DAX and Measures

1. Total Hospitals by State =

```
CALCULATE(DISTINCTCOUNT('Hospital_General_Information'[Facility ID]),
    ALLEXCEPT('Hospital_General_Information', 'Hospital_General_Information'[State]))
```

2. Total Counties = DISTINCTCOUNT('Dim_County'[County/Parish])

3. Total Hospital Types = DISTINCTCOUNT('Dim_HospitalType'[Hospital Type])

4. Total Ownership Types = DISTINCTCOUNT('Dim_Ownership'[Hospital Ownership])

5. Total States = DISTINCTCOUNT('Dim_State'[State])

6. % Birthing Friendly = DIVIDE([Hospitals Birthing Friendly], [Total Hospitals], 0)

7. % Emergency Services = DIVIDE([Hospitals with Emergency], [Total Hospitals], 0)

8. % Emergency Services = DIVIDE([Hospitals with Emergency], [Total Hospitals], 0)

9. % MORT Better = DIVIDE(SUM('Hospital_General_Information'[Count of MORT Measures Better]),SUM('Hospital_General_Information'[Count of Facility MORT Measures]), 0)

10. % MORT No Different = DIVIDE(SUM('Hospital_General_Information'[Count of MORT Measures No Different]),SUM('Hospital_General_Information'[Count of Facility MORT Measures]),0)

11.% MORT Worse = DIVIDE(SUM('Hospital_General_Information'[Count of MORT Measures Worse]),SUM('Hospital_General_Information'[Count of Facility MORT Measures]),0)

12. same Dax created FOR- % READM Better, % READM No Different, % READM Worse

13. same Dax created FOR- % Safety Better , % Safety No Different, % Safety Worse

14. Count High-Performing =

```
VAR threshold = SELECTEDVALUE('Rating Threshold'[Rating Threshold], 4)
RETURN CALCULATE(DISTINCTCOUNT('Hospital_General_Information'[Facility ID]),
   'Hospital_General_Information'[Hospital overall rating] >= threshold)
```

15. Hospitals Birthing Friendly =

```
CALCULATE(COUNTROWS('Hospital_General_Information'),
   'Hospital_General_Information'[Meets criteria for birthing friendly designation] = "Y")
```

16. Hospitals with Emergency = CALCULATE(COUNTROWS('Hospital_General_Information'),'Hospital_General_Information'[Emergency Services] = "Yes")

17. Hospitals with Rating = CALCULATE([Total Hospitals],NOT(ISBLANK('Hospital_General_Information'[Hospital overall rating])))

18. Total Hospitals = COUNTROWS('Hospital_General_Information')

19. Total TE Measures Reported =

SUM('Hospital_General_Information'[Count of Facility TE Measures])

20. Total PtExp Measures Reported =

SUM('Hospital_General_Information'[Count of Facility Pt Exp Measures])

21. Rating Threshold = GENERATESERIES(1, 5, 1)

22. Rating Threshold Selected = SELECTEDVALUE('Rating Threshold'[Rating Threshold],4)

23. Rating Threshold Value = SELECTEDVALUE('Rating Threshold'[Rating Threshold], 4)

24. Measure Improvement % = GENERATESERIES(0, 100, 5)

25. Measure Improvement % Value = SELECTEDVALUE('Measure Improvement %'[Measure Improvement %], 10)

26. Measure Improvement Fraction = DIVIDE([Measure Improvement % Value], 100, 0)

27. High-Performing % (Scenario) = SWITCH(

SELECTEDVALUE(Scenarios[Scenario]),

"Current", [High-performing % (Current)],

"Projected", [Projected % High-Performing],BLANK())

28. Total States = DISTINCTCOUNT('State'[State])

29. Avg Hospital Rating =

AVERAGE('Hospital_General_Information'[Hospital overall rating])

30. BETTER = IF(Perf_Long[Percentage]>3,TRUE())

31. % High-Performing = VAR threshold = SELECTEDVALUE('Rating Threshold'[Rating Threshold], 4)VAR total = DISTINCTCOUNT('Hospital_General_Information'[Facility ID])

VAR high =CALCULATE(DISTINCTCOUNT('Hospital_General_Information'[Facility ID]),

ALLSELECTED('Hospital_General_Information'),'Hospital_General_Information'[Hospital overall rating] >= threshold) RETURN DIVIDE(high, total)

