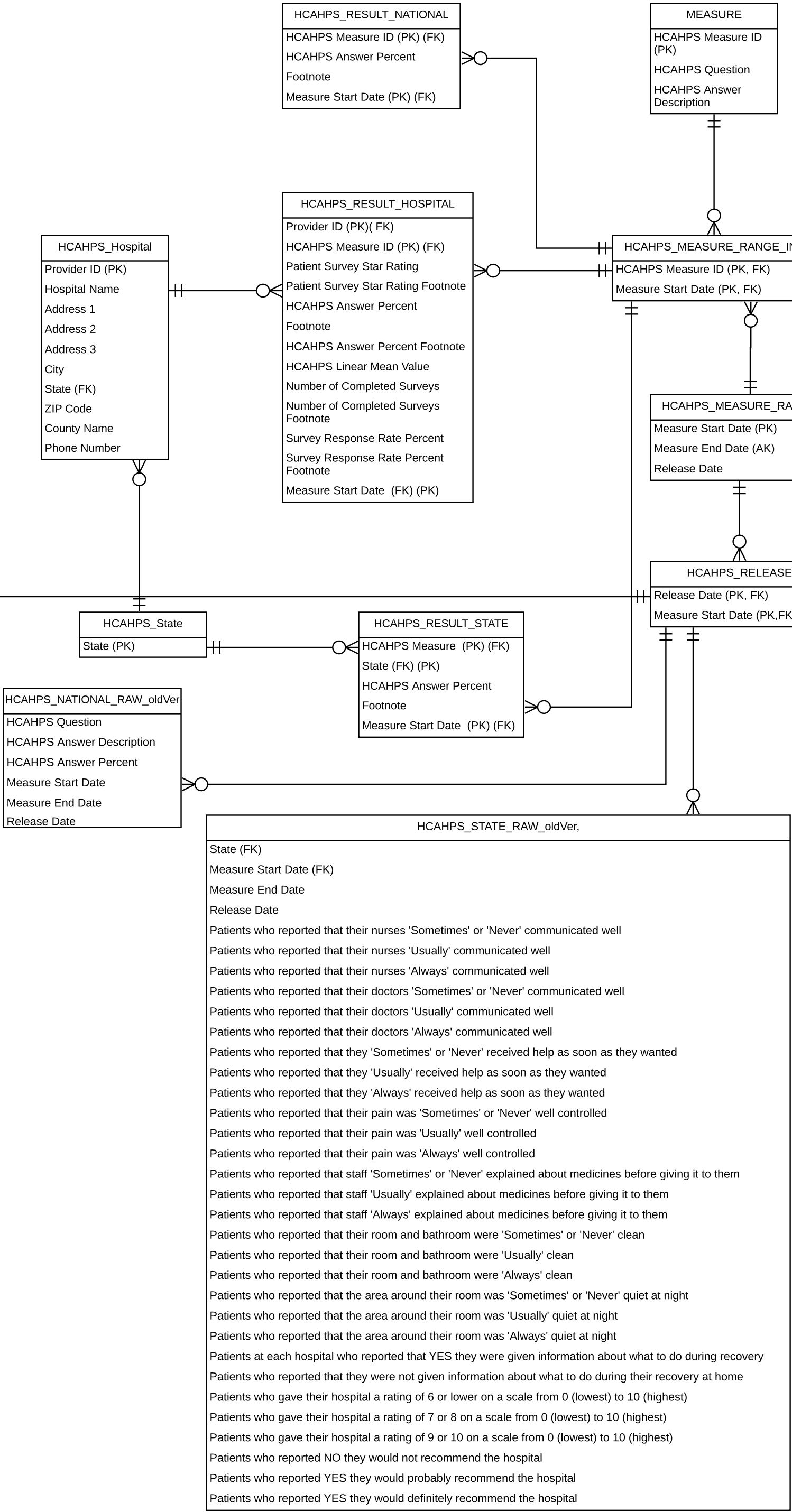


HCAHPS_HOSPITAL_RAW_oldVer
Provider Number
Hospital Name
Address 1
Address 2
Address 3
City
State
Zip Code
County Name
Phone Number
Patients who reported that their nurses 'Sometimes' or 'Never' communicated well
Patients who reported that their nurses 'Usually' communicated well
Patients who reported that their nurses 'Always' communicated well
Patients who reported that their doctors 'Sometimes' or 'Never' communicated well
Patients who reported that their doctors 'Usually' communicated well
Patients who reported that their doctors 'Always' communicated well
Patients who reported that they 'Sometimes' or 'Never' received help as soon as they wanted
Patients who reported that they 'Usually' received help as soon as they wanted
Patients who reported that they 'Always' received help as soon as they wanted
Patients who reported that their pain was 'Sometimes' or 'Never' well controlled
Patients who reported that their pain was 'Usually' well controlled
Patients who reported that their pain was 'Always' well controlled
Patients who reported that staff 'Sometimes' or 'Never' explained about medicines before giving it to them
Patients who reported that staff 'Usually' explained about medicines before giving it to them
Patients who reported that staff 'Always' explained about medicines before giving it to them
Patients who reported that their room and bathroom were 'Sometimes' or 'Never' clean
Patients who reported that their room and bathroom were 'Usually' clean
Patients who reported that their room and bathroom were 'Always' clean
Patients who reported that the area around their room was 'Sometimes' or 'Never' quiet at night
Patients who reported that the area around their room was 'Usually' quiet at night
Patients who reported that the area around their room was 'Always' quiet at night
Patients at each hospital who reported that YES they were given information about what to do during recovery
Patients who reported that they were not given information about what to do during their recovery at home
Patients who gave their hospital a rating of 6 or lower on a scale from 0 (lowest) to 10 (highest)
Patients who gave their hospital a rating of 7 or 8 on a scale from 0 (lowest) to 10 (highest)
Patients who gave their hospital a rating of 9 or 10 on a scale from 0 (lowest) to 10 (highest)
Patients who reported NO they would not recommend the hospital
Patients who reported YES they would probably recommend the hospital
Patients who reported YES they would definitely recommend the hospital
Number of completed Surveys
Survey Response Rate
Hospital Footnote
Measure Start Date
Measure End Date
Release Date



