🗃️ How many patients are in the collection?

db.Patient.countDocuments( )

55500

📅 List all patients admitted after January 1, 2023.

db.Patient.find({

  "Date of Admission": { $gt: new Date("01/01/2023") }

})

```
{
  _id: ObjectId('683dc9c33d311a04350f96b6'),
  Name: 'Bobby JacksOn',
  Age: 30,
  Gender: 'Male',
  'Blood Type': 'B-',
  'Medical Condition': 'Cancer',
  'Date of Admission': '31/01/2024',
  Doctor: 'Matthew Smith',
  Hospital: 'Sons and Miller',
  'Insurance Provider': 'Blue Cross',
  'Billing Amount': 18856.281305978155,
  'Room Number': 328,
  'Admission Type': 'Urgent',
  'Discharge Date': '02/02/2024',
  Medication: 'Paracetamol',
  'Test Results': 'Normal'
}
```

....

🧓 How many patients:

Are older than 50?

db.Patient.aggregate([

  { $match: { Age: { $gt: 50 } } },

{ $count: "Are older than 50?" }

])

>> 'Are older than 50?': 28667

Have the first name "Thomas"?

db.Patient.aggregate([

 {

   $match: {

     Name: { $regex: "Thomas", $options: "i" } }},

 {$count: "nombre_apparitions"}]);

>> nombre_apparitions: 731

Per each distinct Medical Condition?

db.Patient.aggregate([

 {

   $group: {

    _id: "$Medical Condition",

    count: { $sum: 1 }

   }

 }

```
‹ {
    _id: 'Hypertension',
    count: 9245
  }
  {
    _id: 'Diabetes',
    count: 9304
  }
  {
    _id: 'Asthma',
    count: 9185
  }
  {
    _id: 'Obesity',
    count: 9231
  }
  {
    _id: 'Arthritis',
    count: 9308
  }
  {
    _id: 'Cancer',
    count: 9227
  }
```

💊 **What is the frequency of usage for each Medication?**

```
db.Patient.aggregate([
  { $group: { _id: "$Medication",count: { $sum: 1 }}},
  {$setWindowFields: { output: {total: { $sum: "$count" }}}},
  {$project: {medication: "$_id",count: 1,
frequency: {$multiply: [{ $divide: ["$count", "$total"] },
      100]}}},{ $sort: { frequency: -1 }}])
```

```
    _id: 'Lipitor',
    count: 11140,
    medication: 'Lipitor',
    frequency: 20.07207207207207
  }
  {
    _id: 'Ibuprofen',
    count: 11127,
    medication: 'Ibuprofen',
    frequency: 20.048648648648648
  }
  {
    _id: 'Aspirin',
    count: 11094,
    medication: 'Aspirin',
    frequency: 19.989189189189187
  }
  {
    _id: 'Paracetamol',
    count: 11071,
    medication: 'Paracetamol',
    frequency: 19.947747747747748
  }
  {
    _id: 'Penicillin',
    count: 11068,
    medication: 'Penicillin',
    frequency: 19.942342342342343
```

🔍 Retrieve all patients currently taking "Lipitor".

db.Patient.aggregate([

  { $match: { Medication: 'Lipitor' } }

])

```
 _id: ObjectId('683dc9c33d311a04350f96c1'),
 Name: 'aaRon MARtiNeZ',
 Age: 38,
 Gender: 'Female',
 'Blood Type': 'A-',
 'Medical Condition': 'Hypertension',
 'Date of Admission': '13/08/2023',
 Doctor: 'Douglas Mayo',
 Hospital: 'Lyons-Blair',
 'Insurance Provider': 'Medicare',
 'Billing Amount': 7999.586879604188,
 'Room Number': 288,
 'Admission Type': 'Urgent',
 'Discharge Date': '05/09/2023',
 Medication: 'Lipitor',
 'Test Results': 'Inconclusive'


 _id: ObjectId('683dc9c33d311a04350f96c3'),
 Name: 'rObeRt bAuer',
 Age: 68,
 Gender: 'Female',
 'Blood Type': 'AB+',
 'Medical Condition': 'Asthma',
 'Date of Admission': '22/05/2020',
 Doctor: 'Theresa Freeman',
 Hospital: 'Rivera-Gutierrez',
 'Insurance Provider': 'UnitedHealthcare',
```

```
{
  _id: ObjectId('683dc9c33d311a04350f96c3'),
  Name: 'rObeRt bAuer',
  Age: 68,
  Gender: 'Female',
  'Blood Type': 'AB+',
  'Medical Condition': 'Asthma',
  'Date of Admission': '22/05/2020',
  Doctor: 'Theresa Freeman',
  Hospital: 'Rivera-Gutierrez',
  'Insurance Provider': 'UnitedHealthcare',
  'Billing Amount': 33207.706633729606,
  'Room Number': 309,
  'Admission Type': 'Urgent',
  'Discharge Date': '19/06/2020',
  Medication: 'Lipitor',
  'Test Results': 'Normal'
}
```

...