

Outcome Measures (PCOM/OACC) Data Reporting

Wednesday 3rd September 2025
Big Conversation

Welcome and introductions

Annette Alcock, Director of Programmes
Hospice UK

Housekeeping



Please keep your mic muted unless you are asking a question



Please note that the presentations (excluding the Q&A) are being recorded.



The recording and slides will be shared with you after the event, and we'll notify you by email



Please use the Chat function to ask any questions



AI bots are not permitted in these meetings and will be removed

Agenda

14:00	Welcome and introductions	Annette Alcock , Director of Programmes Hospice UK
14:05	EMIS	Aaron Salter , Business Intelligence Lead Pilgrims Hospices in East Kent
14:25	Questions	All
14:45	SystemOne	Robert Fletcher , Business Intelligence and Information Governance Manager Southern Hospice Group
15:05	Questions	All
15:25 – 15:30	Close	Annette Alcock , Director of Programmes Hospice UK



Hospice UK

PCOM360 DATA
REPORTING

Purpose & Agenda

By the end of this session, you'll understand: what EMIS X Insights is, how data flows, what measures we track, how we report them, and the vital role of our Outcome Measures Champions

- What is EMIS X Analytics
- EMIS data to Database – The process
- Outcome Measures used and how often?
- Pilgrims Reporting Timeline
- Outcome Measures Task Group & Reporting
- BI Visualisation Methods used at Pilgrims
- Exception Reporting Methods
- Questions from the Group



Background

- Started working for Pilgrims Hospices in the Business Intelligence department in August 2017
- Additional staff member in January 2022
- Roles mainly cover Patient Data/Human Resources/Finance/Income Generation
- Pilgrims Hospices covers East Kent
- Three inpatient units in Ashford, Canterbury and Thanet
- Inpatient Unit Capacity: 36 Beds
- Current Patient Caseload: 1,200 patients
- Moved from InfoFlex to EMIS in August 2019



What is EMIS-X Insights?

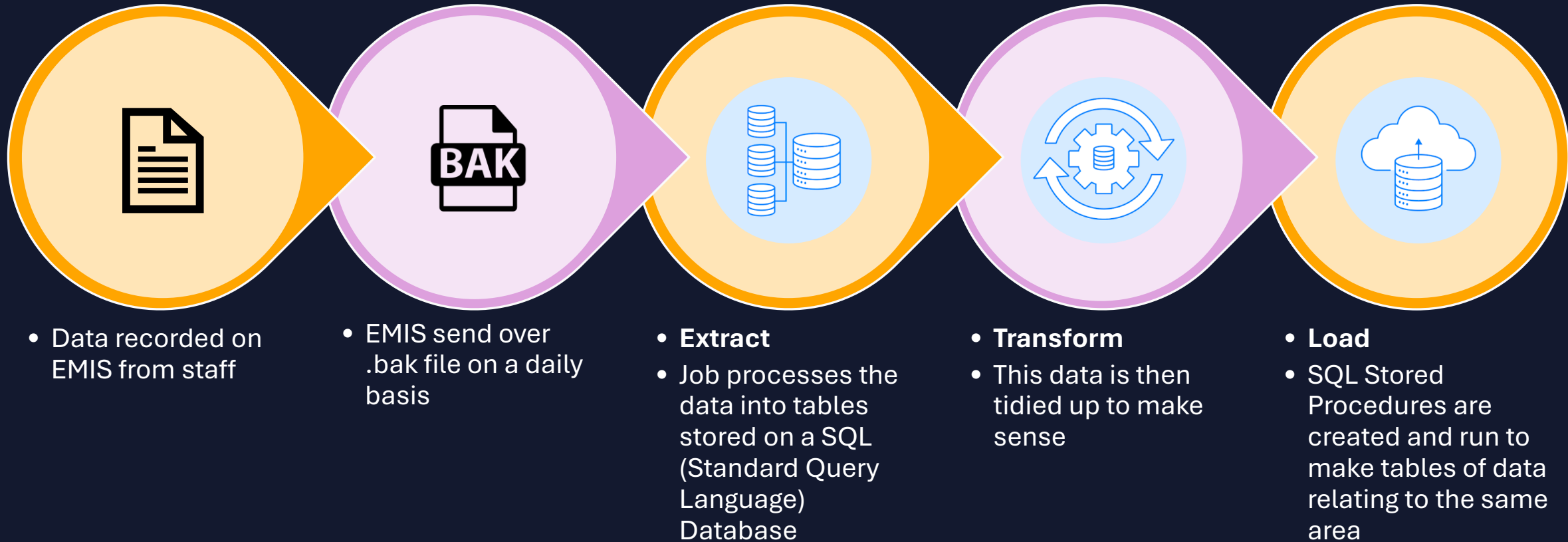
- Optum (formally known as EMIS) works with over 30 Hospices in the UK
- EMIS-X is a bolt on that allows us to extract the information from EMIS into our in-house databases and analyse the data how we see fit.
- EMIS-X Insights effectively provides us on a daily basis our data.
- Pilgrims then upload that to our database so that we can interrogate the data

