



*Ensuring Patient Safety & Image Quality:
The Role of the CRCPD &
State Regulatory Agencies*

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Objectives

- To briefly describe the CRCPD
- To explain the SSRCR and their impact on State regulations
- To describe the components of the SSRs directly related to x-ray in the healing arts and specifically CT
- To identify items for review by specific State Radiation Safety Programs nationwide



CRCPD

- Conference of Radiation Control Program Directors
 - Established in 1968
 - 501(c)(3) nonprofit nongovernmental professional organization dedicated to radiation protection
- Membership
 - State Radiation Control Programs
 - Local Government
 - Anyone interested in Radiation Protection
- <http://www.crcpd.org>



Suggested State Regulations

- SSRCRs – Suggested State Regulations for the Control of Radiation (SSRs for short)
- Model state regulations developed as a consensus document
 - Compatibility
 - Performance Standard
- Ionizing and Nonionizing sections
- Ionizing broken down into various parts (26+ total)
 - Part A General Provisions
 - Part B Registration of Radiation Machines, Facilities, and Services
 - Part C Licensing of Radioactive Materials
 - Part F Diagnostic X-Ray & Imaging Systems in the Healing Arts



Suggested State Regulations

- Developed by Committee
 - State radiation control personnel
 - Federal representatives
 - Professional organizations
- Suggestions/Comments incorporated
 - Rationale for changes
- OED for technical review and formatting
- Peer Review
- Board Approval
- Federal Concurrence
- Published by CRCPD



Suggested State Regulations

- Early development
- Why reinvent the wheel?
- Various state radiation control programs laws and regulations
- Consensus document
- Starting point
- State regulatory process
 - Public Comment Period



SSR Part F

- Part F – Diagnostic X-Ray & Imaging Systems in the Healing Arts
 - F.1 – Purpose and Scope
 - F.2 – Definitions
 - F.3 – General and Administrative Requirements
 - F.4 – General Requirements for All Diagnostic X-Ray Systems
 - F.5-F.7 – Fluoroscopic-Radiographic-Intraoral Dental Equipment
 - F.11 – Computed Tomography Equipment
 - F.12-14 – Mammography Programs
 - F.15 – Bone Density
 - F.16 – Quality Assurance Program
 - Appendix A and B



F.11 Computed Tomography Equipment

- Definitions
- Requirements for Equipment
 - Termination of Exposure
 - Tomographic Plane Indication and Alignment
 - Beam-on and Shutter Indicators and Control Switches
 - Indication of CT Conditions of Operation
 - Extraneous Radiation
 - Maximum Surface CTDI Identification
 - Additional Requirements Applicable to CT X-Ray Systems Containing a Gantry Manufactured After September 3, 1985



F.11 – Computed Tomography (cont)

- Facility Design Requirements
 - Aural Communication
 - Viewing Systems



F.11 – Computed Tomography (cont)

- Surveys, Calibrations, Spot Checks, and Operating Procedures
 - Surveys (shielding evaluation)
 - Radiation Calibrations (initial, annual, phantom use for output, head, body, and whole body scan)
 - Spot Checks (quality assurance)
 - Operating Procedures



F.16 – Quality Assurance Program

- Administration
- Film Processing equipment
- Radiographic equipment
- Fluoroscopy equipment
- Computerized tomography equipment
- Bone densitometry equipment
- Structural shielding for new facilities w/ x-ray equipment



F.16 – Quality Assurance Program

- Computerized tomography equipment
 - Compliance with performance standards in Section F.11
 - CT number
 - Low contrast and high contrast resolution
 - Dosimetry of selected patient examinations to include pediatric patients if applicable
 - Image printing and viewing equipment
 - Radiation protection



State Radiation Control Programs

- Review existing regulations and determine if they need any amendments or expansion
 - Quality Assurance
 - Operator Requirements and Training
 - Dose Measurement (or limits)
 - Accreditation
 - Periodic clinical protocol reviews
 - Some recording of dose in the patients medical records



State Radiation Control Programs

- Educate their own employees as well as registrants on issues involving cases of high radiation dose or other operating issues as they come to light
- Work with local qualified medical physicists, radiologists, medical practitioners, radiologic technologists and other health care professionals to help ensure that all patients from pediatric to adult receive the best exam at the lowest dose possible



State Radiation Control Programs

- Review inspection protocols used by state personnel when surveying CT equipment
 - Review physicist survey including dose measurements
 - Dose measurement by state personnel
 - Clinical protocol reviews
 - Technique developments
 - Pediatric issues
 - Review documented QC results
 - Review facility procedures for editing scan protocols



CRCPD

- www.crcpd.org
- Suggested State Regulations for the Control of Radiation (SSRCR) or (SSRs for short)
- Part F – Diagnostic X-Ray & Imaging Systems in the Healing Arts
 - Section F.11 Computed Tomography Equipment
 - Section F.16 Quality Assurance Program
- State Radiation Control Program review



Thank you

Questions