PATIENT HISTORY DASHBOARD.

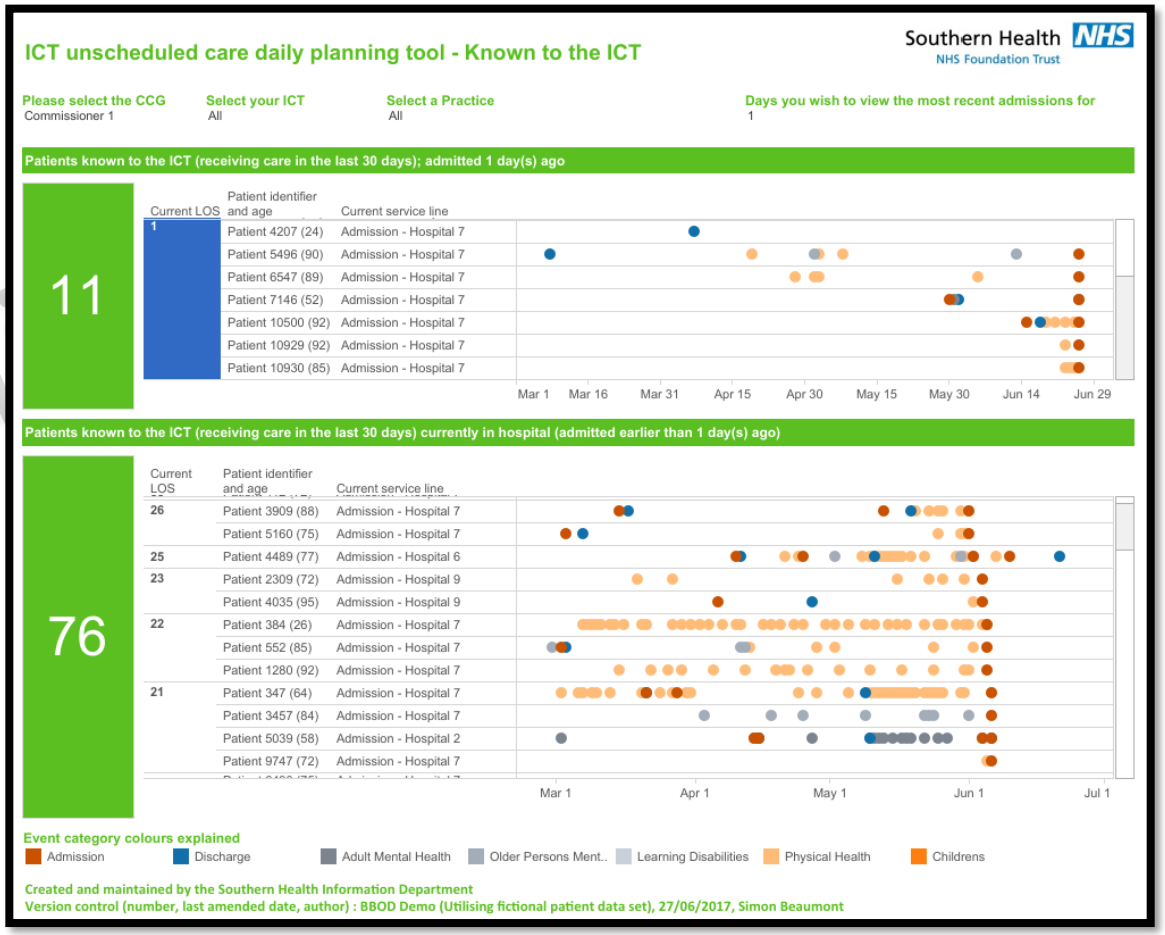
AGENDA.

- Accessing Tableau Public And The Example Patient History Dashboard
- Scenario – Big Picture
- Specifics
- Related Scenarios
- How People Use The Dashboard
- Why This Works
- Commentary – Simon Beaumont
- Commentary – Andy Cotgreave

ACCESSING TABLEAU PUBLIC AND THE EXAMPLE PATIENT HISTORY DASHBOARD.

- Click below to access the public dashboard:

Patient Dashboard



SCENARIO – BIG PICTURE.

- You are a clinician working at a health trust with many hospitals.
  - Your role is to provide **individualised health care** to patients in your region.

- One aspect of this is **responding** to patients' **hospital admissions**.

- Your job is to help clinicians **understand patient histories** and use that information to create a plan to get the patient **home as quickly as possible**.