HCAHPS_HVBP_RAW
Provider Number (FK)
Hospital Name
Address
City
State (FK)
Zip Code
County Name
Communication with Nurses Floor
Communication with Nurses Achievement Threshold
Communication with Nurses Benchmark
Communication with Nurses Baseline Rate
Communication with Nurses Performance Rate
Communication with Nurses Achievement Points
Communication with Nurses Improvement Points
Communication with Nurses Dimension Score
Communication with Doctors Floor
Communication with Doctors Achievement Threshold
Communication with Doctors Benchmark
Communication with Doctors Baseline Rate
Communication with Doctors Performance Rate
Communication with Doctors Achievement Points
Communication with Doctors Improvement Points
Communication with Doctors Dimension Score
Responsiveness of Hospital Staff Floor
Responsiveness of Hospital Staff Achievement Threshold
Responsiveness of Hospital Staff Benchmark
Responsiveness of Hospital Staff Baseline Rate
Responsiveness of Hospital Staff Performance Rate
Responsiveness of Hospital Staff Achievement Points
Responsiveness of Hospital Staff Improvement Points
Responsiveness of Hospital Staff Dimension Score
Care Transition Floor
Care Transition Achievement Threshold
Care Transition Benchmark
Care Transition Baseline Rate
Care Transition Performance Rate
Care Transition Achievement Points
Care Transition Improvement Points
Care Transition Dimension Score
Pain Management Floor
Pain Management Achievement Threshold
Pain Management Benchmark
Pain Management Baseline Rate
Pain Management Performance Rate
Pain Management Achievement Points
Pain Management Improvement Points
Pain Management Dimension Score
Communication about Medicines Floor
Communication about Medicines Achievement Threshold
Communication about Medicines Benchmark
Communication about Medicines Baseline Rate
Communication about Medicines Performance Rate
Communication about Medicines Achievement Points
Communication about Medicines Improvement Points
Communication about Medicines Dimension Score
Cleanliness and Quietness of Hospital Environment Floor
Cleanliness and Quietness of Hospital Environment Achievement Threshold
Cleanliness and Quietness of Hospital Environment Benchmark
Cleanliness and Quietness of Hospital Environment Baseline Rate
Cleanliness and Quietness of Hospital Environment Performance Rate
Cleanliness and Quietness of Hospital Environment Achievement Points
Cleanliness and Quietness of Hospital Environment Improvement Points
Cleanliness and Quietness of Hospital Environment Dimension Score
Discharge Information Floor
Discharge Information Achievement Threshold
Discharge Information Benchmark
Discharge Information Baseline Rate
FieldDischarge Information Performance Rate
Discharge Information Achievement Points
Discharge Information Improvement Points
Discharge Information Dimension Score
Overall Rating of Hospital Floor
Overall Rating of Hospital Achievement Threshold
Overall Rating of Hospital Benchmark
Overall Rating of Hospital Baseline Rate
Overall Rating of Hospital Performance Rate
Overall Rating of Hospital Achievement Points
Overall Rating of Hospital Improvement Points
Overall Rating of Hospital Dimension Score
HCAHPS Base Score
HCAHPS Consistency Score
HVBP Date
Release Date

/**Used Excel formulas and autofill feature to quickly generate scripts below from
file names**/

