Bp Premier

# SUMMIT 2025

## Please take a seat, your session starts soon.

## Acknowledgement of Country

Best Practice Software acknowledges the Traditional Custodians of Country throughout Australia and recognise their unique cultural and spiritual relationships to the land, waters, and seas and their rich contribution to society. We pay our respects to ancestors and Elders, past, present, and emerging.

Best Practice Software respects Māori as the tangata whenua and Treaty of Waitangi partners in Aotearoa New Zealand.

Right: Ginmine design from corner, radiating outwards.
Designed for the Bp Bundaberg Operations Hub Mural Project, 2021

Artist: Nicole Wone

Addresses themes of: Evolution – Adaptation of Universe and traditional Indigenous beliefs across the globe.

Beginning of time, darkness. Movement in the cosmos. Rainbow Serpent – Creation being. Ancestral lineage without our DNA

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Complex SQL Queries and Reports
Scott Everist

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# Complex SQL Queries and Reports

## Scott Everist

Scott Everist is a seasoned professional with over 13 years of experience at Best Practice. In recent years, Scott has transitioned into a management role in Service Quality. Here, he focuses on data analysis, quality assurance, and ensuring the best outcomes possible for the Customer Support Group.

His analytical skills and attention to detail have been instrumental in driving improvements and maintaining high standards.

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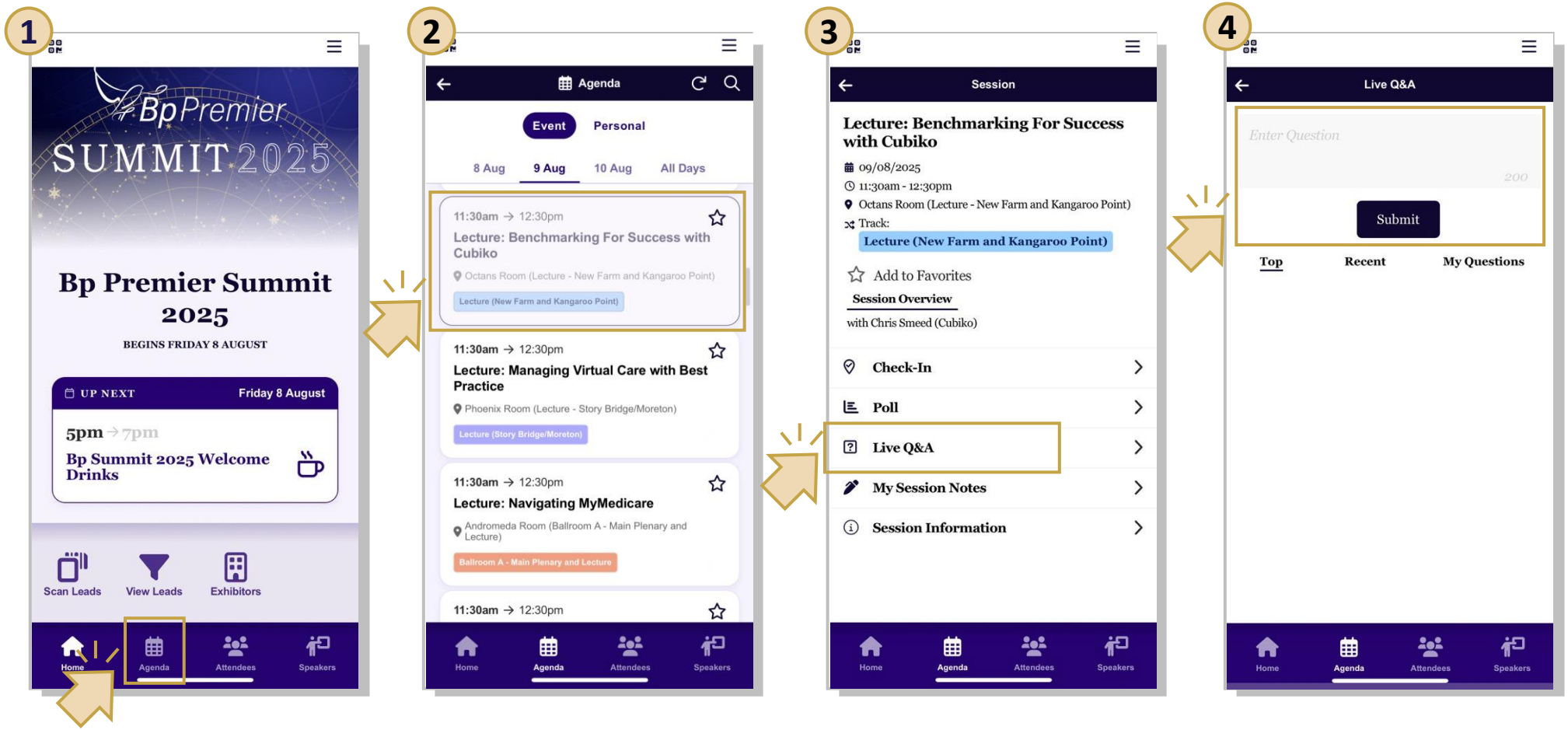
# Ask any questions using The Event App

