS EVALUATION.
FIGURE 2: GRAPH DEPICTING RESIDENT’S RESPONSE REGARDING EFFECTIVENESS OF DOPS IN IMPROVING THEIR FLUOROSCOPIC SKILLS.
FIGURE 3: GRAPH DEPICTING RESPONSE OF RESIDENTS TO THE QUESTION “HAS THIS SESSION ALLOWED THEM TO IDENTIFY THEIR SHORT-COMINGS RELATED TO FLUOROSCOPIC PROCEDURES.”
FIGURE 4: GRAPH DEPICTING RESIDENT’S RESPONSE REGARDING ADEQUACY OF RESIDENCY MANUAL FOR PROVIDING ADEQUATE BASELINE FOR PERFORMING GOOD QUALITY FLUOROSCOPIC PROCEDURES.
FIGURE 5. GRAPH DEPICTING RESIDENT’S VIEWS ABOUT WHICH ASSESSMENT TOOL IS BETTER FOR THEIR FLUOROSCOPIC EVALUATION: DOPS VERSUS CONVENTIONAL END OF ROTATION WRITTEN FEEDBACK.
• Different teaching methodologies and assessment strategies have been implemented over the past few decades across different specialties of Medicine.
• Each medical specialty faces its own unique challenges for the physicians undergoing training today.
DISCUSSION; CONTD

• To meet the requirements and challenges of these changing roles, medical educationists and residency programs have devised or revised new techniques for training caregivers of tomorrow.

• Conventional teaching methods have undergone intense scrutiny and critical analysis and have been found suboptimal.


DISCUSSION; CONTD

• There has been a whole-sale shift of education towards an outcome oriented approach in the past few decades and has produced different methods of assessment, some of which have been specifically designed for radiology e.g. simulation based training techniques, RAD-DOPS, CBD, MSF, Mini-IPX etc


Burkill GJC. Work-based assessment for trainees — more than just a few new tools? Clinical Radiology January 2008; 63, 1:12–14,


• Application of DOPS to fluoroscopy was our second experience with this educational technique.
• Last year we did a pilot DOPS study for assessment of pre call proficiency of ultrasound which received positive feedback from residents as well as faculty, when we presented our ultrasound DOPS pilot study in European congress of Radiology, 2014 (ECR)

Shah RA, Rehman IU, Khan AKN, Ahmed M. Using DOPS (Directly observed Procedural skills) for pre call assessment of ultrasound proficiency of first year radiology residents: A pilot Study. Poster presentation at ECR 2014 - European Congress of Radiology meeting March 6-10: Vienna, Austria.
DISCUSSION; CONTD

• Being a single center study with relatively small number of participants is a limitation in our study. Subjective assessment by examiners created some degree of bias. Despite these limitations, we feel that application of DOPS for ultrasound and fluoroscopic evaluation is a step forward towards our goal of providing safe care to our patients.
CONCLUSION

- Compared to our conventional end of rotation written feedback, using DOPS for fluoroscopic proficiency assessment of radiology residents has been judged to be a useful assessment tool in the initial analysis.