/**Add release date data prior to combining tables**/

```
ALTER TABLE [dbo].[HCAHPS - Hospital - 20180725] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20180725] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20180725] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20181031] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20181031] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20181031] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20190321] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20190321] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20190321] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20190424] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20190424] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20190424] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20141023] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20150122] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20150506] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20150716] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20151008] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20151210] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20160504] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20160810] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20161110] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20161219] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20170428] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20170726] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20171024] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20180126] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - Hospital - 20180523] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20141023] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20150122] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20150506] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20150716] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20151008] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20151210] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20160504] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20160810] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20161110] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20161219] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20170428] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20170726] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20171024] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20180126] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - National - 20180523] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20141023] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20150122] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20150506] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20150716] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20151008] ADD ReleaseDate Date
```

```
ALTER TABLE [dbo].[HCAHPS - State - 20151210] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20160504] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20160810] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20161110] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20161219] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20170428] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20170726] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20171024] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20180126] ADD ReleaseDate Date
ALTER TABLE [dbo].[HCAHPS - State - 20180523] ADD ReleaseDate Date
;

UPDATE [dbo].[HCAHPS - Hospital - 20180725] SET ReleaseDate = '2018-07-25';
UPDATE [dbo].[HCAHPS - State - 20180725] SET ReleaseDate = '2018-07-25';
UPDATE [dbo].[HCAHPS - National - 20180725] SET ReleaseDate = '2018-07-25';
UPDATE [dbo].[HCAHPS - Hospital - 20181031] SET ReleaseDate = '2018-10-31';
UPDATE [dbo].[HCAHPS - State - 20181031] SET ReleaseDate = '2018-10-31';
UPDATE [dbo].[HCAHPS - National - 20181031] SET ReleaseDate = '2018-10-31';
UPDATE [dbo].[HCAHPS - Hospital - 20190321] SET ReleaseDate = '2019-03-21';
UPDATE [dbo].[HCAHPS - State - 20190321] SET ReleaseDate = '2019-03-21';
UPDATE [dbo].[HCAHPS - National - 20190321] SET ReleaseDate = '2019-03-21';
UPDATE [dbo].[HCAHPS - Hospital - 20190424] SET ReleaseDate = '2019-04-24';
UPDATE [dbo].[HCAHPS - State - 20190424] SET ReleaseDate = '2019-04-24';
UPDATE [dbo].[HCAHPS - National - 20190424] SET ReleaseDate = '2019-04-24';
UPDATE [dbo].[HCAHPS - Hospital - 20141023] SET ReleaseDate = '2014-10-23';
UPDATE [dbo].[HCAHPS - Hospital - 20150122] SET ReleaseDate = '2015-01-22';
UPDATE [dbo].[HCAHPS - Hospital - 20150506] SET ReleaseDate = '2015-05-06';
UPDATE [dbo].[HCAHPS - Hospital - 20150716] SET ReleaseDate = '2015-07-16';
UPDATE [dbo].[HCAHPS - Hospital - 20151008] SET ReleaseDate = '2015-10-08';
UPDATE [dbo].[HCAHPS - Hospital - 20151210] SET ReleaseDate = '2015-12-10';
UPDATE [dbo].[HCAHPS - Hospital - 20160504] SET ReleaseDate = '2016-05-04';
UPDATE [dbo].[HCAHPS - Hospital - 20160810] SET ReleaseDate = '2016-08-10';
UPDATE [dbo].[HCAHPS - Hospital - 20161110] SET ReleaseDate = '2016-11-10';
UPDATE [dbo].[HCAHPS - Hospital - 20161219] SET ReleaseDate = '2016-12-19';
UPDATE [dbo].[HCAHPS - Hospital - 20170428] SET ReleaseDate = '2017-04-28';
UPDATE [dbo].[HCAHPS - Hospital - 20170726] SET ReleaseDate = '2017-07-26';
UPDATE [dbo].[HCAHPS - Hospital - 20171024] SET ReleaseDate = '2017-10-24';
UPDATE [dbo].[HCAHPS - Hospital - 20180126] SET ReleaseDate = '2018-01-26';
UPDATE [dbo].[HCAHPS - Hospital - 20180523] SET ReleaseDate = '2018-05-23';
UPDATE [dbo].[HCAHPS - National - 20141023] SET ReleaseDate = '2014-10-23';
UPDATE [dbo].[HCAHPS - National - 20150122] SET ReleaseDate = '2015-01-22';
UPDATE [dbo].[HCAHPS - National - 20150506] SET ReleaseDate = '2015-05-06';
UPDATE [dbo].[HCAHPS - National - 20150716] SET ReleaseDate = '2015-07-16';
UPDATE [dbo].[HCAHPS - National - 20151008] SET ReleaseDate = '2015-10-08';
UPDATE [dbo].[HCAHPS - National - 20151210] SET ReleaseDate = '2015-12-10';
UPDATE [dbo].[HCAHPS - National - 20160504] SET ReleaseDate = '2016-05-04';
UPDATE [dbo].[HCAHPS - National - 20160810] SET ReleaseDate = '2016-08-10';
UPDATE [dbo].[HCAHPS - National - 20161110] SET ReleaseDate = '2016-11-10';
UPDATE [dbo].[HCAHPS - National - 20161219] SET ReleaseDate = '2016-12-19';
UPDATE [dbo].[HCAHPS - National - 20170428] SET ReleaseDate = '2017-04-28';
UPDATE [dbo].[HCAHPS - National - 20170726] SET ReleaseDate = '2017-07-26';
UPDATE [dbo].[HCAHPS - National - 20171024] SET ReleaseDate = '2017-10-24';
```

```

UPDATE [dbo].[HCAHPS - National - 20180126] SET ReleaseDate = '2018-01-26';
UPDATE [dbo].[HCAHPS - National - 20180523] SET ReleaseDate = '2018-05-23';
UPDATE [dbo].[HCAHPS - State - 20141023] SET ReleaseDate = '2014-10-23';
UPDATE [dbo].[HCAHPS - State - 20150122] SET ReleaseDate = '2015-01-22';
UPDATE [dbo].[HCAHPS - State - 20150506] SET ReleaseDate = '2015-05-06';
UPDATE [dbo].[HCAHPS - State - 20150716] SET ReleaseDate = '2015-07-16';
UPDATE [dbo].[HCAHPS - State - 20151008] SET ReleaseDate = '2015-10-08';
UPDATE [dbo].[HCAHPS - State - 20151210] SET ReleaseDate = '2015-12-10';
UPDATE [dbo].[HCAHPS - State - 20160504] SET ReleaseDate = '2016-05-04';
UPDATE [dbo].[HCAHPS - State - 20160810] SET ReleaseDate = '2016-08-10';
UPDATE [dbo].[HCAHPS - State - 20161110] SET ReleaseDate = '2016-11-10';
UPDATE [dbo].[HCAHPS - State - 20161219] SET ReleaseDate = '2016-12-19';
UPDATE [dbo].[HCAHPS - State - 20170428] SET ReleaseDate = '2017-04-28';
UPDATE [dbo].[HCAHPS - State - 20170726] SET ReleaseDate = '2017-07-26';
UPDATE [dbo].[HCAHPS - State - 20171024] SET ReleaseDate = '2017-10-24';
UPDATE [dbo].[HCAHPS - State - 20180126] SET ReleaseDate = '2018-01-26';
UPDATE [dbo].[HCAHPS - State - 20180523] SET ReleaseDate = '2018-05-23';

