

Supplementary File S3. Algorithms for the classification of diseases

Stage	If	Then	Else	Code list (Suppl File S2)
Classification of diabetes mellitus types				
0	Any diagnosis, treatment or abnormal test with missing event date OR (exactly one treatment AND no Read or abnormal test)	Unclassifiable 0 (Excluded)	1	Sheets 1.1, 1.2, 1.3
1	Any diagnosis, treatment or abnormal test	2	DM-free (T2DM-free)	Sheets 1.1, 1.2, 1.3
2	Type 1 Read and no other Read except Unspecified	Type 1 (Excluded)	3	Sheet 1.1 where ClassType=Type 1
3	Type 2 Read and no Type 1 Read	Type 2	4	Sheet 1.1 where ClassType=Type 2
4	Both Type 1 and Type 2 Read OR no Read except Unspecified	5	Unclassifiable 4 (Excluded)	Sheet 1.1
5	Never on insulin	7	6	Sheet 1.2 where TreatmentProgression=5
6	Insulin concurrent with other antidiabetic except metformin: prescriptions for other antidiabetic separated by no more than 180 days between diabetes onset and end of follow-up in database	7	Unclassifiable 4 (Excluded)	Sheet 1.2 where TreatmentProgression=2
7	>= 25 years old at DM onset date	Type 2	Unclassifiable 4 (Excluded)	
8	Gestational Read and no other Read except Unspecified	Gestational (T2DM-free)	9	Sheet 1.1 where ClassType=Gestational DM
9	Other transient Read and no other Read	Other transient (T2DM-free)	Unclassifiable 2 (Excluded)	Sheet 1.1 where Type=Other transient
Classification of HBV infection				
0	Any confirmatory (or A703.00) Read code, or ICD-10 code or test "present" with missing event date	Excluded	1	Sheets 1.4, 1.5, 1.6
1	Any confirmatory (or A703.00) Read code, or ICD-10 code or test "present"	2	HBV-free	Sheets 1.4, 1.5, 1.6
2	ICD-10 code type Chronic	HBV chronic	3	Sheet 1.5 where Acute_Chronic=Chronic
3	Confirmatory Read code type Chronic	HBV chronic	4	Sheet 1.4 where Acute_Chronic=Chronic
4	Test type Hepatitis B surface antibody (anti-HBs) "present"	5	6	Sheet 1.6 where ClassType= anti-HBs

5	Test type Total hepatitis B core antibody (anti-HBc) "present" not more than 7 days apart from 4	Resolved/immune (HBV non-chronic)	11	Sheet 1.6 where ClassType= anti-HBc
6	Test type Hepatitis B surface antigen (HBsAg) "present"	7	11	Sheet 1.6 where ClassType= HBsAg
7	Tests type IgM antibody to hepatitis B core antigen (IgM anti-HBc) "present" not more than 7 days apart from 6	Acute (HBV non-chronic)	8	Sheet 1.6 where ClassType= IgM anti-HBc
8	Test type Total hepatitis B core antibody (anti-HBc) "present" not more than 7 days apart from 6	HBV chronic	9	Sheet 1.6 where ClassType= anti-HBc
9	Tests type Hepatitis B surface antigen (HBsAg) "present" in two separate dates more than 180 days apart	HBV chronic	10	Sheet 1.6 where ClassType= HBsAg
10	Test type Total hepatitis B core antibody (anti-HBc) "present"	Status unknown (HBV non-chronic)	11	Sheet 1.6 where ClassType= anti-HBc
11	ICD-10 code type Acute or NOS	HBV non-chronic	12	Sheet 1.5 where Acute_Chronic=Acute/NOS
12	Confirmatory Read code type Acute or NOS	HBV non-chronic	13	Sheet 1.4 where Acute_Chronic=Acute/NOS
13	Test type Hepatitis B surface antigen (HBsAg) "present"	HBV including HBsAg in definition (Excluded in standard definition)	Excluded	Sheet 1.6 where ClassType= HBsAg

Note: For subjects classified as Type 2, the index date of the T2DM exposure was the date of the first recording of any diagnosis, treatment or abnormal test, thereby now excluding events within 180 days prior or after any Gestational or Other transient Read event, except Type 2 Read events that are included regardless of their proximity to Gestational or Other transient Read events.

Subjects with T2DM/HBV were considered to have new-onset T2DM/HBV when the onset of the T2DM/HBV exposure occurred at or after inclusion in the cohort.

Subjects with T2DM/HBV were considered to have prevalent T2DM/HBV when the onset of the T2DM/HBV exposure occurred before inclusion in the cohort.