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NATIONWIDE EVALUATION OF X-RAY TRENDS (NEXT)

TABULATION AND GRAPHICAL SUMMARY OF 2000 SURVEY OF COMPUTED TOMOGRAPHY

August 2007

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Tabulation and Graphical Summary of 2000 Survey of Computed Tomography

Prepared by Stanley H. Stern, Ph.D.

Food and Drug Administration
Center for Devices and Radiological Health

in association with

Conference of Radiation Control Program Directors, Inc.'s
Committee on Nationwide Evaluation of X-ray Trends (H-4)

and

American College of Radiology

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EXECUTIVE SUMMARY

As part of the *Nationwide Evaluation of X-ray Trends (NEXT)* survey program in 2000-2001, state radiation control personnel performed measurements related to radiation dose in patients, and they obtained technical data about technique factors, estimates of procedure workload, and information about quality assurance practices at 265 randomly selected computed tomography (CT) facilities located in 39 participating states. *NEXT* surveys, conducted through a cooperative agreement between the U.S. Food and Drug Administration and the Conference of Radiation Control Program Directors, Inc. (CRCPD), are like "snapshots" of collective radiological practice affecting radiation dose in patients.

Trends emerge over the course of time when snapshots are compared. In particular, the results of the 2000-2001 CT are a comprehensive basis for comparison: they reflect the profound advances in CT technology and clinical practice that have occurred since the previous CT survey in 1990, and they offer a template for understanding the impact of even more recent developments in CT—automatic exposure control and large-number multi-slice-array helical scanning—whose assessment will ensue following the 2005-2006 CT survey.

Results are compiled in four categories, and important findings are highlighted for each category:

Workload, techniques factors, and associated dose indices

- Statistics are presented for each of the 24 most common examinations in adult patients done with the most frequently used CT unit at facilities.

- Tabulations are stratified according to scanning mode (axial versus helical) and site of the CT unit (all types of facilities versus hospitals versus facilities other than hospitals).

- The most common exams are those of the head (covering the regions of the brain + posterior fossa) and of the abdomen + pelvis, whose summary statistics are presented in the following tables: