

What's NEXT?

The Nationwide Evaluation of X-ray Trends (NEXT) is a national program conducted annually to collect data regarding the x-ray exposure that a standard patient receives for selected x-ray examinations. This program is conducted jointly by the Conference of Radiation Control Program Directors, Inc. (CRCPD), an association of state and local radiation control agencies, and the Food and Drug Administration's (FDA) Center for Devices and Radiological Health (CDRH).

In 2002, the selected examinations were the Abdomen and Lumbosacral (LS) Spine. There are two trifold for the 2002 survey. See the *Abdomen Trifold for Abdomen data*. Two hundred and seventy (270) facilities were surveyed, which also includes data from facilities that use digital-based imaging. A clinically validated patient equivalent phantom was used to capture patient exposure data. This phantom represents an adult of approximately 1.73 m (5 ft 9 in), weighing 75 kg (165 lb.), with an equivalent patient thickness measured P/A, of 23 cm (9 in).

Specific information was obtained pertaining to the X-ray equipment, facility workload, and radiographic technique, as well as information relating to air kerma including, grid use, beam quality, darkroom fog, and the quality of film processing.

Downloadable NEXT survey summaries and further information on NEXT surveys are available from the CRCPD at www.crcpd.org/NEXT.aspx or from the Food and Drug Administration at www.fda.gov/cdrh/radhth/next.html.

The information contained herein is for guidance. The implementation and use of the information and recommendations are at the discretion of the user. The mention of commercial products, their sources, or their use in connection with material reported is not to be construed as either an actual or implied endorsement by CRCPD or CDRH.

SURVEY RESULTS FOR YOUR FACILITY

	Your Result	Survey Mean
Entrance Skin Air Kerma (mGy)		3.4
Tube Potential (kVp)		78
Processing Speed STEP Test Result		106
Darkroom Fog (OD)		0.09
Phantom Film (OD)		1.41
mAs		92.4
Low Contrast Objects		4
High Contrast Objects		4

CRCPD, 1030 Burlington Lane, Suite 4B
Frankfort, KY 40601

Nationwide Evaluation of X-Ray Trends (NEXT)

2002 Lumbosacral (LS) Spine Radiography Survey



Conference of Radiation Control Program Directors, Inc.

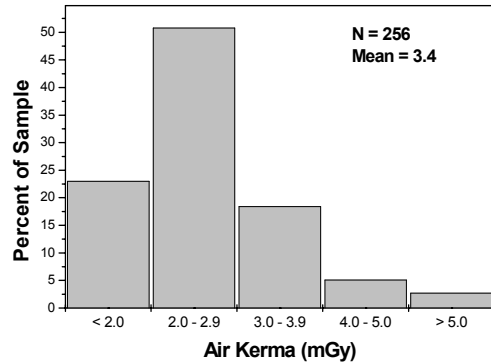


and

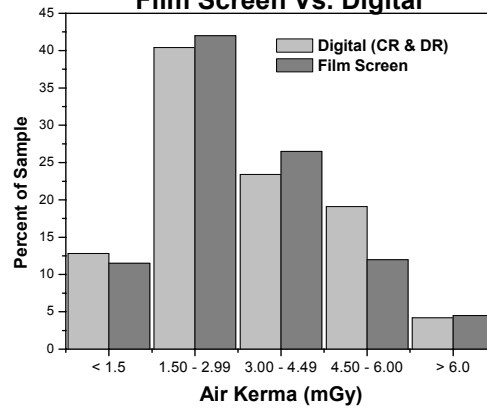
Food and Drug Administration
Center for Devices and Radiological Health