- This dashboard shows the **activity of individuals** admitted to the hospital in the last 24 hours.

- Patients' **recent medical histories** help explain the **reasons for their admission** to the hospital.

- Along with **personal knowledge of the patients**, this information allows you to plan a **successful intervention**.

SPECIFICS.

- You want to know which **patients** were **admitted** to the hospital in the last day and in the last month.

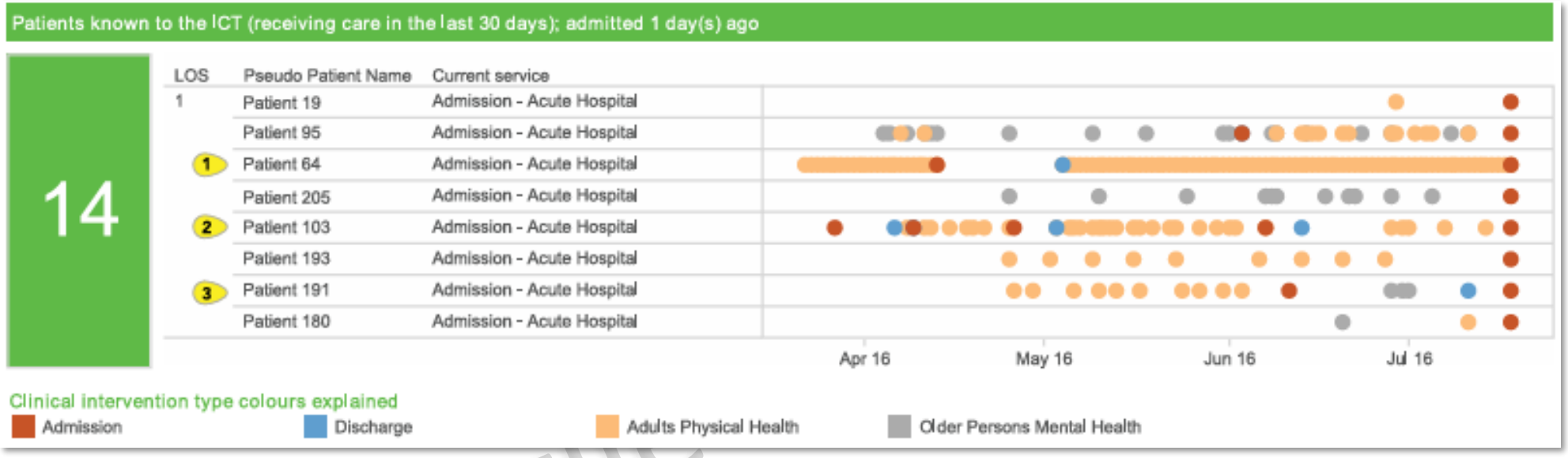
- Of those who have been **admitted**, what health care **visits** have they had in the last five months ?

RELATED SCENARIOS.

- The presentation used in this scenario can translate to any other scenario in which it's **important to see patterns** in **individual events rather than aggregated data**.

- Such scenarios include, for example.
  - Schools that want to track truancy for **individual** students.
  - Sales organisations that want to **track** customer activity on their websites in order to **adapt** their sales strategy to the individual.
  - **Database administrators** who need to **understand bottlenecks** and downtime in company infrastructure.