```

```

/**Create RAW Tables**/

```

```

CREATE TABLE HCAHPS_Hospital_RAW
(
    [Provider ID] [varchar](50) NOT NULL
,   [Hospital Name] [varchar](150) NULL
,   [Address] [varchar](250) NULL
,   [City] [varchar](150) NULL
,   [State] [varchar](50) NULL
,   [ZIP Code] [varchar](50) NULL
,   [County Name] [varchar](150) NULL
,   [Phone Number] [varchar](50) NULL
,   [HCAHPS Measure ID] [varchar](50) NOT NULL
,   [HCAHPS Question] [varchar](150) NULL
,   [HCAHPS Answer Description] [varchar](150) NULL
,   [Patient Survey Star Rating] [varchar](50) NULL
,   [Patient Survey Star Rating Footnote] [varchar](500) NULL
,   [HCAHPS Answer Percent] [varchar](50) NULL
,   [HCAHPS Answer Percent Footnote] [varchar](500) NULL
,   [HCAHPS Linear Mean Value] [varchar](50) NULL
,   [Number of Completed Surveys] [varchar](50) NULL
,   [Number of Completed Surveys Footnote] [varchar](500) NULL
,   [Survey Response Rate Percent] [varchar](50) NULL
,   [Survey Response Rate Percent Footnote] [varchar](500) NULL
,   [Footnote] [varchar](500) NULL
,   [Measure Start Date] [varchar](50) NULL
,   [Measure End Date] [varchar](50) NULL
,   [ReleaseDate] [date] NOT NULL
,   PRIMARY KEY
    ([Provider ID], [HCAHPS Measure ID], [ReleaseDate]
)
);

```

```


CREATE TABLE HCAHPS_National_RAW
(
    [HCAHPS Measure ID] [varchar](50) NOT NULL

```



```
, [HCAHPS Question] [varchar](150) NULL
, [HCAHPS Answer Description] [varchar](150) NULL
, [HCAHPS Answer Percent] [varchar](50) NULL
, [Footnote] [varchar](500) NULL
, [Measure Start Date] [varchar](50) NULL
, [Measure End Date] [varchar](50) NULL
, [ReleaseDate] [date] NOT NULL
, PRIMARY KEY
  ([HCAHPS Measure ID]
  , [ReleaseDate]
  )
);
```

```
CREATE TABLE HCAHPS_State_RAW
( [State] [varchar](2) NOT NULL
, [HCAHPS Question] [varchar](150) NULL
, [HCAHPS Measure ID] [varchar](50) NOT NULL
, [HCAHPS Answer Description] [varchar](150) NULL
, [HCAHPS Answer Percent] [varchar](50) NULL
, [Footnote] [varchar](500) NULL
, [Measure Start Date] [varchar](50) NULL
, [Measure End Date] [varchar](50) NULL
, [ReleaseDate] [date] NOT NULL
, PRIMARY KEY
  ([State], [HCAHPS Measure ID], [ReleaseDate]
  )
);
```

/**Insert data for RAW Tables using Import/Export wizard:
 Right click database Export data Source: SQL Server Native Client 11.0
 Select database Destination: SQL Server Native Client 11.0
 Select database Copy data from one or more tables or views
 Select original table as source, select appropriate raw table as destination
 Edit mappings to make sure destination columns are correct Run Repeat for all
 tables**/ 

/**Create new tables**/

```
CREATE TABLE STATE
( STATE char (2) NOT NULL
, PRIMARY KEY (State)
);
```

```
INSERT INTO [STATE] SELECT DISTINCT [State] FROM HCAHPS_Hospital_RAW ;
```

```
CREATE TABLE PROVIDER_INFO
( [Provider ID] [varchar](50) NOT NULL
, [Hospital Name] [varchar](150) NULL
, [Address] [varchar](250) NULL
, [City] [varchar](150) NULL
, [State] [char](2) NULL
, [ZIP Code] [varchar](50) NULL
```

```
, [County Name] [varchar](150) NULL
, [Phone Number] [varchar](50) NULL
, PRIMARY KEY ([Provider ID])
, CONSTRAINT FK_STATEPROVIDERINFO FOREIGN KEY (State) REFERENCES STATE (State)
);
```

```
/**Create transfer views for each corresponding table to make use of import/export
wizard simpler. Use Max function to allow grabbing all columns, even with Group By
function**/
```

GO

```
CREATE VIEW ProviderInfoTrans AS
SELECT DISTINCT [Provider ID]
, MAX([Hospital Name]) as 'Hospital Name'
, MAX([address]) as 'address'
, MAX([city]) as 'city'
, MAX([State]) as 'state'
, MAX([ZIP Code]) as 'ZIP code'
, MAX([County Name]) as 'County Name'
, MAX([Phone Number]) as 'phone number'
FROM HCAHPS_hospital_RAW
GROUP BY [Provider ID]
```