Entrance Skin Air Kerma: All Facilities



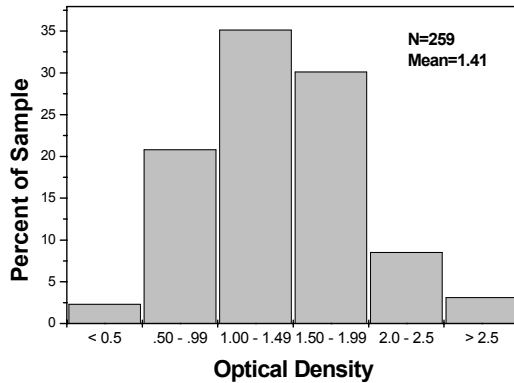
Entrance Skin Air Kerma: Film Screen Vs. Digital



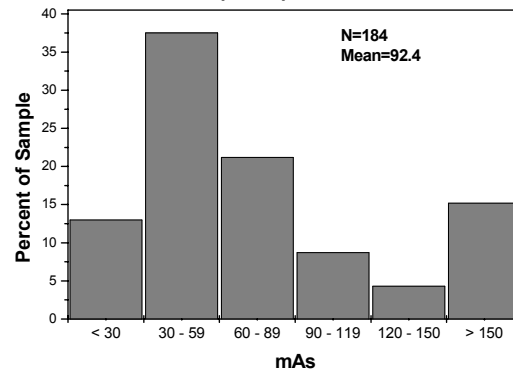
2002 LS Spine Data Summary
(Mean values listed below)

	HOSP	PP	CHIRO	OTR
Number of Surveys	106	63	56	39
ESAK (mGy)	3.2	3.5	3.6	3.2
Tube Current (mA)	444	300	198	246
mAs	127	86	75	69
Tube Pot. (kVp)	77	77	80	77
HVL (mm Al)	3.2	3.2	3.2	3.1
Darkroom Fog (OD)	.08	.07	.10	.10
Film Proc. Speed	107	108	102	106
Phantom Film (OD)	1.28	1.56	1.47	1.33
High/Low Contrast Objects Visible	4 / 4	3 / 4	3 / 3	4 / 4

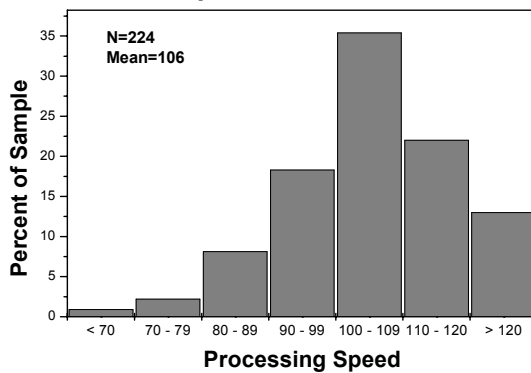
Phantom Film Optical Density: All Facilities



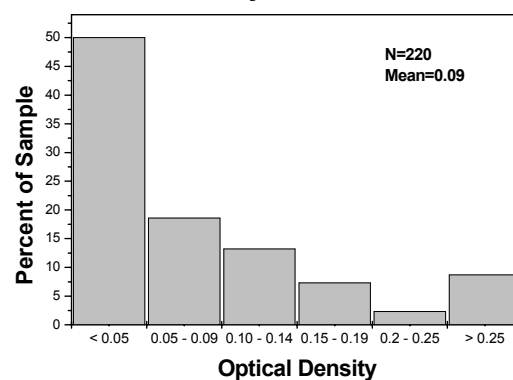
Tube Current-Exposure Time Product (mAs): All Facilities



Film Processing (STEP)* Speed: All Facilities



Darkroom Fog Optical Density: All Facilities



Abbreviation Key:

- Hosp = Hospitals
- PP = Private Practice
- Chiro = Chiropractors
- OTR = Other types of facilities

Film Screen vs. Digital Imaging Systems: Entrance Skin Air Kerma (ESAK) (mGy) Data: Overall and by Mode

System Type	ESAK	AEC	Manual
Film Screen	3.3	3.1	3.4
Digital (CR & DR)	3.2	3.2	3.2

* Mammography Quality Standard Act (MQSA) Std. for STEP Speed: 80-120 is considered acceptable