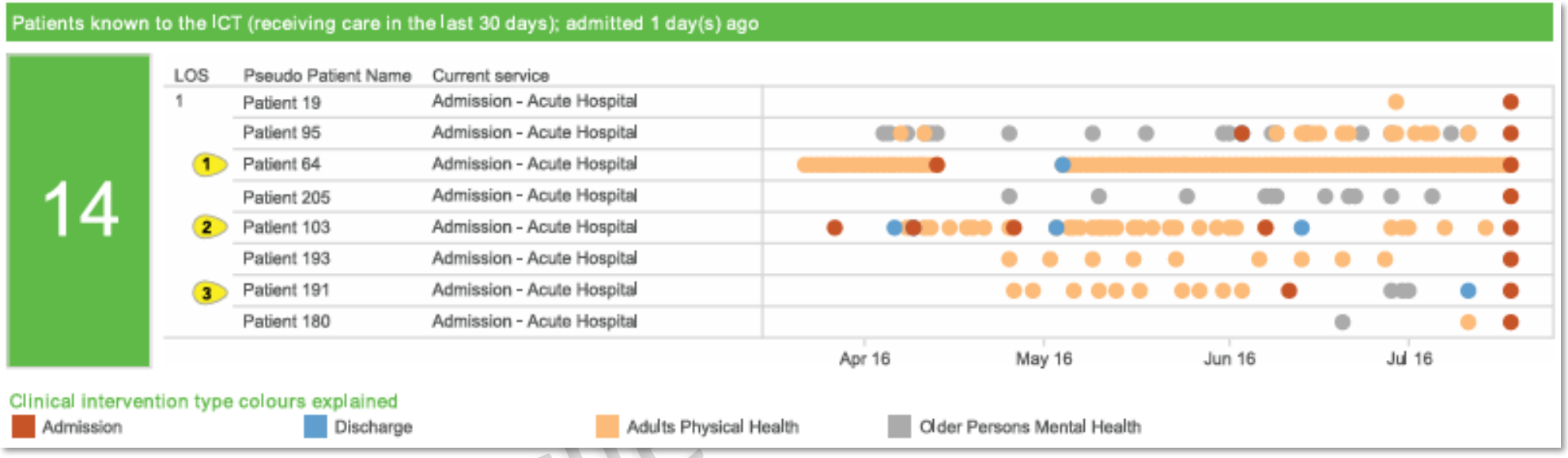
HOW PEOPLE USE THE DASHBOARD.



The first section shows admissions in the last day. In this example there were 14

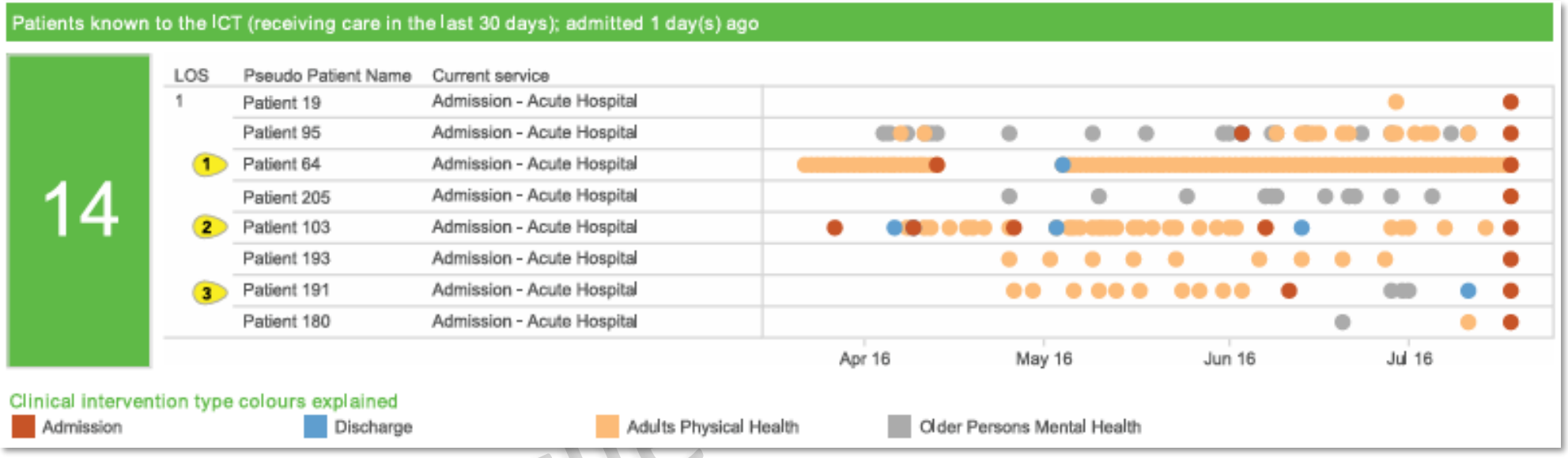
- Each day, clinicians **meet to plan** their work.
- The dashboard is **opened** and **filtered** to patients relevant to the group.
- The same dashboard is used across the health trust, covering **multiple areas**, hospitals, and teams.
- The first section shows **admissions** in the **last day**. In this example there were **14**.

HOW PEOPLE USE THE DASHBOARD.



