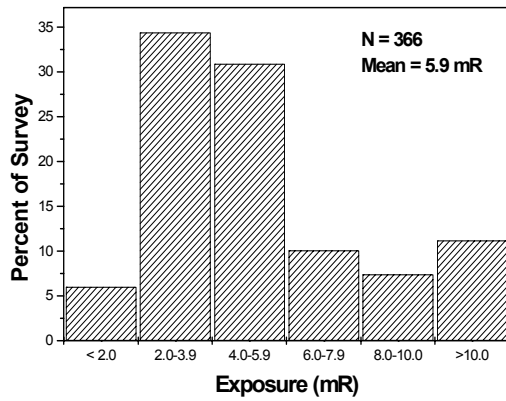
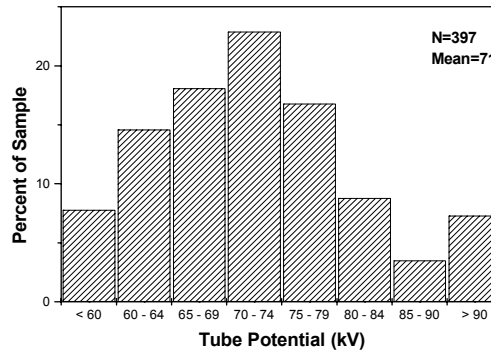


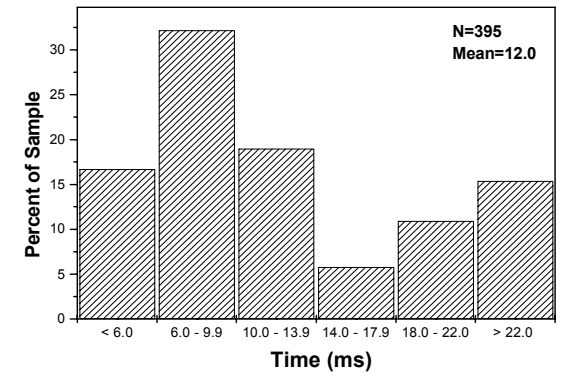
**Entrance Skin Exposure: All Facilities**



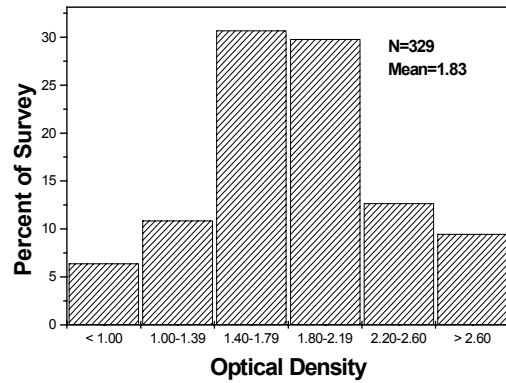
**Selected Clinical Tube Potential: All Facilities**



