Synopsis

Overview: **13 of 20** requirements are achieved.

1. Does your design capture the requirement that all patients under the age of 18 must have a parent or guardian in the system?

No. Our design didn't capture the requirement that all patients under the age of 18 must have a parent or guardian in the system. As long as we insert the patient to the table PATIENT, we can insert the patient to the table MINOR. Our design doesn't have the judgment to ensure the under 18 patients can only be inserted in MINOR. To achieve this requirement I think we need to add PARENT_GUARDIAN primary key as foreign key to MINOR.

2. Does your design capture the requirement that a patient over the age of 18 does not have a parent or guardian?

Yes. In this case, the result showed that the patient who is over 18 does not have a patient or guardian. Because there is not any direct relationship between patient and parent_guardian. The only relation between patient and parent_guardian is the RELATE table. When selecting patients' information, the query will not show any information about the parent/guardian.

3. Does the system document when a person does not have insurance? This could be a new situation after having insurance.

Yes. In this case, our design is able to identify the difference between no insurance and having insurance. If a patient has insurance, his data will be inserted into the table INSURANCE with a unique member ID. If a patient has no insurance, his data will not be shown on the table INSURANCE. Trigger is a good method to improve this design, due to the trigger is easier to judge whether the patient has insurance.

4. Does your design capture the system's need to store old insurance information along with current insurance information?

Yes. In this case, both old insurance and new insurance can be stored at the same time. And a clerk can find the valid dates by the valid date that has been stored in the INSURANCE table.

5. Can a patient be seen by only one service provider per visit?

No. No possible Query to prove that a patient can be seen by only one service provider per visit at all because VISIT has no direct or indirect relationship with SERVICE_PROVIDER. To achieve this requirement I think we should add a direct relation between VISIT and SERVICE_PROVIDER.

6. Can a patient have more that one diagnosis per visit? Assume all patients must be given a diagnosis.

Yes. Following the SQL command. We can get more than one row of diagnosis information. That means one patient will have more than one diagnosis during a visit.

7. Can only service providers make a diagnosis(es)?

No. In this case, there are several foreign keys that exist in the table service providers. Without those foreign keys, there is not enough information to build table DIAGNOSIS. To make this work better, we should build a direct relationship between service providers and diagnosis.

8. Does the system properly document followup tests/procedures with proper coding?

No. In our design, a VISIT has a Date attribute that indicates the date of this VISIT. Although an INITIAL ASSESSMENT is associated with VISIT given a DATE, a TREATMENT is not associated as with any PATIENT or VISIT or INITIAL ASSESSMENT. This means there is also no way for a TREATMENT to have an associated date given a PATIENT or VISIT or INITIAL ASSESSMENT. Therefore, our system cannot document follow up tests/procedures.

9. Does the system document what intake clerk collected the insurance information and the copay?

No. We do not have a relation that relates the INTAKE_CLERK with INSURANCE OR INSURED. In order to achieve this requirement we should have a relation that allows intake clerks to access the insurance and copay information.

10. Does the system allow more than one initial assessment to be in the system at a time?

Yes. We successfully inserted two initial assessments given a patient and a visit. which means it satisfies the requirement.

11. Does the system allow the patient to visit urgent care for more than one time?

Yes. In this case, different visit id and same patient id can both exit in table VISIT, due to the primary key in table VISIT is VID, which will be updated each time patient visit the urgent care.

12. Do initial assessments have the nurse's information associated with it? Can we retrieve the nurses information?

Yes. Following the SQL query command, we can retrieve the nurse's information from the initial assessments. Because the table of initial assessments involve the nurse's EID. We query the nurse's information by querying the nurse's EID.

13. Can a nurse do assessments for multiple patients?

Yes. In table VISIT, the primary key in table VISIT is VID, which is the only key that can not be duplicated. However, not for assessment nurse id and PID. Therefore, assessment nurse id can be duplicated in this table. So, one assessment nurse can refer to multiple patients.

14. Can a nurse do assessments be completed by only one nurse?

Yes. The initial assessment can be done by only one nurse. Because the AssessmentID is the primary key in table initial_assessment. Only and only one nurse can complete one kind of initial assessment. The result, when we retrieve one kind of the initial assessment, return only one line.

15. Are we able to review the vitals as defined on the writeup of the patient through queries for a given visit?

No. A VISIT is associated with a PATIENT through PID. Each PATIENT has its PATIENT_PHONE. We can get all information of a PATIENT by the query SELECT for a given PID.

16. Are all employees classified as either salaried or hourly?

No. There is no indication showing whether an assessment is salaried or hourly. The same situation for other kinds of employees exists. This is caused by the flaw of our design.

17. Can doctors request more than one test/procedure per visit?

Yes. We successfully inserted two TREATMENTs with the SERVICE_PROVIDER.

18. Can there be no tests/procedures for a patient for a given visit?

Yes. Our design does meet the requirement that there can be no tests/procedures for a patient for a given visit.

19. Test at least two FKs for the cardinality numbers that are on the design document (your choice of Fks) – do we capture the max numbers for the relations?

One is YES and another is NO. In our design, INITIAL_ASSESSMENT and VISIT have a 1:1 relation. However, we successfully inserted two different INTIAL_ASSESSMENTs with the same VID, which means they don't have 1:1 relation, and it exceeds the max cardinal number 1. Similarly, SERVICE_PROVIDER and TREATMENT have a 1:N relation. We successfully inserted two different TREATMENT with the same SP_ID, which means they have 1:N relation.

20. You should have two tests to test two primary keys or other keys.

Yes. We tried inserting two patients with the same PID and two departments with the same DID, and both cases generated errors indicating that no primary key can be duplicated. This means it satisfies the primary keys' feature. Then, we inserted the patient with the PID is null. Then we get an error that shows that the primary can not be null.