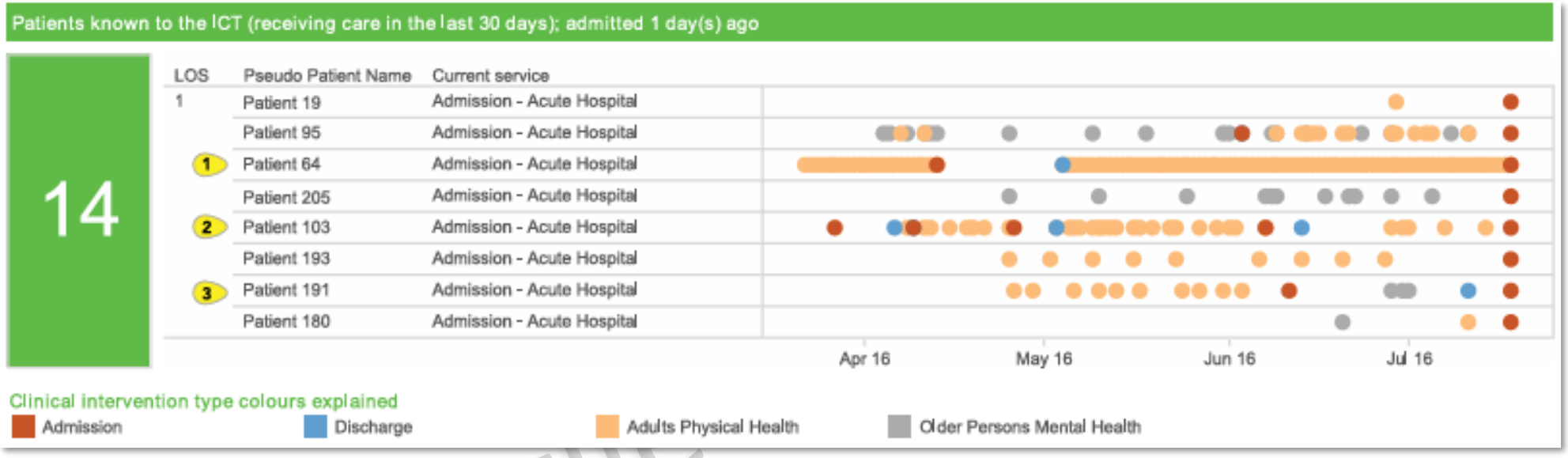
- The top area shows data about patients **admitted** to hospital in the last 24 hours.
- The number of patients is displayed in the green callout on the left.
  - In this example, 14 patients were **admitted**.
- Eight are shown on the screen, and the rest can be seen by **scrolling**.
- Each **dot** represents a **visit** with a health care worker, a hospital admission, or a discharge.
- The **patterns** of the **dots** tell a **rich story** about each patient, which we detail later.

HOW PEOPLE USE THE DASHBOARD.



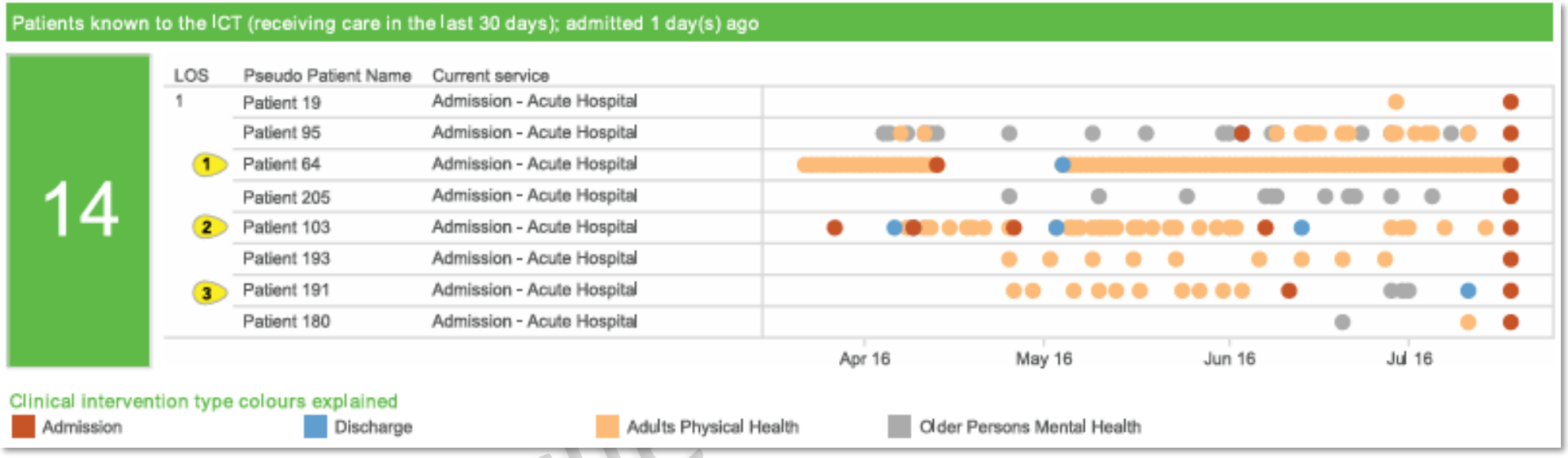
- Clinicians can look at the recent **pattern** for each patient, along with their **personal knowledge** of each case, to work out a suitable plan for **each patient**.
  - Each **dot** has a hyperlink directly to the **detailed** record for that intervention.
- Each row in the figure tells a **detailed** history about a real person.
  - Over time, this story becomes **easier** and **faster** to read as clinicians learn to decode the dots and the colours.
  - Let's look at three different patient stories our dashboard tells us.