32. Average % Better (3 Categories) =

```
VAR mort   = 'Hospital_General_Information'[% MORT Better]
VAR safety = 'Hospital_General_Information'[% Safety Better]
VAR readm  = 'Hospital_General_Information'[% READM Better]
RETURN DIVIDE(mort + safety + readm, 3)
```

33.Average % Worse (3 Categories) =

```
VAR mort   = 'Hospital_General_Information'[% MORT Worse]
VAR safety = 'Hospital_General_Information'[% Safety Worse]
VAR readm  = 'Hospital_General_Information'[% READM Worse]
RETURN DIVIDE(mort + safety + readm, 3)
```

34. Projected % Safety Better =

```
VAR shiftPct = SELECTEDVALUE('Measure Improvement'[Measure Improvement], 10) / 100
VAR moveToBetter = SELECTEDVALUE('Move To Better'[Move To Better], 0.5)
RETURN
AVERAGEX(
  VALUES('Hospital_General_Information'[Facility ID]),
  VAR worse = COALESCE('Hospital_General_Information'[% Safety Worse], 0)
  VAR better = COALESCE('Hospital_General_Information'[% Safety Better], 0)
  VAR moved = worse * shiftPct
  RETURN better + moved * moveToBetter)
```

35. Projected % Safety Better (X) = VAR baseBetter = [% Safety Better]

```
VAR baseWorse  = [% Safety Worse]
VAR improvementPct = MAX( ImprovementScenarios[Value] ) / 100
VAR improved = baseWorse * improvementPct
RETURN
baseBetter + improved9
```

What-If Analysis:

1. Creating the two What-If Parameters

Modeling → New Parameter → Numeric Range

Created What-If Parameters for:

1. Rating Threshold – With Min 1, Max 5 and Increment 1
2. Measure Improvement % – With Min 0, Max 100 and Increment 5

Now, these two tables are added in the model.

2. Basic parameter helper measures

Modeling → New Measure

Rating Threshold Selected = SELECTEDVALUE('Rating Threshold'[Rating Threshold Value], 4)

Measure Improvement Fraction = DIVIDE([Measure Improvement % Value], 100, 0)

Added Card Visuals for 'Rating Threshold Value' and 'Measure Improvement Fraction'

Added the slicers for Rating Threshold and Measure Improvement %

3. Core "current" measures

Below Measures are created:

1.

Total Hospitals = COUNTROWS('Hospital_General_Information')

2.

```
High-Performing Hospitals (Current) =
CALCULATE(
   COUNTROWS ('Hospital_General_Information'),
   FILTER('Hospital_General_Information','Hospital_General_Information'[Hospital overall rating] >= [Rating Threshold Value]))
```

3. Percentage of hospitals that meet or exceed the threshold

High-Performing % (Current) = DIVIDE ([High-Performing Hospitals (Current)], [Total Hospitals], 0)

4. Projected Safety measures

Below Measures are created:

1. Projected Safety Better (count) =
   SUM ('Hospital_General_Information'[Count of Safety Measures Better])
   + SUM ('Hospital_General_Information'[Count of Safety Measures Worse]) * [Measure Improvement Fraction]

2. Projected % Safety Better =
   DIVIDE (
   [Projected Safety Better (count)],
   SUM('Hospital_General_Information'[Count of Facility Safety Measures]),
   0
)

3. Projected READM Better (count) =
   SUM ('Hospital_General_Information'[Count of READM Measures Better])
   + SUM ('Hospital_General_Information'[Count of READM Measures Worse]) * [Measure Improvement Fraction]

4. Projected % READM Better =
   DIVIDE (
   [Projected READM Better (count)],
   SUM('Hospital_General_Information'[Count of Facility READM Measures]), 0
)
5. Average across Safety & READM

   Projected Avg % Better (Safety & READM) =
   DIVIDE ([Projected % Safety Better] + [Projected % READM Better], 2, 0)

5. Projecting number of High-Performing hospitals

A) Hospitals just below the Threshold

```
Hospitals at (Threshold - 1) =
VAR thresh = [Rating Threshold Value]
RETURN
CALCULATE (COUNTROWS ( 'Hospital_General_Information' ),
'Hospital_General_Information'[Hospital overall rating] = thresh - 1)
```

B) Projected High-Performing Hospitals

```
Projected High-Performing Hospitals =
[High-Performing Hospitals (Current)]
+ ROUND (
   [Hospitals at (Threshold - 1)] * [Measure Improvement Fraction],
   0
)
```

C) Projected % High-Performing

```
Projected % High-Performing =
DIVIDE ( [Projected High-Performing Hospitals], [Total Hospitals], 0 )
```