The logo for Optum, featuring the word "Optum" in a bold, orange, sans-serif font.



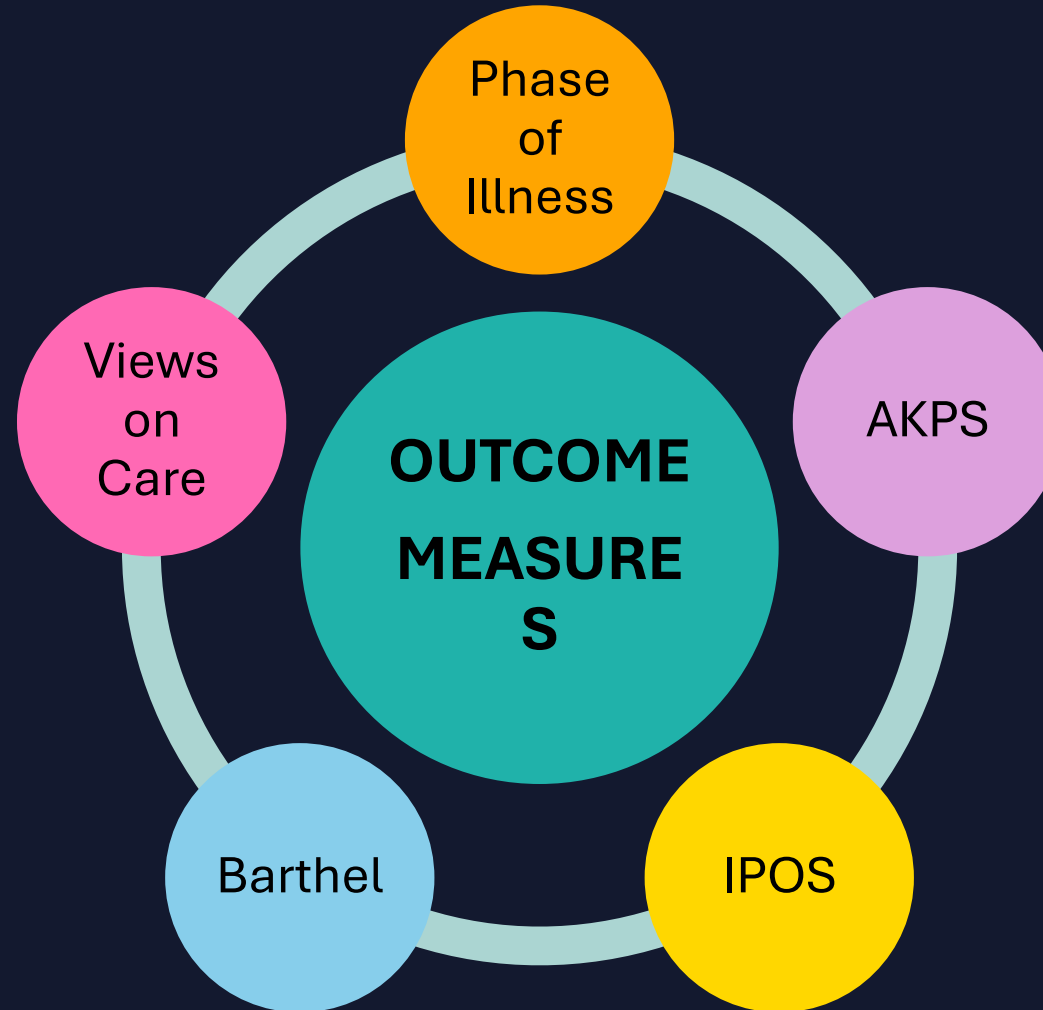
slot

What is EMIS-X Insights?