**Download the app**
**By scanning the QR code**

The EVENTAPP



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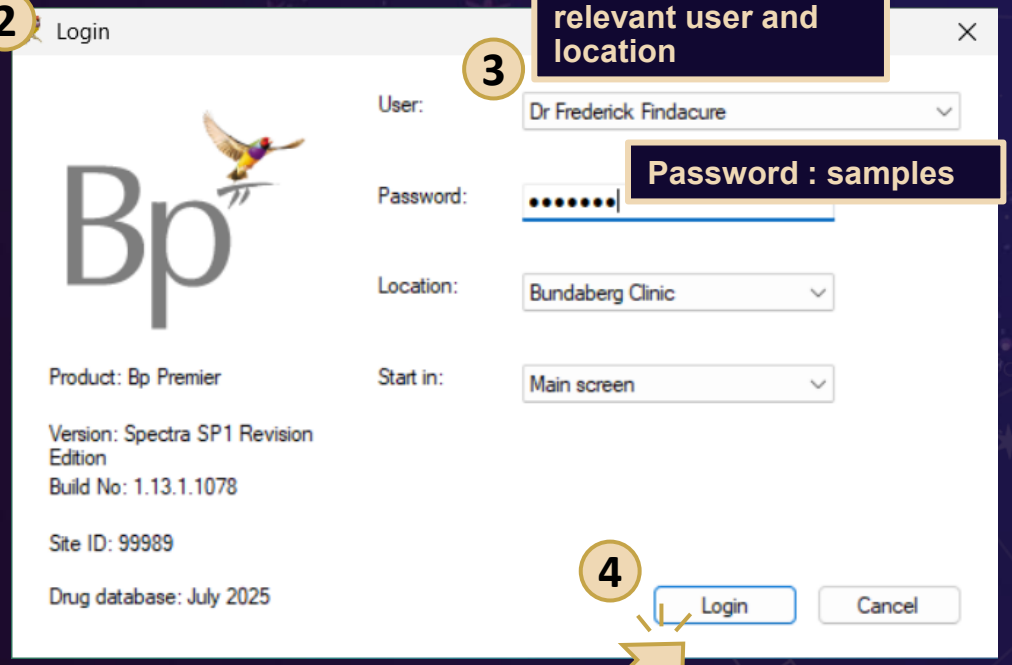
# Login to Bp Premier

1

Best Practice

2

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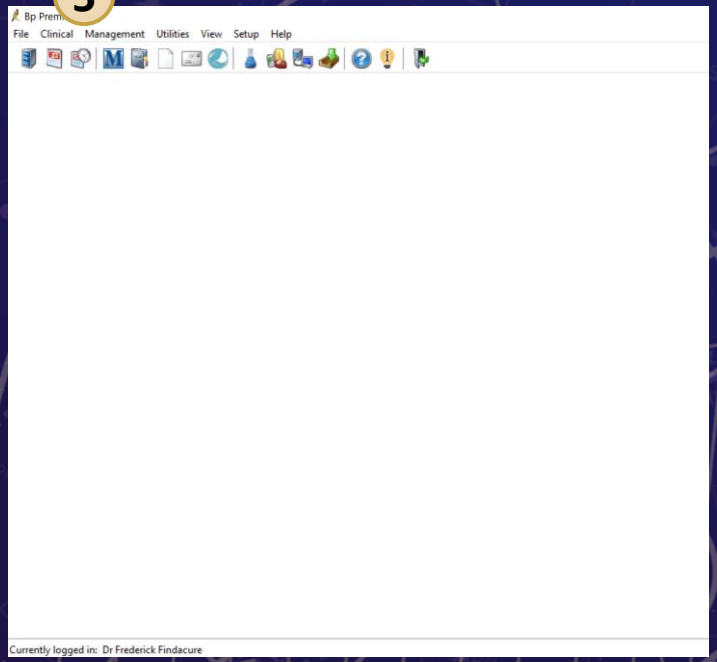