HOW PEOPLE USE THE DASHBOARD.



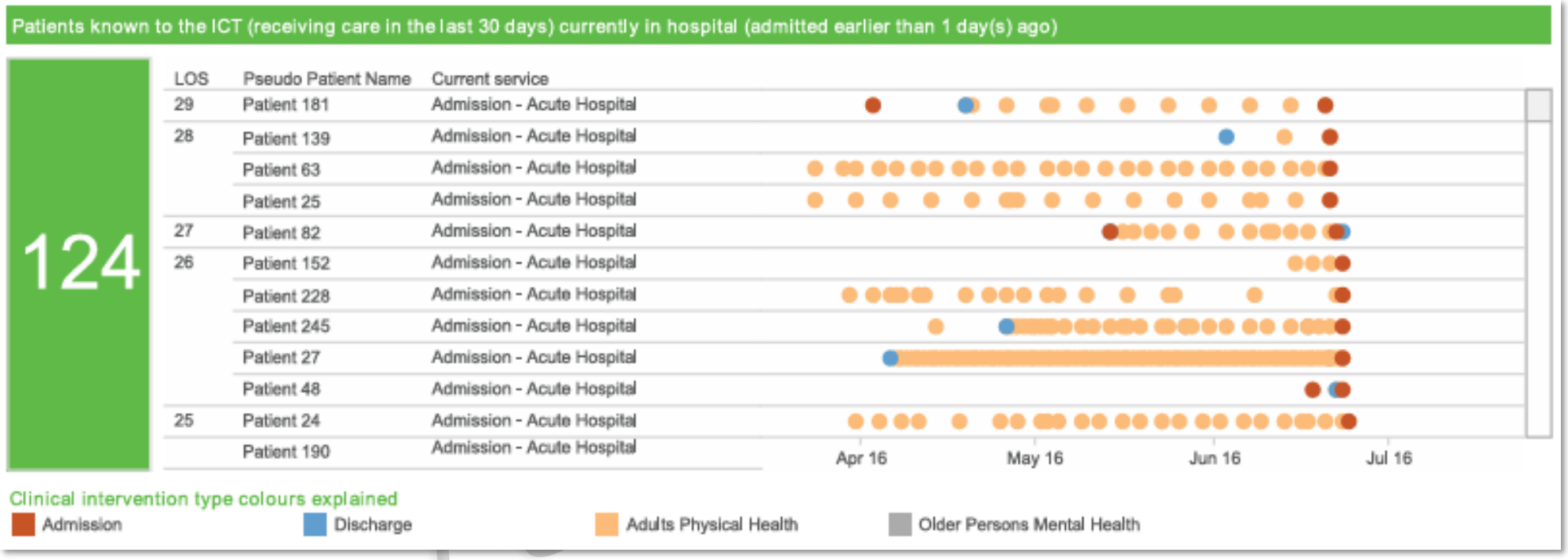
- Patient 64 has had almost continuous visits from Adults Physical Health (peach dots) services for the **duration** of the time shown on this view.
- The only gap was a period spent in the hospital (the time between the first red dot and the blue dot showing **admission** and **discharge**).
- What this shows is that intensive home care has largely **succeeded** in giving this patient time at home, providing him or her with **valuable** independence.
- Despite these interventions, this patient still has been **admitted** to the hospital.

HOW PEOPLE USE THE DASHBOARD.