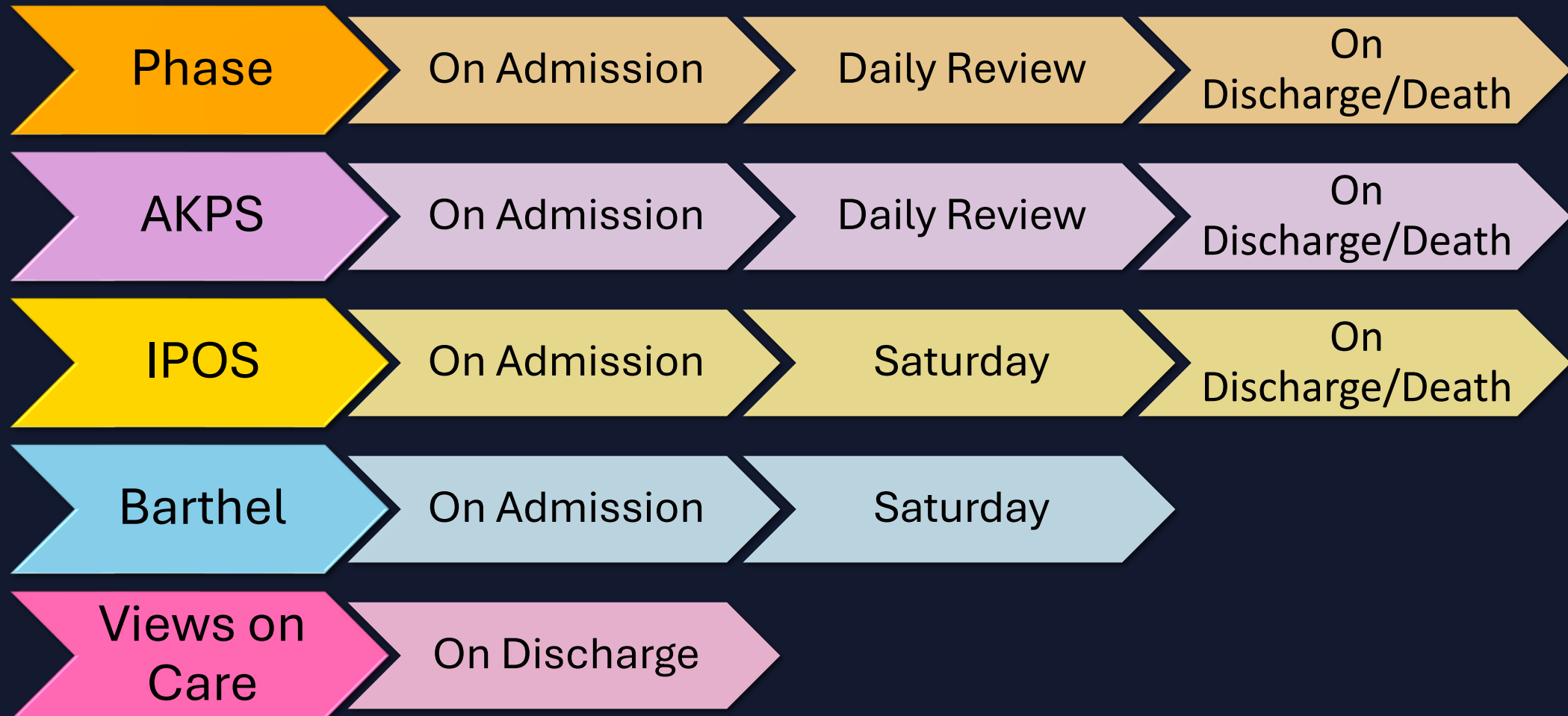
Outcome Measures

How Often do Pilgrims record them?

