

## Dose Index Registry ABR PQI Project

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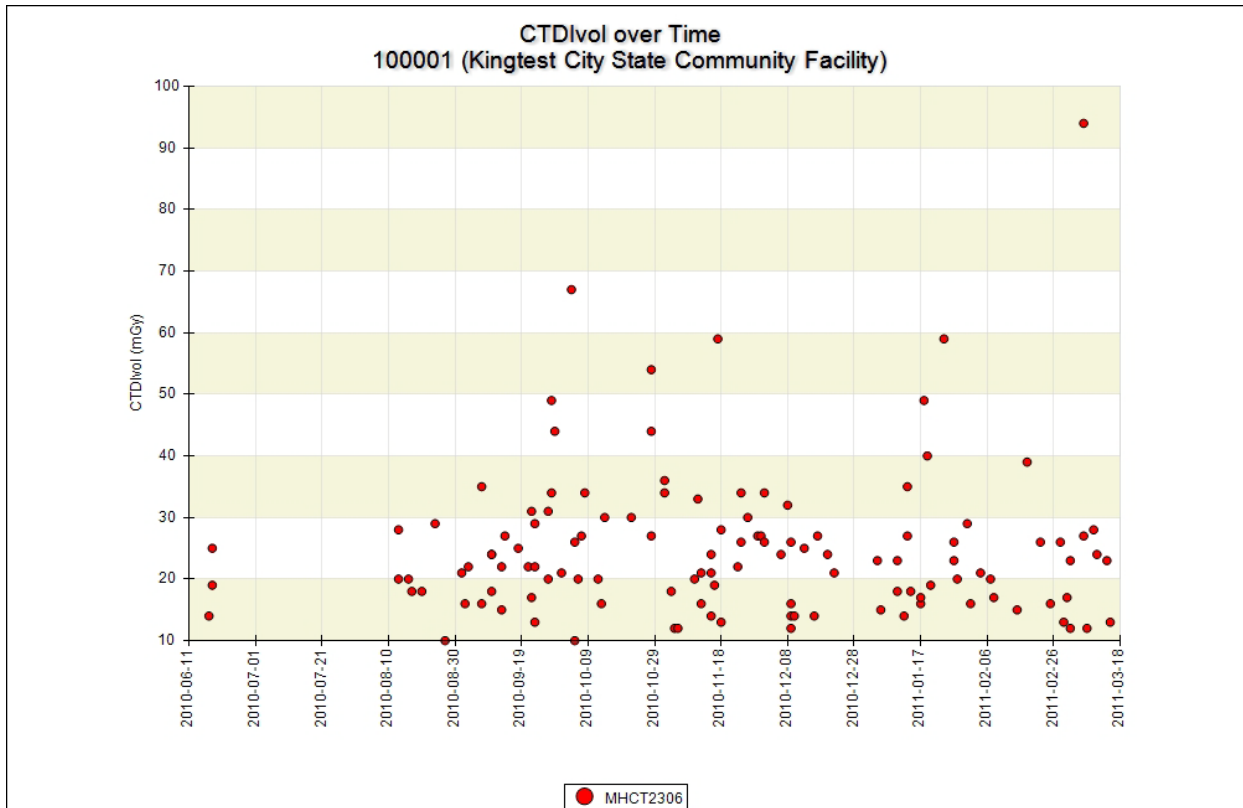
The Dose Index Registry (DIR) is a data registry that allows facilities to compare their CT dose indices to regional and national values. Information related to dose indices for all CT exams is collected, anonymized, transmitted to the ACR, and stored in a database. Institutions are then provided with periodic feedback reports comparing their results by body part and exam type to aggregate results. Data collected from the registry will be used to establish national benchmarks for CT dose indices.

One of the primary goals of the ACR Dose Index Registry is to improve patient safety by helping facilities adjust their imaging protocols to obtain diagnostic images using the lowest reasonable dose. As such, the DIR is an ideal project for ABR PQI and meets all of its requirements and characteristics as described below:

### **1. Fundamental characteristics of a PQI program (evidence-based, patient care focus, and relevance to practice)**

Radiation dose monitoring is still in very early stages. There is not adequate guidance regarding appropriate doses for the vast majority of medical imaging procedures. Prior to the DIR, the little guidance that existed was based on phantom images, not from patient images. The DIR provides benchmarks based on data from actual patients at facilities all across the nation (over 200 to date). While participating in the DIR, facilities have the following resources available to them to help them improve performance quality:

- Facilities can look at their own data at any time and identify exams with outlier values for dose index and follow up to investigate if any corrections or protocol modifications need to be made. The following is an example of a chart that a facility can run with its own data at any time and identify outliers:



- Participating facilities receive feedback reports every six months with comparisons of a facility's dose indices on each exam to dose indices at comparable facilities for the same exam. For each exam, the report includes comparison of facility mean dose indices to mean dose indices elsewhere, and also provides side-by-side comparisons of the entire distribution of dose indices, for the facility and the registry as a whole. These comparisons provide facilities a more comprehensive view of where they might have potential for improvement.
- Every six months after facilities receive their reports, we schedule conference calls and webinars with everyone at the facility who can attend to explain the results and to give facility representatives an opportunity to talk to each other about methods by which they manage their doses. These user groups/learning communities provide facilities an opportunity to learn about available tools for dose management and allow us to learn about ways in which to make the facility reports more helpful for participating facilities.

## 2. Metrics to benchmark individual performance with comparison to peer data or consensus-based practice guidelines

Feedback reports providing comparisons by facility type, facility location, facility region and to national benchmarks are provided every six months (see attachment of Sample Facility Report).

**3. Action plan for improvement needed (if not needed, diplomate would pick another topic for his/her project)**

After each report, webinars are provided for peer facilities to discuss their experience and offer suggestions. The DIR will also offer links to helpful resources such as Image Wisely, AAPM protocols, etc. However, each site is responsible for developing its own improvement plan.

**4. Ability to reassess and document improvement**

Feedback reports are provided every six months so that facilities can continue to monitor improvement.

**5. Ability to document participation and electronically transmit evidence of participation in the project via the CME Gateway portal (or equivalent networked program) into the ABR Personal Data Base of the individual participant (other means of documenting participation/completion are also acceptable). In routine reporting, actual performance data are not transmitted. Audit procedures, however, may include review of source data.**

The feedback reports produced by the registry are transmitted electronically and provide evidence of participation.

**Note:** Data for the DIR are collected at the facility level, so participation would apply to all radiologists and medical physicists at the facility who choose to participate in the project. Participants in the PQI project must be registered on the National Radiology Data Registry (NRDR) website to receive credit for the project.