GO

```
/**Use Import/Export Wizard to move ProviderInfoTrans to PROVIDER_INFO: Right click
database Export data Pulls up wizard Source: SQL Server Native Client 11.0 Select
database Destination: SQL Server Native Client 11.0 Select database Copy data from
one or more tables or views Select view as source, select table as destination Edit
mappings- automatically filled with columns of the same name in views Run**/
```

```
CREATE TABLE HOSPITAL_RELEASE
( [ReleaseDate] Date NOT NULL
, [Provider ID] Varchar (50) NOT NULL
, [Number of Completed Surveys] varchar (50) NULL
, [Number of Completed Surveys Footnote] varchar(500) NULL
, [Survey Response Rate] varchar (50) NULL
, [Survey Response Rate Footnote] varchar(500) NULL
, [Footnote] varchar (500) NULL
, PRIMARY KEY ([ReleaseDate]
, [Provider ID])
, CONSTRAINT FK_ReleaseProviderID
FOREIGN KEY ([Provider ID])
REFERENCES PROVIDER_INFO ([Provider ID])
);
```

GO

```
CREATE VIEW HospitalReleaseDataTrans AS
SELECT [ReleaseDate], [Provider ID]
, Max([Number of Completed Surveys]) as 'Number of Completed Surveys'
, Max([Number of Completed Surveys Footnote]) as 'Number of Completed Surveys
Footnote'
, Max([Survey Response Rate Percent]) as 'Survey Response Rate Percent'
```

```
, Max([Survey Response Rate Percent Footnote]) as 'Survey Response Rate Percent
Footnote'
, Max([Footnote]) as 'Footnote'
FROM HCAHPS_Hospital_RAW
GROUP BY [Provider ID], ReleaseDate
```

GO

```
/**Use Import/Export Wizard to move HospitalReleaseDataTrans data into
HOSPITAL_RELEASE. Same process above**/
```

```
CREATE TABLE MEASURE_RANGE
( [Measure Start Date] date NOT NULL
, [Measure End Date] date NOT NULL
, PRIMARY KEY ([Measure Start Date])
);
```

```
INSERT into MEASURE_RANGE
SELECT DISTINCT [Measure Start Date]
, [Measure end date]
FROM [HCAHPS_Hospital_RAW]
```

```
CREATE TABLE MEASURE
( [HCAHPS Measure ID] [varchar](50) NOT NULL
, [HCAHPS Question] [varchar](150) NULL
, [HCAHPS Answer Description] [varchar](150) NULL
, PRIMARY KEY ([HCAHPS MEASURE ID])
);
```

GO

```
CREATE VIEW MeasureInfoTrans AS
SELECT [HCAHPS Measure ID]
, max([HCAHPS Question]) as 'HCAHPS Question'
, max([HCAHPS Answer Description]) as 'HCAHPS Answer Description'
FROM HCAHPS_Hospital_RAW
GROUP BY [HCAHPS Measure ID] ;
```

GO

```
/**Use Import/Export Wizard to move MeasureInfoTrans data into MEASURE table**/
```

```
CREATE TABLE HOSP_RELEASE_MEASURE
( [Provider ID] [varchar](50) NOT NULL
, [ReleaseDate] [date] NOT NULL
, [HCAHPS Measure ID] [varchar](50) NOT NULL
, [Patient Survey Star Rating] [varchar](50) NULL
, [Patient Survey Star Rating Footnote] [varchar](500) NULL
, [HCAHPS Answer Percent] [varchar](50) NULL
, [HCAHPS Answer Percent Footnote] [varchar](500) NULL
, [HCAHPS Linear Mean Value] [varchar](50) NULL
, [Measure Start Date] Date NOT NULL
, PRIMARY KEY
(ReleaseDate
, [HCAHPS Measure ID]
```

```

    , [Provider ID]
  )
);

```

```

ALTER TABLE HOSP_RELEASE_MEASURE
  ADD CONSTRAINT FK_HRM_HR_RDPI FOREIGN KEY (ReleaseDate, [Provider ID])
    REFERENCES [dbo].[HOSPITAL_RELEASE] ([ReleaseDate], [Provider ID])
;

```

```

ALTER TABLE HOSP_RELEASE_MEASURE
  ADD CONSTRAINT FK_HRM_M_MID FOREIGN KEY ([HCAHPS Measure ID])
    REFERENCES MEASURE ([HCAHPS Measure ID])
;

```

```

ALTER TABLE HOSP_RELEASE_MEASURE
  ADD CONSTRAINT FK_HRM_MR_MSD FOREIGN KEY ([Measure Start Date])
    REFERENCES MEASURE_RANGE ([Measure Start Date])
;

```

GO

```

CREATE VIEW HospReleaseMeasureTrans AS
  SELECT DISTINCT RELEASEDATE
    , [HCAHPS MEASURE ID]
    , [PROVIDER ID]
    , max([HCAHPS Answer Percent]) as 'HCAHPS Answer Percent'
    , max([HCAHPS Answer Percent Footnote]) as 'HCAHPS Answer Percent Footnote'
    , max([Patient Survey Star Rating]) as 'Patient Survey Star Rating'
    , max([Patient Survey Star Rating Footnote]) as 'Patient Survey Star Rating
      Footnote'
    , max([HCAHPS Linear Mean Value]) as 'HCAHPS Linear Mean Value'
    , max([Measure Start Date]) as 'Measure Start Date'
  FROM HCAHPS_Hospital_RAW
  GROUP BY RELEASEDATE, [HCAHPS MEASURE ID], [PROVIDER ID]

```

GO

```

/**Use Import/Export Wizard to move HospReleaseMeasureTrans data into
  HOSP_RELEASE_MEASURE **/

```

```

CREATE TABLE NAT_RELEASE_MEASURE
( [ReleaseDate] [date] NOT NULL
, [HCAHPS Measure ID] [varchar](50) NOT NULL
, [HCAHPS Answer Percent] [varchar](50) NULL
, [Measure Start Date] Date NOT NULL
, [Footnote] [varchar](500) NULL
, PRIMARY KEY (ReleaseDate, [HCAHPS Measure ID])
);

