

Procedure for Patient Fluoroscopy Exposure & Dose Reporting

Effective Date:

Purpose: To outline the procedure for the department(s) to report patient fluoroscopy exposure on the 'Skin Entrance Absorbed Dose Worksheet for Prolonged Fluoroscopic Procedures' form to the Office of Radiation Safety (ORS). Also, to outline the procedure for the Radiation Safety Officer (RSO) or designee to calculate, document, and provide follow-up instructions for the patient's dose.

Related Documents:

Patient Fluoroscopy Exposure Reporting Policy

ALARA policy

A. Initial Exposure Reporting

1. The department(s) will notify the ORS on the same day of the procedure if:
 - a. Fluoroscopy on time exceeds 60 minutes
 - b. Kerma air product (KAP) values exceed $500 \text{ Gy} \cdot \text{cm}^2$
 - c. Reference point air kerma exceeds 5000 mGy
 - d. The patient undergoing the procedure is pregnant

B. Dose Estimation and Reporting

1. The RSO or designee will review the submitted patient fluoroscopy exposure data and other information, if necessary, to calculate an estimated peak skin dose (PSD) or estimated fetal dose.
 - a. The estimated PSD or fetal dose will be entered into the patient's medical record by the RSO or designee within three business days of the procedure.
 - The patient's record should be reviewed by the RSO or designee for other documented PSDs within the previous 6 months for cumulative totals.
 - b. If the estimated PSD indicates a dose that might produce a radiation skin injury ($> 3 \text{ Gy}$ to the same area of skin), then the fluoroscopy unit operator (Interventionalist) or designee will follow up with the patient for observation of possible skin injury as recommended in section C.1.
 - c. If an estimated fetal dose is provided, then the fluoroscopy unit operator (Interventionalist) or designee will follow recommendations in Section C.2.

C. Dose Estimation Follow-Up

1. Adapting information from NCRP Report 168, Stecker et al., and the Centers for Disease Control and Prevention Cutaneous Radiation Injury, the following recommendations will be provided to the fluoroscopy unit operator (i.e., Interventionalist).
 - a. Estimated PSD > 3 Gy – follow-up at 2 weeks and 8 weeks
 - b. Estimated PSD > 5 Gy – follow-up at 2 weeks, 8 weeks, and 6 months
 - c. Estimated PSD > 10 Gy – follow-up at 2 weeks, 4 weeks, 6 months, and 12 months

2. All estimated fetal dose calculations will include the following recommendation:
 - a. Continue to further track all additional abdominal and/or pelvic radiation exposures for the duration of this gestation period.

D. Radiation Safety Committee Reporting Requirements

1. The RSO will report the following metrics to the Radiation Safety Committee (RSC) at least quarterly:
 - a. Number of patients who were submitted (per department) to the ORS for estimated PSD or fetal dose calculation.
 - b. Number of patients (per department) who exceeded 3 Gy PSD (single or 6-month cumulative dose).

Approved by:

Signed

12/7/18

Radiation Safety Officer

Date Signed

Date Approved by RSO: 12/7/18

Date Revised:

Date Reviewed: 12/7/18