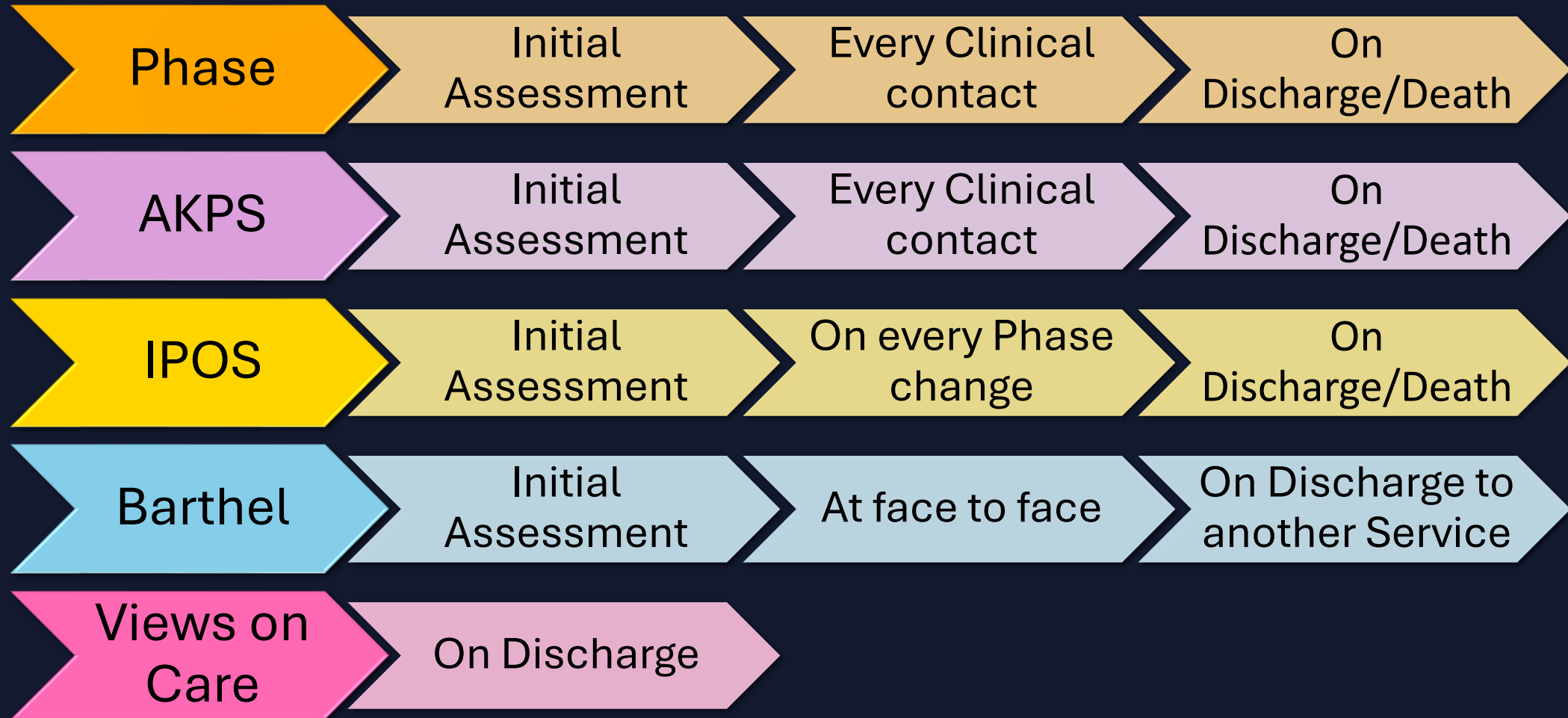


Outcome Measures

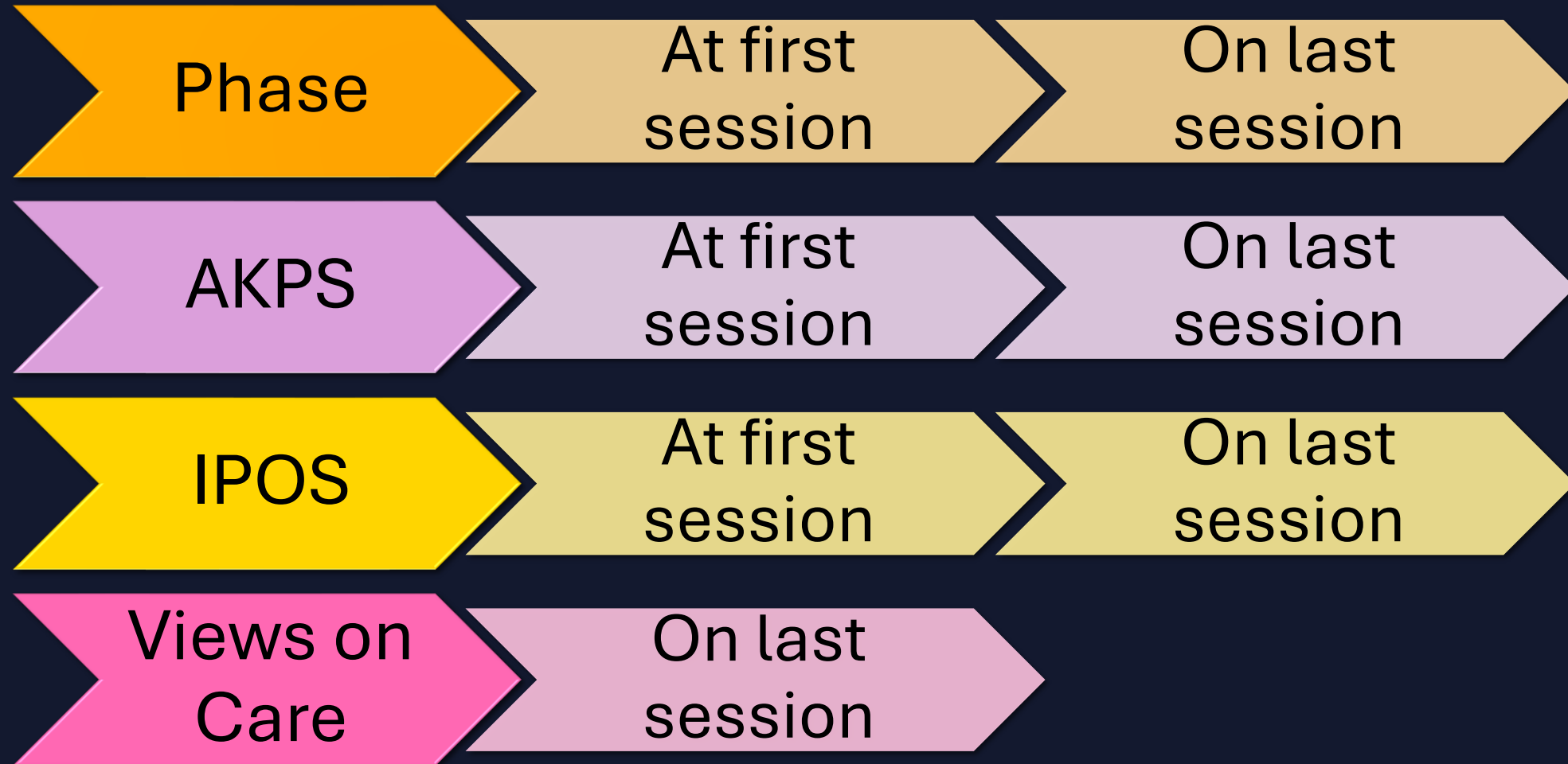