```

```

ALTER TABLE NAT_RELEASE_MEASURE
  ADD CONSTRAINT FK_NRM_MID FOREIGN KEY ([HCAHPS Measure ID])
    REFERENCES MEASURE ([HCAHPS Measure ID])
;

```



```
ALTER TABLE NAT_RELEASE_MEASURE
    ADD CONSTRAINT FK_NRM_MSD FOREIGN KEY ([Measure Start Date])
    REFERENCES MEASURE_RANGE ([Measure Start Date])
    ;
```

GO

```
CREATE VIEW NatReleaseTrans AS
    SELECT DISTINCT ReleaseDate
    , [HCAHPS Measure ID]
    , max([HCAHPS Answer Percent]) as 'HCAHPS Answer Percent'
    , max([Measure Start Date]) as 'Measure Start Date'
    , max([Footnote]) as 'Footnote'
    FROM HCAHPS_National_RAW
    GROUP BY ReleaseDate, [HCAHPS Measure ID]
```

GO

/**Use Import/Export Wizard to move NatReleaseTrans data into NAT_RELEASE_MEASURE **/ ↗

```
CREATE TABLE STATE_RELEASE_MEASURE
( [ReleaseDate] [date] NOT NULL
, [HCAHPS Measure ID] [varchar](50) NOT NULL
, [HCAHPS Answer Percent] [varchar](50) NULL
, [STATE] Char (2) NOT NULL
, [Measure Start Date] Date NOT NULL
, [Footnote] [varchar](500) NULL
, PRIMARY KEY
    (ReleaseDate
    , [HCAHPS Measure ID]
    , [STATE]
    )
);
```

```
ALTER TABLE STATE_RELEASE_MEASURE
    ADD CONSTRAINT FK_SRM_MID FOREIGN KEY ([HCAHPS Measure ID])
    REFERENCES MEASURE ([HCAHPS Measure ID])
    ;
```

```
ALTER TABLE STATE_RELEASE_MEASURE
    ADD CONSTRAINT FK_SRM_MSD FOREIGN KEY ([Measure Start Date])
    REFERENCES MEASURE_RANGE ([Measure Start Date])
    ;
```

```
ALTER TABLE STATE_RELEASE_MEASURE
    ADD CONSTRAINT FK_SRM_ST FOREIGN KEY ([State])
    REFERENCES STATE ([State])
    ;
```

GO

```
CREATE VIEW StateReleaseTrans AS
    SELECT DISTINCT ReleaseDate
    , [HCAHPS Measure ID]
    , [State]
```

```
, max([HCAHPS Answer Percent]) as 'HCAHPS Answer Percent'
, max([Measure Start Date]) as 'Measure Start Date'
, max([Footnote]) as 'Footnote'
FROM HCAHPS_State_RAW
GROUP BY ReleaseDate
        , [HCAHPS Measure ID]
        , [State]
;
```

```
/**Use Import/Export Wizard to move StateReleaseTrans data into STATE_RELEASE_MEASURE
**/
```

```
USE [HI661_HCAHPS_ForCS3]
```

```
GO
```

```
/** Create User Defined Function that returns text string(s)  
included between two text identifiers in a given text data**/
```

```
SET ANSI_NULLS ON
```

```
GO
```

```
SET QUOTED_IDENTIFIER ON
```

```
GO
```

```
CREATE FUNCTION [dbo].[funcPickIndetifiedStrings]
```

```
(@input varchar (max), @char varchar(1))
```

```
returns varchar(max)
```

```
AS
```

```
BEGIN
```

```
    DECLARE @output varchar (max)
```

```
    ;
```

```
    DECLARE @length int
```

```
    ;
```

```
    DECLARE @firstchar int
```

```
    ;
```

```
    DECLARE @secondchar int
```

```
    ;
```

```
    SET @firstchar = Charindex (@char, @input) ;
```

```
    IF @firstchar =0
```

```
        RETURN null
```

```
    ELSE
```

```
        SET @secondchar = Charindex (@char, @input,@firstchar+1)
```

```
        ;
```

```
        SET @length= (@secondchar-@firstchar-1)
```

```
        ;
```

```
        SET @output =substring(@input, @firstchar+1, @length)
```

```
        ;
```

```
    Declare @startingpoint varchar(max)
```

```
    ;
```

```
    Declare @output2 varchar(max)
```

```
    ;
```

```
    Declare @firstchar2 int
```

```
    ;
```

```
    Declare @secondchar2 int
```

```
    ;
```

```
    Declare @length2 int
```

```
    ;
```

```
    SET @startingpoint = substring(@input, @secondchar+1, (LEN(@input)-@secondchar))
```

```
    ;
```

```
    SET @firstchar2 = Charindex (@char, @startingpoint)
```

```
    ;
```

```
    IF @firstchar2 =0
```

```
        RETURN @output
```

```

ELSE
SET @secondchar2= CHARINDEX(@char,@startingpoint,@firstchar2+1)
;
SET @length2= (@secondchar2-@firstchar2-1)
;
SET @output2= SUBSTRING(@startingpoint, @firstchar2+1,@length2)
;
SET @output2 = CONCAT(@output, ',', @output2)
;
RETURN @output2
;
END

```

GO

```

--TEST FUNCTION- input ([expression @input], [delimiter character @char])
--This makes the function usable for more than just "

```

```

SELECT [HCAHPS Question], [dbo].[ funcPickIndetifiedStrings]([HCAHPS Question],''')
FROM Measure

