SQL SERVER 2016 Project

Covid-19 pandemic tracking

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Project Scenario

You have to design a database normalized to 3NF based on the description below.

A company is working on Covid-19 infection statics only in greater Dhaka. They divided Dhaka into 11 areas and 3 zones – red, green and yellow.
Red zone – critical area, COVID-19 cases are high
Yellow zone – warning level, COVID-19 cases are increasing.
Green zone – normal level, COVID-19 cases are low

They want to store daily basis (for each zone) the following information –
New case, death case and cured cases
Each area may be changed to different zone based in rules and a trail is kept in detail for the changes

A sample data is available for better understanding
Zone record

Zone	**Area**
Red	Mirpur, Mohammedpur, Old Dhaka, Uttara, Gazipur
Yellow	Gulshan, Dhanmondi, Motijheel,
Green	Sutrapur, Nobabgonj, Keranigonj

Covid-19 Area wise daily record

Date	Zone	New Case	Death	Cured
2020-12-01	Mirpur	55	21	11
2020-12-01	Motijheel	23	4	2

Zone changes track

Area	Zone	Update date
Mirpur	Green	2020-07-01
Mirpur	Yellow	2020-09-02
Mirpur	Red	2020-11-07

Some key implementation requirements:

- An area is initially set to green zone
- Every Sunday, an automatic review is done. An area automatically goes into yellow zone if average of new cases in last seven 4 or more. An area automatically goes into yellow zone if average of new cases in last seven 7 or more
- A procedure way to get cases records of an area/zone in a date range