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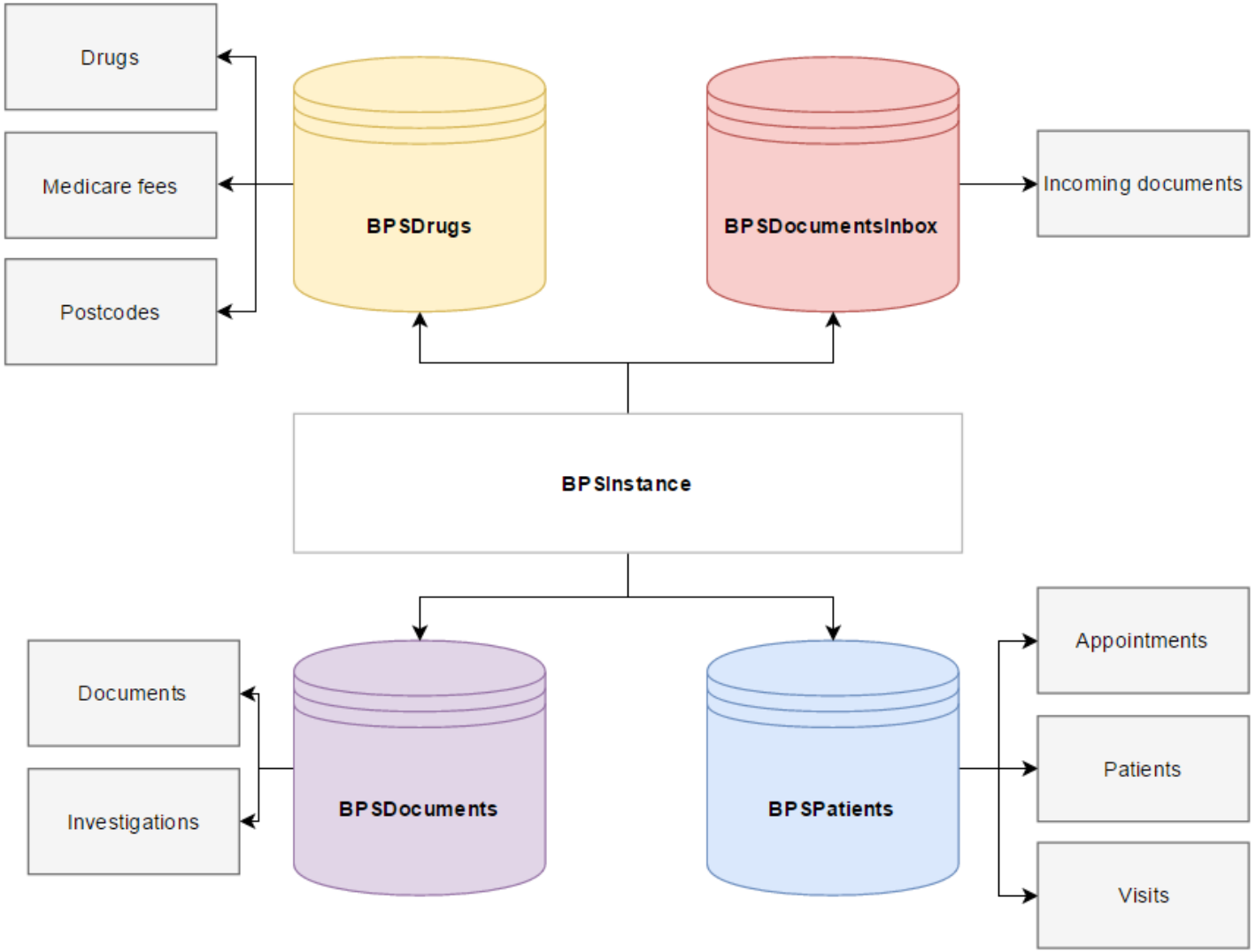
# Agenda

- Database overview
- SQL basics
- Overview of the utilities available to query the database
  - Bp Browser
  - Database Search
  - Bp Reporting Tool
- Example queries and exercises
- Q&A

