## 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 trifolds for the 2002 survey. *See the LS Spine Trifold for LS Spine 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/radhlth /next.html.



## SURVEY RESULTS FOR YOUR FACILITY

| | Your Result | Survey Mean |
|---|---|---|
| Entrance Skin Air Kerma (mGy) | | 2.7 |
| Tube Potential (kVp) | | 75 |
| Processing Speed STEP* Test Result | | 107 |
| Darkroom Fog (OD) | | 0.06 |
| Phantom Film (OD) | | 1.82 |
| mAs | | 75.5 |
| Low Contrast Objects | | 5 |
| High Contrast Objects | | 4 |

*Sensitometric Technique for the Evaluation of Processing

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# Nationwide Evaluation of X-Ray Trends (NEXT)

## 2002 Abdomen Radiography Survey

Conference of Radiation Control Program Directors, Inc.

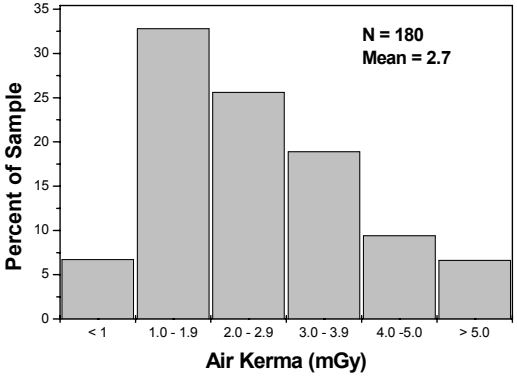
and

Food and Drug Administration
Center for Devices and Radiological Health

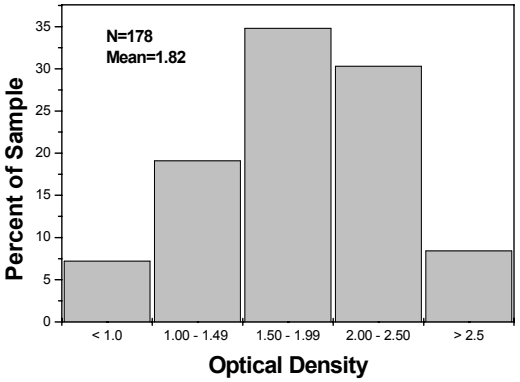
United States Department of Health & Human Services
Leading America to Better Health, Safety and Well-Being

Pub. August 2006

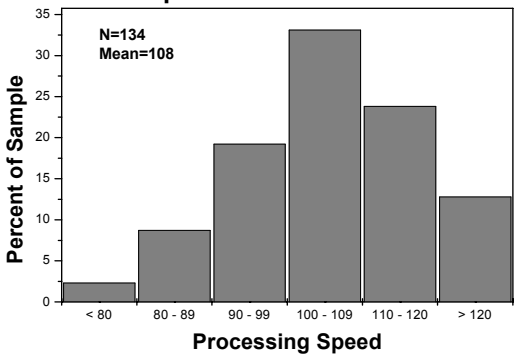
### Entrance Skin Air Kerma: All Facilities




### Phantom Film Optical Density: All Facilities

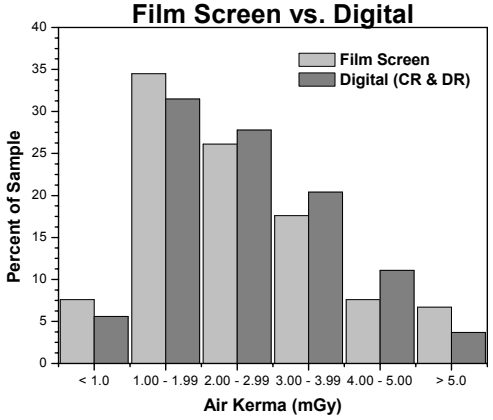



### Film Processing (STEP) * Speed: All Facilities

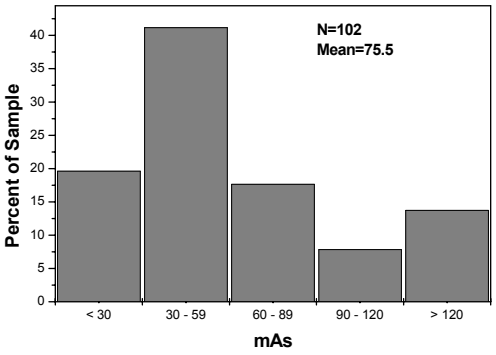



* Mammography Quality Standards Act **(**MQSA) Std. for STEP Speed: 80-120 is considered acceptable

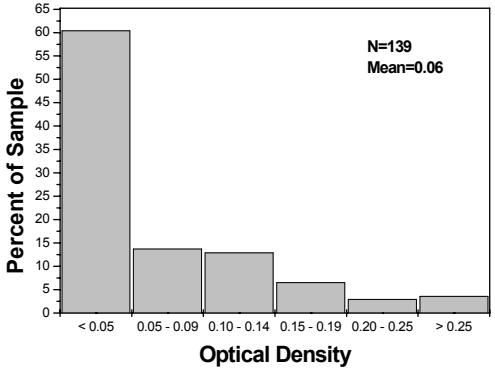
### Entrance Skin Air Kerma: Film Screen vs. Digital




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




### Darkroom Fog Optical Density: All Facilities




## 2002 Abdomen Data Summary

(Mean values listed below)

| | HOSP | PP | OTR |
|---|---|---|---|
| Number of Surveys | 104 | 46 | 31 |
| ESAK (mGy) | 2.7 | 2.7 | 2.9 |
| Tube Current (mA) | 424 | 319 | 265 |
| mAs | 103 | 64 | 52 |
| Tube Pot. (kVp) | 75 | 75 | 77 |
| HVL (mm Al) | 3.0 | 3.1 | 3.0 |
| Darkroom Fog (OD) | .06 | .07 | .55 |
| Film Proc. Speed | 107 | 110 | 107 |
| Phantom Film (OD) | 1.76 | 1.92 | 1.84 |
| High/Low Contrast Objects Visible | 4 / 5 | 4 / 5 | 4 / 5 |

**Abbreviation Key:**

- Hosp = Hospitals
- PP = Private Practice
- 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 | 2.6 | 2.4 | 3.4 |
| Digital (CR & DR) | 2.7 | 2.5 | 3.9 |