Inpatient



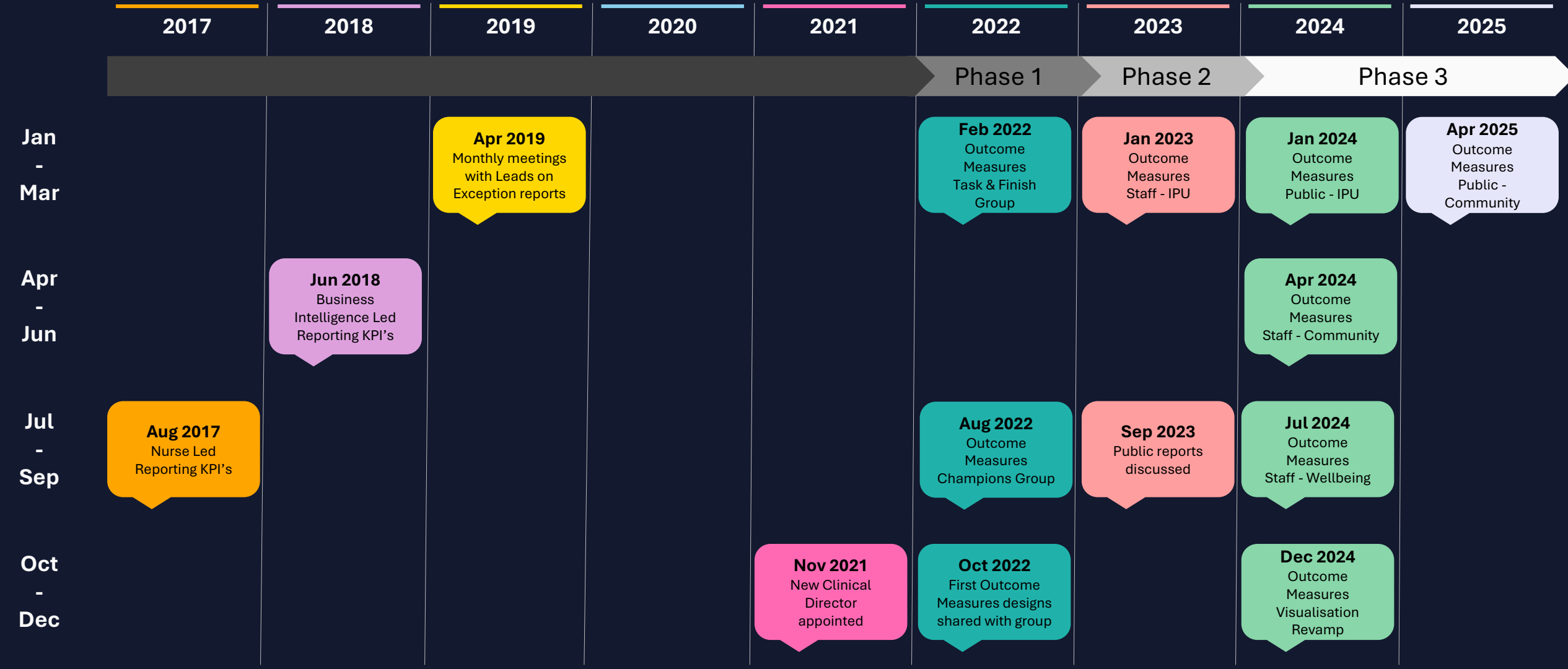
Outcome Measures Community



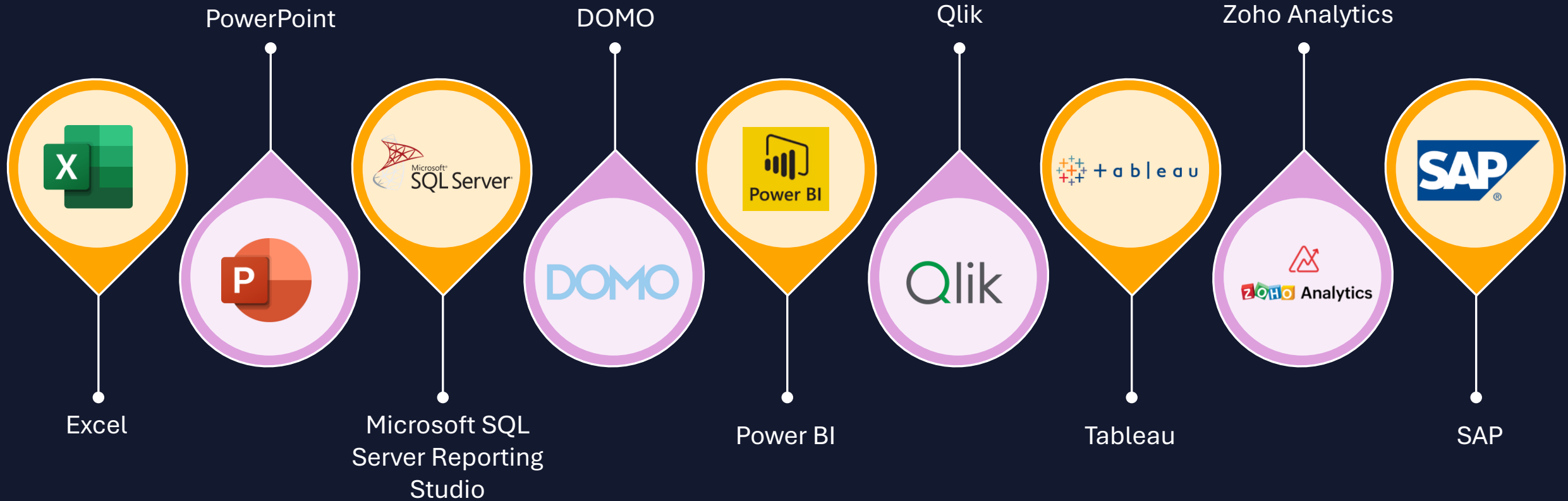