# Database Overview



# Table Structure

| InternalID | RecordStatus | FirstName | Surname | Created | CreatedBy | Updated | UpdatedBy |
|---|---|---|---|---|---|---|---|
| 1 | 1 | Kathleen | Aalbrecht | 2012-01-30 | 11 | 2025-07-19 | 1 |
| 2 | 1 | Alan | Abbott | 2012-01-30 | 5 | NULL | NULL |
| 3 | 0 | Maree | Ackerman | 2012-02-01 | 4 | 2025-02-10 | 5 |
| 4 | 1 | Felix | Adams | 2012-02-01 | 7 | 2025-08-05 | 6 |

- First column is the primary key which is a unique identifier for that record
- Most tables will have the following columns:
  - RecordStatus – Indicates the status of the record. Generally 1 is active and 0 is deleted
  - Created – The date and time the record was created
  - CreatedBy - The UserID of the user that created that record
  - Updated – The date and time the record was last updated
  - UpdatedBy – The UserID of the user that last updated the record

# Table Relationships

| InternalID | FirstName | Surname | CreatedBy |
|---|---|---|---|
| 1 | Kathleen | Aalbrecht | 11 |
| 2 | Alan | Abbott | 6 |

**Patients**

| RecordID | InternalID | UserID | Appointment Date |
|---|---|---|---|
| 1 | 2 | 5 | 2025-01-01 |
| 2 | 5 | 5 | 2025-01-02 |

**Appointments**

| UserID | FirstName | Surname |
|---|---|---|
| 5 | Frederick | Findacure |
| 6 | Ivor | Cure |

**Users**

- Foreign keys are used to link tables by referencing the primary key of the related table.
- This helps reduce duplicate data.

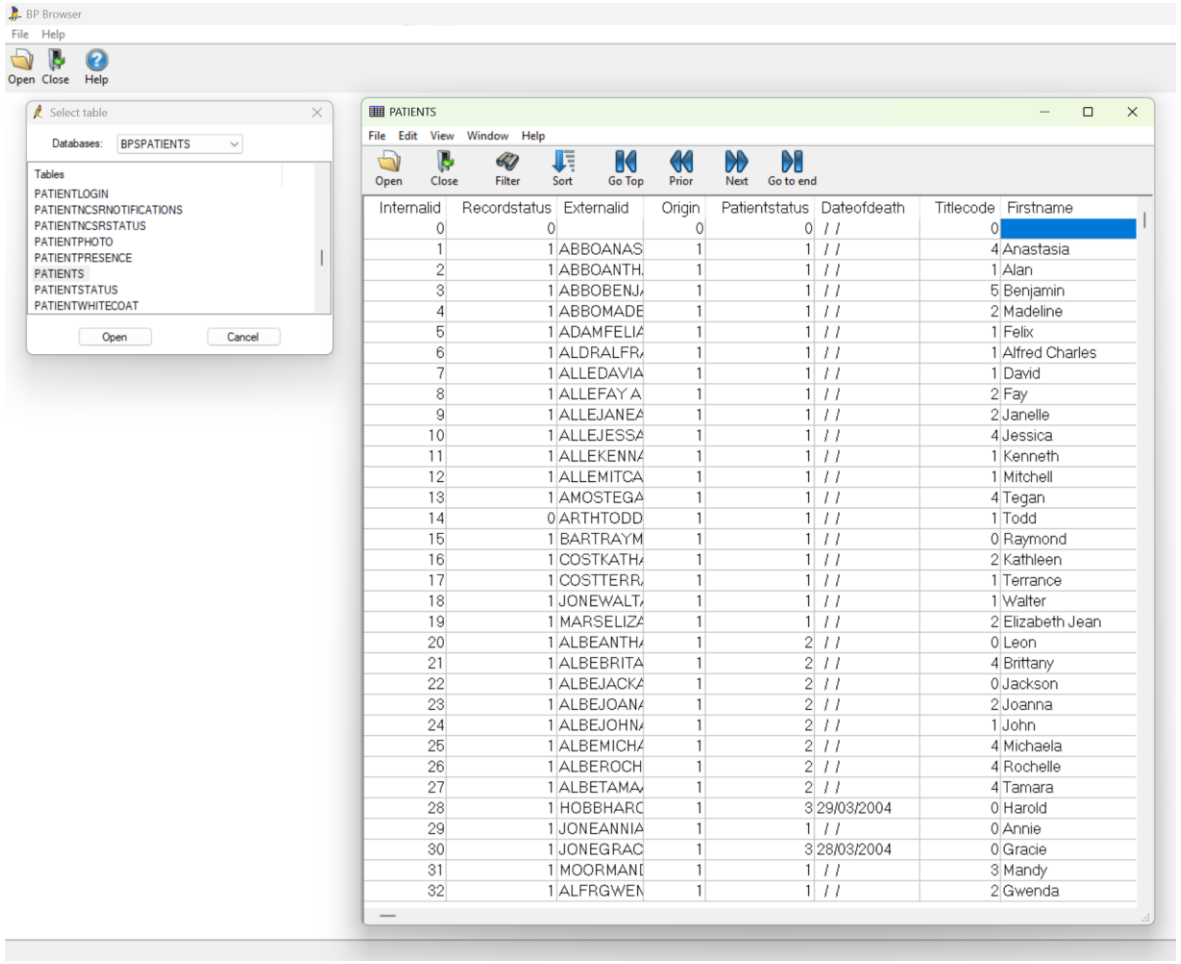
Alan Abbott's patient record was created by Ivor Cure and he has an appointment on 1st January with Dr Findacure

