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| **Project: New Haven Urgent Care Team# 9** | |
|  | **Test Date: 12/09** |
| **Test Case ID#: 20** | **Name(s) of Tester(s): Brandon Xu** |
| **Test Description (What are you testing? – you must be specific):**  Testing primary key of Patient and Diagnosis.     * Does the system ensure that two patients cannot have the same PId? * Does the system ensure that the PId of a patients cannot be null? * Can a patient be uniquely identified by its primary key, PId? * Can we have a foreign key referencing the primary key, PId? | * Does the system ensure that two diagnoses cannot have the same ICD-10-CM code? * Does the system ensure that the ICD-10-CM code of a diagnosis cannot be null? * Can a diagnosis be uniquely identified by its primary key, ICD-10-CM? * Can we have a foreign key referencing the primary key, ICD-10-CM? |
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**Test Data (Provide the file name of the script used to insert data, provide a screen capture to reflect data, or provide script here):**

/\* Add a patient \*/

INSERT INTO Patient(PId, FName, MName, LName, House\_number, Street, City, State, Zip, Day, Month, Year, Has\_insurance)

VALUES (0, 'Brandon', 'Z', 'Xu', '220','Delaware St SE','Minneapolis','MN', '55455', '3', '21', '1999', false);

/\* Insert a tuple with a foriegn key to patient 0. \*/

INSERT INTO PatientHasPhoneNumbers(PId, PhoneNumber)

VALUES (0, 612-413-5921);

/\* Insert a row in to the diagnosis table\*/

INSERT INTO Diagnosis(Name, `ICD-10-CM-Code`, Cost)

VALUES ('Cholera','A00', 100.00);

**SQL Query(s) used for testing:**

/\* Add a second patient with a different PId from the first patient

Pass: System allows insertion. \*/

INSERT INTO Patient(PId, FName, MName, LName, House\_number, Street, City, State, Zip, Day, Month, Year, Has\_insurance)

VALUES (1, 'David', 'P', 'Xu', '220','Delaware St SE','Minneapolis','MN', '55455', '1', '21', '2004', true);

/\* Add a patient with the same PId

Pass: System doesn’t allow the insertion.

Error Message: Duplicate entry '0' for key 'PRIMARY' \*/

INSERT INTO Patient(PId, FName, MName, LName, House\_number, Street, City, State, Zip, Day, Month, Year, Has\_insurance)

VALUES (0, 'Brandon', 'Z', 'Xu', '220','Delaware St SE','Minneapolis','MN', '55455', '3', '21', '1999', false);

/\* Add a patient with the same PId as existing patient

Pass: System doesn’t allow the insertion.

Error Message Column 'PId' cannot be null\*/

INSERT INTO Patient(PId, FName, MName, LName, House\_number, Street, City, State, Zip, Day, Month, Year, Has\_insurance)

VALUES (null, 'Brandon', 'Z', 'Xu', '220','Delaware St SE','Minneapolis','MN', '55455', '3', '21', '1999', false);

/\* Attempt to add a row to the diagnosis table with the same primary key as an existing entry

Pass: System doesn’t allow the insertion.

Error message: Duplicate entry 'A00' for key 'PRIMARY' \*/

INSERT INTO Diagnosis(Name, `ICD-10-CM-Code`, Cost)

VALUES ('Typhoid','A00', 100.00);

/\* Attempt to add a row to the diagnosis table with a null primary key

Pass: System doesn’t allow the insertion.

Error Message: Column 'ICD-10-CM-Code' cannot be null \*/

INSERT INTO Diagnosis(Name, `ICD-10-CM-Code`, Cost)

VALUES ('Typhoid',null, 100.00);

/\* Insert a row in the diagnosis table with a different code from the first diagnosis

Pass: System allows insertion. \*/

INSERT INTO Diagnosis(Name, `ICD-10-CM-Code`, Cost)

VALUES ('Typhoid','A01', 100.00);

/\* Test if we can query a unique passenger by its primary key. Only one passenger should be returned.

Pass: Only the passenger “Brandon Xu” with PId 0 is returned. \*/

SELECT \*

FROM Patient

WHERE PId = 0;

/\* Test if we can query a unique diagnosis by its primary key. Only one diagnosis should be returned.

Pass: Only the diagnosis ‘Cholera’ with ICD-10-CM-Code ‘A00’ is returned. \*/

SELECT \*

FROM Diagnosis

WHERE `ICD-10-CM-Code` = 'A00';

/\* Tests if the PId foriegn key in PatientHasPhoneNumbers table can reference the primary key of the Patient table.

Pass: The phone number(s) is joined with patients by the foriegn key that references the primary key of Patient. \*/

SELECT \*

FROM PatientHasPhoneNumbers, Patient

WHERE PatientHasPhoneNumbers.PId = Patient.PId;