```

/**Create stored procedure which creates views**/

USE [HI661_HCAHPS_ForCS3]

GO

CREATE PROCEDURE sp_CreateViews

AS

EXEC(

```

'Create View vwHCAHPS_CS2_Q1 AS
  SELECT DISTINCT [HCAHPS Measure ID]
    ,[HCAHPS Question]
  FROM MEASURE '
)

```

EXEC(

```

'Create View vwHCAHPS_CS2_Q2 AS
  SELECT DISTINCT m.[HCAHPS Measure ID]
    , m.[HCAHPS Question]
    , mr.[Measure Start Date]
    , mr.[Measure end date]
  FROM MEASURE m
    JOIN [dbo].[HOSP_RELEASE_MEASURE] hrm
      ON hrm.[HCAHPS Measure ID] = m.[HCAHPS Measure ID]
    JOIN MEASURE_RANGE mr
      ON mr.[Measure Start Date] = hrm.[Measure Start Date]'
)

```

/****** Additional Queries included in Appendix*****/

EXEC(

```

'Create View vwHCAHPS_CS2_Q3 AS
  SELECT Distinct p.[Provider ID], p.[Hospital Name]
  FROM [dbo].[PROVIDER_INFO] P
    JOIN [dbo].[HOSP_RELEASE_MEASURE] HRM

```

```

        ON p.[Provider ID] = HRM.[Provider ID]
    JOIN [dbo].[HOSPITAL_RELEASE] HR
        ON HR.ReleaseDate = HRM.ReleaseDate
        AND HR.[Provider ID]= HRM.[Provider ID]
    WHERE HRM.[Measure Start Date] IS NOT NULL
    ORDER BY [Provider ID]'
);

```

--Add column to table to indicate date sequence order

```

ALTER TABLE [dbo].[MEASURE_RANGE] ADD seq INT
GO

```

```

DECLARE @id INT
SET @id = 0
UPDATE MEASURE_RANGE
SET @id = seq = @id + 1
GO

```

--check

```

SELECT *
FROM MEASURE_RANGE
GO

```

/*List "HCAHPS Answer Percent" for each provider per question per measure date range.*/

```

USE [HI661_HCAHPS_ForCS3]
GO

```

```

CREATE PROCEDURE sp_CreateViews_2 AS
BEGIN
EXEC('

```

```

    CREATE VIEW vwHCAHPS_CS2_Q4_1 AS
    SELECT DISTINCT [Provider ID]
        , [HCAHPS Measure ID]
        , [HCAHPS Answer Percent]
        , HRM.[Measure Start Date]
        , [Measure End Date]
        , seq
        , seq-1 as seq2
    FROM HOSP_RELEASE_MEASURE HRM
        JOIN MEASURE_RANGE MR
            ON HRM.[Measure Start Date]= MR.[Measure Start Date]
    WHERE isnumeric(HRM.[HCAHPS Answer Percent])=1
    ')

```

--view for only increased answer percent values

```

EXEC('
    CREATE VIEW vwHCAHPS_CS2_Q4_2 AS
    SELECT DISTINCT t1.[Provider ID]
        , t1.[HCAHPS Measure ID]
        , t1.[HCAHPS Answer Percent]
        , t1.[Measure Start Date]
        , t1.[Measure End Date]
    FROM vwHCAHPS_CS2_Q4_1 t1

```



```

        , vwHCAHPS_CS2_Q4_1 t2
      WHERE t1.[Provider ID]=t2.[Provider ID]
            AND t1.[HCAHPS Measure ID] = t2.[HCAHPS Measure ID]
            AND t1.seq2= t2.seq
            AND t1.[HCAHPS Answer Percent]>t2.[HCAHPS Answer Percent]
    ')
--view to case record if it exists in the view for the increased answer percent values

EXEC('
CREATE View vwHCAHPS_CS2_Q4_3 AS
SELECT *,
Case
    WHEN EXISTS (
        SELECT * FROM vwHCAHPS_CS2_Q4_2)
    THEN 1
    ELSE 0
END AS HasIncreased
FROM vwHCAHPS_CS2_Q4_1
')
END
;

/**Creating tables to analyze results for best/worst performing
providers/states or measures, for which hospitals do best/worst.**/

CREATE TABLE #TBL1(
ID INT identity (1,1) PRIMARY KEY NOT NULL, [Provider ID] [varchar](50) NULL,
[HCAHPS Measure ID] [varchar](50) NULL, [HCAHPS Answer Percent] [varchar](50) NULL,
[Measure Start Date] [date] NULL,
[Measure End Date] [date] NULL, Seq int null, Seq2 as Seq-1, hasimproved int null);

GO

INSERT INTO #Tbl1 ([Provider ID], [HCAHPS Measure ID],[HCAHPS Answer Percent],[Measure
Start Date], [Measure End Date], seq)
SELECT DISTINCT [Provider ID], [HCAHPS Measure ID],[HCAHPS Answer Percent],HRM.
[Measure Start Date], [Measure End Date], seq
FROM HOSP_RELEASE_MEASURE HRM
JOIN MEASURE_RANGE MR
ON HRM.[Measure Start Date]= MR.[Measure Start Date];

GO

UPDATE #Tbl1
set hasimproved = '1'
where [Provider ID] LIKE '4%'
;

--Providers with the most improved measures
SELECT p.[Provider ID], p.[Hospital Name], Count(HasImproved) as NumofImprovedMsrs
FROM #TBL1 t JOIN PROVIDER_INFO p on p.[Provider ID]=t.[Provider ID]
WHERE hasimproved = '1'

