HSE National Radiation Protection Committee

Guidance on the Dose Band Auto-text Changes Introduced to the NIMIS RIS/PACS System for Adult Services

Introduction

Statutory instrument 256 (2018) (13) (2) requires the reporter to record the radiation dose administered to a patient during a procedure on the medical report. The purpose of this mandate is to put into context for the referrer the level of risk to the patient from the exposure.

Inspections by the Health Information and Quality Authority have identified that hospitals are non-compliant with this statutory requirement in the majority of patient radiation exposures. The guidance herein has been developed by the National Radiation Protection Committee, in collaboration with the HSE NIMIS Programme National team, to resolve this issue nationally.

A risk stratification approach to recording dose has been introduced to the RIS/PACS system. This will allow the reporter employ an auto-text workflow in the voice recognition system to indicate whether a procedure delivered a non-ionising radiation, negligible risk, minimal risk, low risk or very low risk exposure to the patient. The dose values being applied are generic and adapted from the UK Royal College of Radiologists *iRefer Guideline*s and the European and American referral guidelines. Any examination which exceeds typical values as outlined must be individually recorded by the reporter on the medical report.

Please update your local policies and procedures accordingly.

The information provided hereunder includes

1. The auto-text incorporated into the RIS/PACS for adult services
2. Instructions on how to insert the auto-text into the medical report
3. Typical adult effective doses from diagnostic procedures adapted from the UK RCR *iRefer Guidelines.*

Also attached to the guidance is the NRPC infographic displaying the risk stratification for typical examinations, based on iRefer, ESR and ACR referral guidelines.

1. The auto-text incorporated into the NIMIS RIS/PACS for adult services.

Adult Dose Band Autotext Wording

Autotext Name	Content
adult dose band 0	Dose Band: Non Ionising Typical Effective Dose: 0 *Please refer to the NRPC guidance document on Dose Bands for Typical Examinations for further details (source iRefer Guidelines)*
adult dose band 1	Dose Band: Negligible Risk Typical Effective Dose: 0-1 mSv *Please refer to the NRPC guidance document on Dose Bands for Typical Examinations for further details (source iRefer Guidelines)*
adult dose band 2	Dose Band: Minimal Risk Typical Effective Dose: 1-5 mSv *Please refer to the NRPC guidance document on Dose Bands for Typical Examinations for further details (source iRefer Guidelines)*
adult dose band 3	Dose Band: Very Low Risk Typical Effective Dose: 5-10 mSv *Please refer to the NRPC guidance document on Dose Bands for Typical Examinations for further details (source iRefer Guidelines)*
adult dose band 4	Dose Band: Low Risk Typical Effective Dose: 10 -29 mSv *Please refer to the NRPC guidance document on Dose Bands for Typical Examinations for further details (source iRefer Guidelines)*
adult dose band 5	Dose Band: Moderate Risk Typical Effective Dose: 30-100 mSv *Please refer to the NRPC guidance document on Dose Bands for Typical Examinations for further details (source ACR/ESR Referral Guidelines)*

2. Instructions on how to insert the auto-text into the medical report

Step 1: Open study and review images.
Select *Powerscribe* icon from the main toolbar.
Dictate report.

Step 2: Use the following voice commands to insert the appropriate dose band into the report:

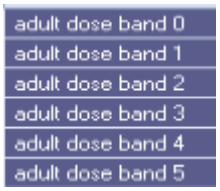
- Auto-text Adult Dose Band Zero
- Auto-text Adult Dose Band One
- Auto-text Adult Dose Band Two
- Auto-text Adult Dose Band Three
- Auto-text Adult Dose Band Four
- Auto-text Adult Dose Band Five

Step 3: The selected dose band text will automatically insert where the cursor is positioned in the report in PS360.

In addition to the above steps, the auto-text can also be inserted manually into the report, as follows:

1. Click on the Auto-text icon at the bottom left of the PS360 application:

2. Double click on the required dose band from the list displayed:



3. The auto-text will insert where the cursor is positioned on the report in PS360.

3. Typical adult effective doses from diagnostic procedures adapted from the UK RCR *iRefer Guidelines.*

Diagnostic procedure	Typical effective dose (mSv)	Equivalent number of chest X- rays	Approx equivalent period of natural background radiation*
Radiographic examinations			
Limbs and joints (except hip)	<0.01	<1	<2 days
Chest (single posterior anterior)	0.015	1	2.5 days
Skull	0.07	5	12 days
Thoracic spine	0.4	30	2 months
Lumbar spine	0.6	40	3 months
Mammography (2 views)	0.5	35	3 months
Pelvis	0.3	20	1.5 months
Abdomen	0.4	30	2 months
Intravenous urogram (IVU)	2.1	140	11.5 months
Barium swallow	1.5	100	8 months
Barium enema	2.2	150	1 year
CT head	1.8	130	10 months
CT chest	14	1,000	6.5 years
CT kidneys, ureters, bladder, KUB for renal stones	6.4	460	3 years

Diagnostic procedure	Typical effective dose (mSv)	Equivalent number of chest X- rays	Approx equivalent period of natural background radiation*
CT abdomen	16	1,100	7.5 years
CT abdomen & pelvis	13	930	6 years
CT colonography	16	1,100	7.5 years
CT chest & abdomen & pelvis	19	1,400	8.5 years
Radionuclide studies			
Lung ventilation (Tc-99m DTPA aerosol)	0.6	45	13 weeks
Lung perfusion (Tc-99m)	1	70	6 months
Kidney (Tc-99m)	0.7	50	4 months
Thyroid (Tc-99m)	1	70	6 months
Bone (Tc-99m)	3	200	1.4 years
Dynamic cardiac (Tc-99m)	6	400	2.7 years
PET-CT head (F-18 FDG)	7	460	3.2 years
PET-CT body (F-18 FDG)	18	1,200	8.1 years

*UK average background radiation = 2.2 mSv per year; regional averages 1.5–7.5 mSv per year.