# Bp Browser

The Bp Browser provides a basic read-only view of the data contained in your database.

**Useful for:**

- Viewing, filtering and sorting data
- Exporting bulk data to text or XML formats
- Viewing the tables and columns that make up the Bp Database which can be useful when building custom queries.




Requires ‘Allow Access’ to the ‘Bp Browser Access’ permission.

# Demo

# SQL Queries

- SQL is a language designed for accessing and manipulating databases.
- A SELECT statement is used to retrieve data from the database.
- Each statement, is made up of several clauses that help filter, sort and aggregate the data being retrieved.

| SQL clause | What it does | Required |
|---|---|---|
| SELECT | Lists the columns that will be retrieved<br>* selects all columns. | Yes |
| FROM | Lists the tables that contain the columns listed in the SELECT clause. This can be more then one. | Yes |
| WHERE | Specifies criteria that must be met by each record to be included in the results. | No |
| ORDER BY | Specifies how to sort the results. | No |
| GROUP BY | In a SQL statement that contains aggregate functions, lists columns that are not summarised in the SELECT clause. | Only if there are such fields |
| HAVING | In a SQL statement that contains aggregate functions, specifies conditions that apply to columns that are summarised in the SELECT statement. | No |

```
SELECT   *
FROM     BPS_Patients
WHERE    StatusText = 'Active'
ORDER BY Surname, Firstname
```

| | InternalID | ExternalID | StatusText | Title | Firstname | Middlename |
|---|---|---|---|---|---|---|
| 1 | 24634 | | Active | Mrs | Kathleen | |
| 2 | 24643 | | Active | Mrs | Kathleen | |
| 3 | 24652 | NULL | Active | | Wargle | |
| 4 | 24641 | | Active | Dr | Simon | |
| 5 | 24637 | | Active | Mr | Reuben | T |
| 6 | 24636 | NULL | Active | | Ichiban | |
| 7 | 24638 | | Active | Mr | Sam | A |

# Joining tables

| InternalID | FirstName | Surname | CreatedBy |
|---|---|---|---|
| 1 | Kathleen | Aalbrecht | 11 |
| 2 | Alan | Abbott | 6 |

**Patients**

| RecordID | InternalID | UserID | Appointment Date |
|---|---|---|---|
| 1 | 2 | 5 | 2025-01-01 |
| 2 | 5 | 5 | 2025-01-02 |

**Appointments**

| UserID | FirstName | Surname |
|---|---|---|
| 5 | Frederick | Findacure |
| 6 | Ivor | Cure |

**Users**

| RecordID | FirstName | Surname | Appointment Date | Doctor |
|---|---|---|---|---|
| 1 | Alan | Abbot | 2025-01-01 | Findacure |

```
SELECT   RecordID,
         p.FirstName,
         p.Surname,
         AppointmentDate,
         u.Surname AS Doctor
FROM     Patients p
         INNER JOIN Appointments a ON p.InternalID = a.InternalID
         INNER JOIN Users u ON a.UserID = u.UserID
WHERE    RecordID = 1
```

