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**Algorithm 3** Get axioms from ICD-10-CM/SNOMED CT mappings and addition to the DIONE ontology

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1: procedure GET AXIOMS FROM MAPPINGS AND ADDITION TO ONTOLOGY
2:   Set database connection;
3:   readFile(ICD-10-CM classes);
4:   printFileWithAxioms();
5:   while line (line = readLine() !=null do
6:     result = select ICD10, SNOMEDCT, concept1, relationshiptype, concept2
      from mappings, relations where ICD10 = line and SNOMEDCT = concept1;
7:     while row != null do
8:       get(ICD-10));
9:       get(SNOMEDCT));
10:      get(concept1);
11:      get(relationshiptype);
12:      get(concept2);
13:      nextline();
14:    end while
15:  end while
16:  addAxioms(file);
17:  closeFileWithAxioms();
18:  close connection;
19:  function ADDAXIOMS(FILEWITHAXIOMS)
20:    getInstance();
21:    loadOntologyWithoutaxioms();
22:    readAxiomsFromFile();
23:    createOntologyWithAxioms();
24:    saveOntology();
25:    close database connection;
26:  end function
27: end procedure
```

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