Purpose: In the Netherlands Diagnostic Reference Levels (DRLs) have been set for 11 radiological examinations in 2012. The values of these DRLs were chosen on the basis of available scientific literature and expert judgment. The purpose of this study was to determine the level of adaptation of the current DRLs by Dutch hospitals and to support them in implementing the DRLs in clinical practice.

Materials & Methods: First, a survey was conducted among 20 Dutch hospitals about the implementation of DRLs in the QA system. Second, a pilot study was carried out in which radiography students performed dose measurements in some hospitals. Finally, this study was enlarged to cover the entire country: 21 hospitals participated.

Results: The survey showed that the majority of Dutch hospitals had not yet implemented the DRLs. The pilot study and its follow-up demonstrated that in nearly all cases compliance to the DRLs can be achieved. For some examinations 75-percentile values could be derived. These values suggest that when updating the DRLs, new values could be set at approximately half the current ones.

Conclusions: The survey showed that many hospitals did not immediately take action when the DRLs were introduced. Their implementation took form when support was offered to hospitals in the form of students helping out with dose measurements. The measurements themselves show that nearly all hospitals comply with the DRLs to a level that suggests that new DRLs could be set at much lower values.

Key words: Diagnostic Reference Levels