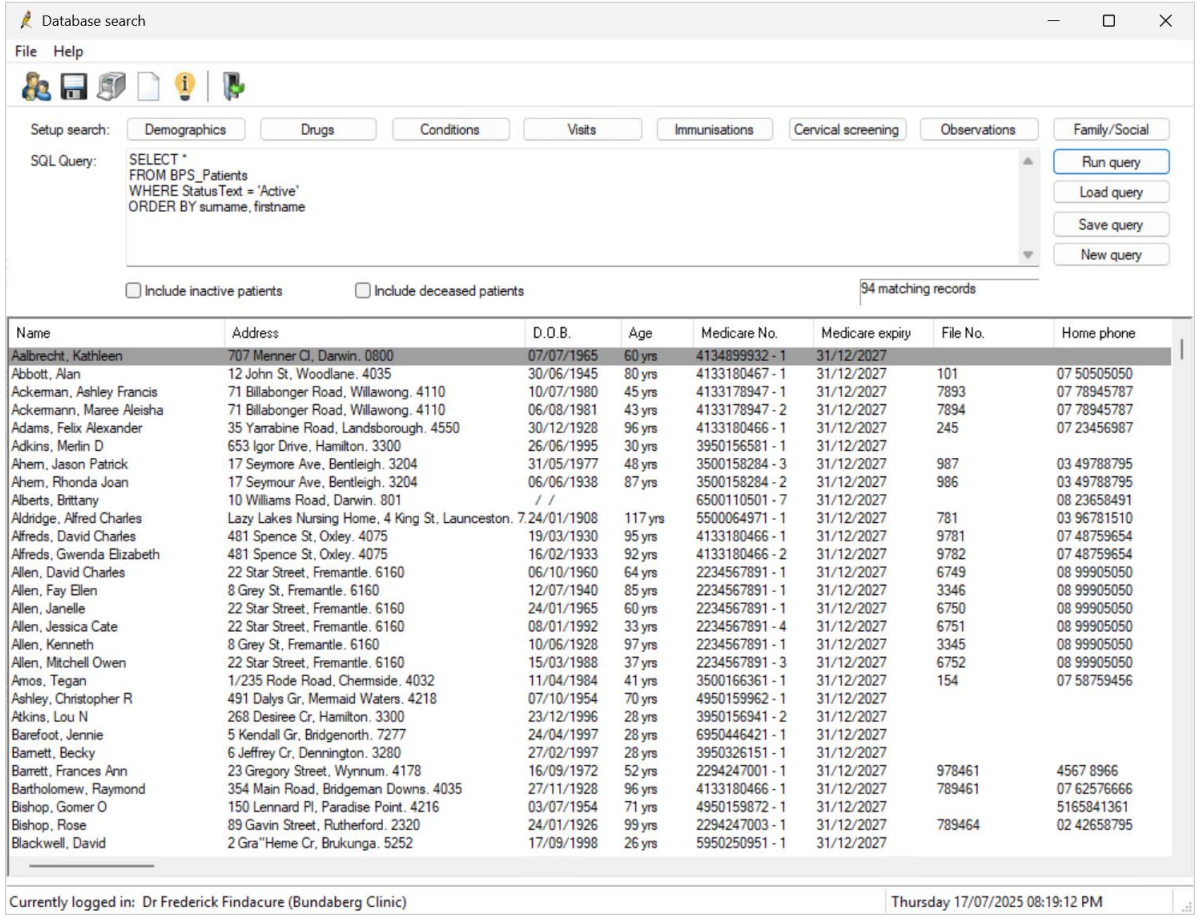
# Database Search

The Database Search feature allows the retrieval of a list of patients through either a user-friendly query builder or custom SQL query.

**Useful for:**

- Sending SMS or BHA messages
- Generating letters
- Adding clinical reminders
- Inactivating patients
- As a filter for exporting patient clinical records
- Printing or exporting patient demographics for external use.
- Printing labels

Requires ‘Allow Access’ to the ‘Search clinical data’ permission.



# Demo

# Database Search - Exercise 1

Using the database search report builder, create a query that finds patients that matches the below criteria:

- Active patients
- Currently a smoker
- Do **not** have a Past History of COPD recorded

**Expected Results**

3 matching records

| Name | Address | D.O.B. | Age | Medicare No. | Medicare expiry | File No. |
|---|---|---|---|---|---|---|
| Ackerman, Ashley Francis | 71 Billabonger Road, Willawong. 4110 | 10/07/1980 | 45 yrs | 4133178947 - 1 | 31/12/2027 | 7893 |
| Amos, Tegan | 1/235 Rode Road, Chermside. 4032 | 11/04/1984 | 41 yrs | 3500166361 - 1 | 31/12/2027 | 154 |
| Bryant, Leonard | 32 Lonely Lane, Bankstown. 2200 | 06/06/1956 | 69 yrs | 2294260071 - 1 | 31/12/2027 | 66604 |

# Database Search - Exercise 2

**Supplied query:** Patients with a GPMP/TCA plan eligible for a GPCCM plan

Update to include the following criteria:

- Patient is not registered for MyMedicare

**Hint:** The column is in the Patients table. Use Bp Browser to verify the column name and value to filter for.

**Expected Results**

1 matching record

| Name | Address | D.O.B. | Age | Medicare No. | Medicare expiry | File No. |
|---|---|---|---|---|---|---|
| Barrett, Frances Ann | 23 Gregory Street, Wynnum, 4178 | 16/09/1972 | 52 yrs | 2294247001 - 1 | 31/12/2027 | 978461 |

# Database Search - Exercise 3

**Supplied query:** Patients that are registered for MyMedicare

Update to include the following criteria:

- Does **not** have a MyMedicare location set, or
- Does **not** have a MyMedicare registration date set

**Expected Results**

18 matching records

| Name | Address | D.O.B. | Age | Medicare No. | Medicare expiry | File No. |
|---|---|---|---|---|---|---|
| Ahern, Rhonda Joan | 17 Seymour Ave, Bentleigh. 3204 | 06/06/1938 | 87 yrs | 3500158284 - 2 | 31/12/2027 | 986 |
| Alfreds, David Charles | 481 Spence St, Oxley. 4075 | 19/03/1930 | 95 yrs | 4133180466 - 1 | 31/12/2027 | 9781 |
| Alfreds, Gwenda Elizabeth | 481 Spence St, Oxley. 4075 | 16/02/1933 | 92 yrs | 4133180466 - 2 | 31/12/2027 | 9782 |
| Allen, Kenneth | 8 Grey St, Fremantle. 6160 | 10/06/1928 | 97 yrs | 2234567891 - 1 | 31/12/2027 | 3345 |
| Allen, Mitchell Owen | 22 Star Street, Fremantle. 6160 | 15/03/1988 | 37 yrs | 2234567891 - 3 | 31/12/2027 | 6752 |
| Amos, Tegan | 1/235 Rode Road, Chermside. 4032 | 11/04/1984 | 41 yrs | 3500166361 - 1 | 31/12/2027 | 154 |
| Bartholomew, Raymond | 354 Main Road, Bridgeman Downs. 4035 | 27/11/1928 | 96 yrs | 4133180466 - 1 | 31/12/2027 | 789461 |
| Bishop, Rose | 89 Gavin Street, Rutherford. 2320 | 24/01/1926 | 99 yrs | 2294247003 - 1 | 31/12/2027 | 789464 |
| Carlton, Noah | 219 Geoffrey Cr, Tennant Creek. 0862 | 27/09/1980 | 44 yrs | 4950290231 | 31/12/2027 | |
| Costello, Kathleen | 36 Reed Street, Bendigo. 3552 | 03/11/1962 | 62 yrs | 3500158281 - 2 | 31/12/2027 | 789462 |
| Costello, Terrance | 36 Reed Street, Bendigo. 3552 | 28/10/1958 | 66 yrs | 3500158281 - 1 | 31/12/2027 | |
| Dean, Reuben T | 76 Frederick St, Woodlane. 5238 | 14/12/1945 | 79 yrs | 5950067771 - 1 | 31/12/2027 | |
| Fields, Steven | 11 Hiram Gr, Ainslie. 2602 | 23/09/1997 | 27 yrs | 2950889271 - 1 | 31/12/2027 | |
| Jones, Walter | 2 Oldham Road, Kenmore. 4069 | 02/02/1936 | 89 yrs | 3500158282 - 1 | 31/12/2027 | |
| Limbrick, Sandeshni | 63 Holles Terrace, Buxton. 4660 | 10/04/1984 | 41 yrs | 4950324121 - 1 | 31/12/2027 | |
| Marshal, Elizabeth Jean | 15 Albert St, St Peters. 5069 | 02/11/1948 | 76 yrs | 6500110502 - 2 | 31/12/2027 | |
| Moore, Mandy | 68 Bridge Road, Noosaville. 4566 | 11/04/1966 | 59 yrs | 4122401287 - 1 | 31/12/2027 | |
| Nicole, Patsy | 32 Geoff Ave, Dickson. 2602 | 05/04/1923 | 102 yrs | 2950159672 - 4 | 31/12/2027 | |