- Patient 103 has had **fewer** interventions, but the recent admission is the fifth time in the hospital in the past five months. (Each red dot represents a hospital admission.)
- The visits by the Adults Physical Health care team haven't been as **frequent** as for Patient 64, but they have helped the patient stay at home for **significant** amounts of time.
- Patient 191 has just been **readmitted** after a recent discharge.
- Prior to the first visit, there had been **regular** visits by the Adults Physical Health service, and during the time Patient 191 was in the hospital, there was also a need for the Older Persons Mental Health team to spend time with him or her (the gray dots).

HOW PEOPLE USE THE DASHBOARD.



- The **lower** section shows patients who have been in the hospital and were **admitted** more than 24 hours ago.
- Clinicians use this dashboard to discuss the **history** of each patient in their **daily** meetings.

WHY THIS WORKS.

- **Complete data, not aggregated data**.
  - A lot of the dashboards **focus** on **key performance indicators** and **aggregated metrics**.
    - This is **good** when looking at the **higher levels** of a business but **consider** what the data in health care is all about.
  - Each record is a patient, a **patient who might be struggling**.
    - Working out the **average symptoms** for all patients might provide a picture for those governing the health care provider, but the overall average is of **no use** to the provider trying to help an **individual** patient.
  - Each patient is **different**, and each needs **individualised** plans.
  - This doesn't mean a single dashboard view is needed for every single patient.
    - Instead, this dashboard provides a **holistic view** of the history of all the patients under the care of the team.
  - With **one screen** all the patients' details can been **seen** and **discussed**.

WHY THIS WORKS.

- **Stories about real people told linearly**.
  - These are **real** patients.
  - Their stories **cannot be aggregated** into **averages**.
  - Looking after their health requires being able to see the **complete narrative**, which this dot plot enables.
  - The **dot plot** showing each interaction along a horizontal line makes it **easy** to follow this history visually.

- **Single-number callouts**.
  - How many new patients were admitted in the last 24 hours ?
    - 11
  - How many patients who have been admitted in the last 30 days are still in the hospital ?
    - 76
  - Both of these questions are important to answer.
  - The answers are the biggest and most obvious features of the dashboard.

WHY THIS WORKS.

- **Filters at the top**.
  - This **single** dashboard is used by **multiple teams**, so they need filters to get to the **right data quickly**.
  - Therefore, for this dashboard the **filters** are at the **top**, where people are **most likely** to look first.
  - In an ideal situation, the filters should be **retained** so that each time the viewer opens the dashboard, the filters are **already set**.
  - If that's the case, and the filters no longer need to be reset on each view, it would be possible to move them to a **less prominent** position, such as the right-hand side.

COMMENTARY – SIMON BEAUMONT.

- In the health care field, data is often used only to support and measure targets and to facilitate conversations around only the targets.
- This data normally is summarised using the traditional red, amber, green rating.
  - The **problem** with this approach is that it **misses the purpose** of health care.
    - To support individual patients to lead healthy, independent, and fulfilling lives.
- By **aggregating** numbers, we **lose** this **connection** with the people we are here to serve, our patients.
  - That is not to say that we do not measure the success of initiatives - we do that on other, **higher-level** dashboards.
- But our health care providers, for their day to-day work, looking after patients, need detail, not aggregates.
- Prior to this dashboard being implemented, there was simply no way for clinicians to see all patient history data.
- When a patient was admitted, the clinicians would receive a **text message** on their phone.
- In order to see the case history, clinicians had to click a link in the text message or copy it into a browser.
  - There was no way to see the **entire history** in one view.
    - Instead, clinicians needed to click through every past appointment.
- This was **inconvenient** and **disruptive**.
  - The end result was that it was simply **too cumbersome** a process for clinicians to follow.

COMMENTARY – SIMON BEAUMONT.

- This dashboard has been **revolutionary**.
- Its purpose is the number-one priority of all clinicians: to **maximise** the **effectiveness** of the care they provide to their patients.
- The data directly supports clinicians in their working day.
  - It complements their clinical knowledge with **automated**, **timely** information from across the health economy.
- Instead of data being seen as an **aggregated hindrance**, it is seen as an asset that directly supports the delivery of **personalised care**.

COMMENTARY – ANDY COTGREAVE.

- So many dashboards are about **aggregating** an organisation's activity into a **small set** of numbers.
- When those numbers represent people, we get into **uncomfortable** areas.
- There is **no such thing** as an "**average**" person, whether they are patients, students, or employees.
  - Someone in a class at school might have an average IQ but they won't be average in other categories.
- This is not to say that hospitals such as Southern Health Trust shouldn't also look at aggregated data, they should.
- The lesson from this dashboard is that data should be viewed at **different levels** of detail.