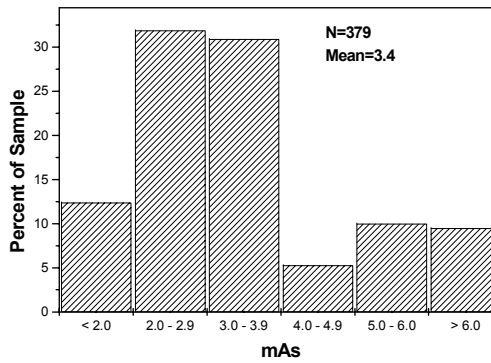
**Exposure Time: All Facilities**



**Phantom Film Optical Density: All Facilities**



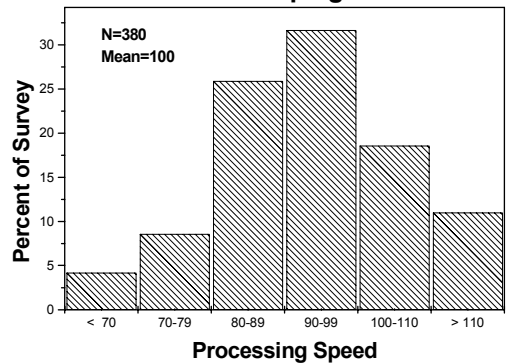
**mAs Values: All Facilities**



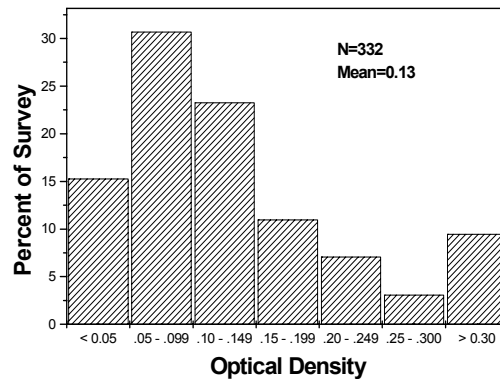
**1998 Pediatric Chest Summary  
(15 Month / 24 lb. Phantom)**

	HOSPS	PEDS	PRIV_PRAC.
Tube mA	332	324	232
mAs	2.9	2.7	4.2
kV	70	68	72
HVL (mm Al)	2.8	2.9	2.9
Entrance Exp (mR)	5.4	6.5	5.1
Film Proc. Speed	100	102	99
Phantom Film OD	1.84	1.84	1.82
Low Contrast Objects Visible	4.5	4.6	4.4
High Contrast Objects Visible	5.3	5.2	5.1

**Calculated Processing (STEP) Speed for Film Developing: All Facilities**



**Darkroom Fog Optical Density: All Facilities**



**Darkroom Fog**

	HOSPS	PEDS	PRIV_PRAC.
Mean	0.13	0.14	0.13
Percent < .05	15.1	7.3	17.0
Percent < 0.10	39.9	35.7	53.1

## What's NEXT?

The Nationwide Evaluation of X-ray Trends (NEXT) is a national program conducted annually to measure 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 (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 1998 the selected examination was the pediatric chest. Over 300 facilities were surveyed, with the sample divided nearly equally between hospital and non-hospital facilities. Exposures were measured using a phantom equivalent to an infant of approximately 15 months of age and weighing 10.9 kg (24 lb.). The phantom used for the pediatric surveys is equivalent to a patient thickness, measured P/A, of 12.5 cm (4.5 in).

Specific information was obtained pertaining to the equipment, facility workload, and radiographic technique. Information related to dose was also collected such as film/screen combination, grid use, beam quality, x-ray output, darkroom fog, and the quality of film processing.

Upon completion of each survey, the data is analyzed by CDRH personnel, and the results are published by the CRCPD. As the purpose of the program is to observe national trends, the published results summarize the basic statistical results of each surveyed parameter, and no attempt is made to establish potential statistical relationships. For information on how to obtain a copy of the published results of this or other NEXT surveys contact the CRCPD in Frankfort, Kentucky, at 502/227-4543.

## Survey Results - Your Facility

kV \_\_\_\_\_  
 ESE (mR) \_\_\_\_\_  
 Processing Speed  
 STEP\* Test Result \_\_\_\_\_  
 Darkroom Fog (OD) \_\_\_\_\_  
 Phantom Film OD \_\_\_\_\_  
 mAs \_\_\_\_\_  
 Low Contrast Objects \_\_\_\_\_  
 High Contrast Objects \_\_\_\_\_

\*Sensitometric Technique for the  
 Evaluation of Processing

### Abbreviation Key:

- Hosps = General Hospitals
- Peds = Pediatric Facilities
- Priv\_Prac. = Private Practice  
 Facilities

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.

CRCPD is a nonprofit organization of individuals that regulate and control the use of radioactive material and radiation sources.

CRCPD, 1030 Burlington Lane, Suite 4B, Frankfort, KY 40601  
[www.crcpd.org](http://www.crcpd.org)



# Nationwide Evaluation of X-Ray Trends (NEXT)

## 1998 Pediatric Chest X-ray Data

Conference of Radiation  
 Control Program Directors, Inc. (CRCPD)

and

The Center for Devices and  
 Radiological Health

U.S. DEPARTMENT OF HEALTH  
 AND HUMAN SERVICES  
 Public Health Service  
 Food and Drug Administration