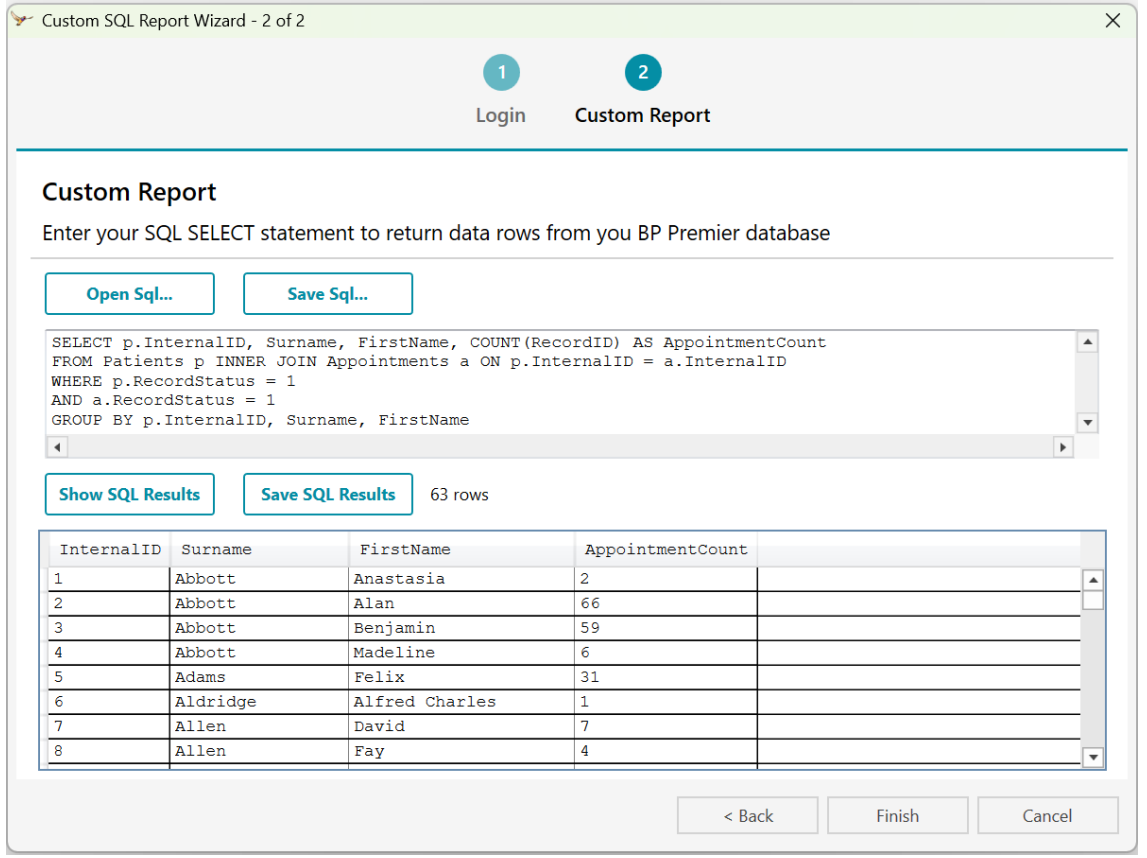
# Bp Reporting Tool – Custom SQL Query

The Custom SQL Query feature within the Bp Reporting Tool allows read-only sql queries to be executed against the database.

**Useful for:**

- When more than just a list of patients is required. Allows complete flexibility with what is retrieved from the database.
- Exporting data to CSV.

Requires ‘Allow Access’ to the ‘Reports’ permission.

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# Demo

# Custom SQL Query – Exercise 4

Supplied query: Patients with 5 or more Current Rx records

Update the columns being displayed to show the drug name as per the example below.

**Expected Results**

Show SQL Results | Save SQL Results | 16 rows

| InternalID | FirstName | Surname | Drugname |
|---|---|---|---|
| 6 | Alfred Charles | Aldridge | Accupril 10mg Tablet |
| 6 | Alfred Charles | Aldridge | Dilatrend 3.125mg Tablet |
| 6 | Alfred Charles | Aldridge | Lasix M 20mg Tablet |
| 6 | Alfred Charles | Aldridge | Normison 10mg Tablet |
| 6 | Alfred Charles | Aldridge | Agarol Emulsion |
| 6 | Alfred Charles | Aldridge | Ebixa 10mg/g Solution |
| 32 | Gwenda | Alfreds | Cipramil 20mg Tablet |
| 32 | Gwenda | Alfreds | Daonil 5mg Tablet |

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# Questions & Answers

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# Thank you for joining us!

**Our Bp Summit Presentations and Resources are available via our Knowledge Base**

Complex SQL Queries and Reports

Joel Mortensen