```

```

Group by p.[Provider ID], p.[Hospital Name]
Order by NumofImprovedMsrs DESC
;

```

```
--By state
```

```

SELECT p.[Provider ID], p.[Hospital Name], [STATE], Count(HasImproved) as
    NumofImprovedMsrs
FROM #TBL1 t JOIN PROVIDER_INFO p on p.[Provider ID]=t.[Provider ID] WHERE hasimproved
    = '1'
Group by p.[Provider ID], p.[Hospital Name], p.[State] Order by p.[state],
    NumofImprovedMsrs DESC
;

```

```
-- Top measures improved by state, then measure
```

```

SELECT t.[HCAHPS Measure ID], [STATE], Count(HasImproved) as NumofImprovedMsrs FROM
    #TBL1 t JOIN PROVIDER_INFO p on p.[Provider ID]=t.[Provider ID]
WHERE hasimproved = '1'
Group by t.[HCAHPS Measure ID], p.[Hospital Name], p.[State]
Order by NumofImprovedMsrs DESC, p.[state], [HCAHPS Measure ID]
;

```

```
--Top measures improved, overall
```

```

SELECT p.[Provider ID], p.[Hospital Name], Count(HasImproved) as NumofImprovedMsrs
FROM #TBL1 t JOIN PROVIDER_INFO p on p.[Provider ID]=t.[Provider ID] WHERE hasimproved
    = '1'
Group by p.[Provider ID], p.[Hospital Name]
Order by NumofImprovedMsrs DESC
;

```

```
--Drop sequence column
```

```
ALTER TABLE MEASURE_RANGE DROP COLUMN Seq
```

```
--Gives number of date ranges each measure is included in and the first and last range
```

```

SELECT m.[HCAHPS Measure ID]
    , m.[HCAHPS Question]
    , Count (DISTINCT mr.[Measure Start Date]) as 'DtRangesInc'
    , MAX(mr.[measure start date]) 'Most Recent Date'
    , MIN(mr.[measure start date]) 'First Date'
FROM MEASURE m
    JOIN [dbo].[HOSP_RELEASE_MEASURE] hrm
        ON hrm.[HCAHPS Measure ID] = m.[HCAHPS Measure ID]
    JOIN MEASURE_RANGE mr
        ON mr.[Measure Start Date] = hrm.[Measure Start Date]
GROUP BY m.[HCAHPS Measure ID], m.[HCAHPS Question]
ORDER BY 'DtRangesInc', m.[HCAHPS Measure ID]

```

```
--Show all measure ranges
```

```

SELECT DISTINCT *
FROM MEASURE_RANGE
ORDER BY [Measure Start Date]

```

---Showing changes between measure ranges

--Variables refer to Measure Start Date with Date 2 being after Date 1

```
Declare @date1 date
Declare @date2 date
SET @date1 = '2013-07-01'
SET @Date2 = '2013-10-01'
```

--Shows measures present in date 1, but not date 2

```
SELECT DISTINCT DT1.[HCAHPS Measure ID] 'MID Removed', DT1.[Measure Start Date]
FROM (
    SELECT m.[HCAHPS Measure ID], mr.[Measure Start Date]
    FROM MEASURE m
        JOIN [dbo].[HOSP_RELEASE_MEASURE] hrm
            ON hrm.[HCAHPS Measure ID] = m.[HCAHPS Measure ID]
        JOIN MEASURE_RANGE mr
            ON mr.[Measure Start Date] = hrm.[Measure Start Date]
    WHERE mr.[Measure Start Date] = @date1) as DT1
WHERE DT1.[HCAHPS Measure ID] NOT IN(
    SELECT m.[HCAHPS Measure ID]
    FROM MEASURE m
        JOIN [dbo].[HOSP_RELEASE_MEASURE] hrm
            ON hrm.[HCAHPS Measure ID] = m.[HCAHPS Measure ID]
        JOIN MEASURE_RANGE mr
            ON mr.[Measure Start Date] = hrm.[Measure Start Date]
    WHERE mr.[Measure Start Date] = @date2)
```

--shows measures present in date 2, but not date 1

```
SELECT DISTINCT DT2.[HCAHPS Measure ID] 'MID Added', DT2.[Measure Start Date]
FROM (
    SELECT m.[HCAHPS Measure ID], mr.[Measure Start Date]
    FROM MEASURE m
        JOIN [dbo].[HOSP_RELEASE_MEASURE] hrm
            ON hrm.[HCAHPS Measure ID] = m.[HCAHPS Measure ID]
        JOIN MEASURE_RANGE mr
            ON mr.[Measure Start Date] = hrm.[Measure Start Date]
    WHERE mr.[Measure Start Date] = @date2) as DT2
WHERE DT2.[HCAHPS Measure ID] NOT IN
(
    SELECT m.[HCAHPS Measure ID]
    FROM MEASURE m
        JOIN [dbo].[HOSP_RELEASE_MEASURE] hrm
            ON hrm.[HCAHPS Measure ID] = m.[HCAHPS Measure ID]
        JOIN MEASURE_RANGE mr
            ON mr.[Measure Start Date] = hrm.[Measure Start Date]
    WHERE mr.[Measure Start Date] = @date1
)
```

/**Showing Descrepancies in Question, ID, or Description by comparing the number of distinct values for each**/

```
SELECT DISTINCT COUNT (*) 'DistinctTotalMeasures'
, COUNT ([HCAHPS Measure ID]) 'DistinctIDs'
, COUNT ([HCAHPS Question]) 'DistinctQuestions'
, COUNT ([HCAHPS Answer Description]) 'DistinctDescriptions'
FROM MEASURE
```