APPENDIX 1: PROCESSING DATA

We initially extracted records from 244998 patients from the practitioners' EMRs, over the period January 1st 2011 to December 31st 2011. These records were stored in a data warehouse, and were subsequently filtered in order to obtain 58 of the 62 practices included in the data warehouse that were part of the primary care group as well as were practices of which we had complete data from both EMR and CDR, resulting in a group of 233415 patients. The data in the data warehouse were also filtered on several aspects, such as the reference date, category of the patient, enrollment date, departure date, reason for departure, start date of type 2 diabetes mellitus, valid range for the clinical items and prescription date of medication (see Figure 2). The reporting period was 12 months, however, for some clinical items, i.e. those used for indicators 19, 25 and 34, we reported over a longer period, varying from 24 months to 'the first measurement found in the data warehouse'.

From the CDR we initially extracted records from 9089 patients, with April 27th 2012 as the reference date. Again, we selected the same 58 practices of the 62 practices included in the CDR that were part of the primary care group as well as were present in the EMR during 2011, resulting in 8684 patients. The data were filtered on a valid range for the clinical items, and after the merge (see next paragraph) further filtered on aspects as enrollment date, departure date and reason for departure (see Figure 2).

The two files were merged into one data file on the basis of the practice number in combination with patient numbers which were unique within practices (but not across practices). We subsequently filtered the data on the criterion that a record had to contain a unique identifying number originating from the EMR as well as from the CDR, because those were patients that could be matched on the basis of practice number and the patient number. This resulted in a group of 8235 patients, which is the population that is used in the rest of this study for comparing the clinical items used for indicators over both systems. A few patients could not be matched where this was to be expected for various reasons (see Figure 2), resulting in 183 unmatched patients with only a unique identifying number, among other constraints, from the CDR, and 280 unmatched patients with only a unique identifying number, among other constraints, from the EMR.

Selection of study population