Outcome Measures (Wellbeing Services)



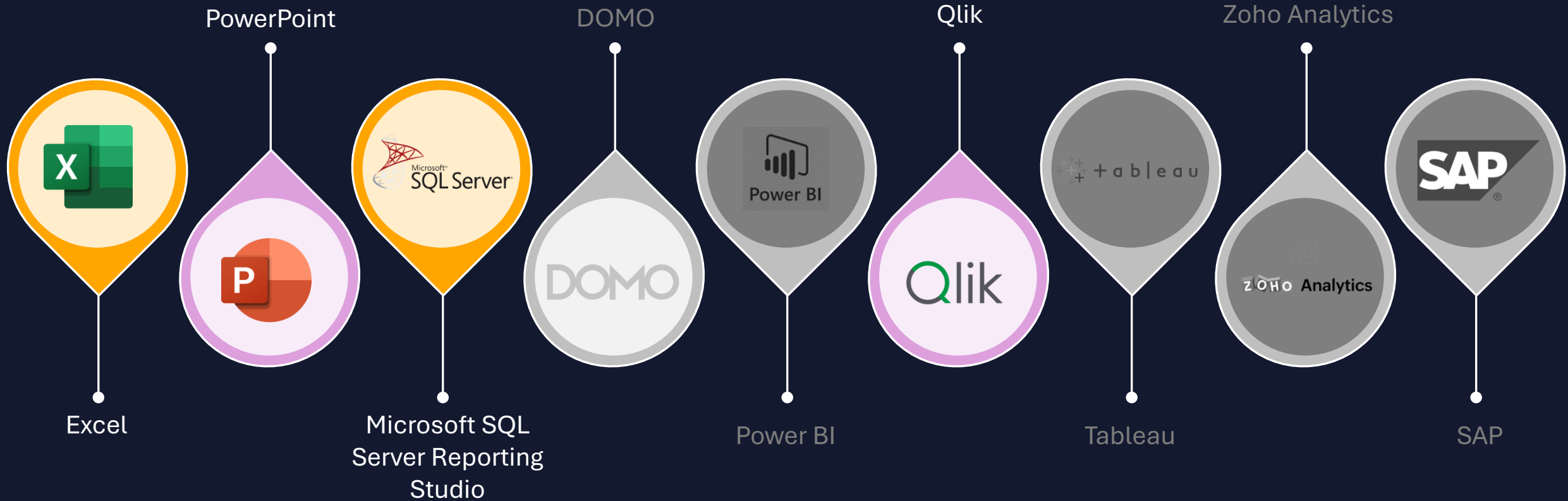
Outcome Measures Timeline



Outcome Measures Reporting Methods



Outcome Measures Reporting Methods used by Pilgrims



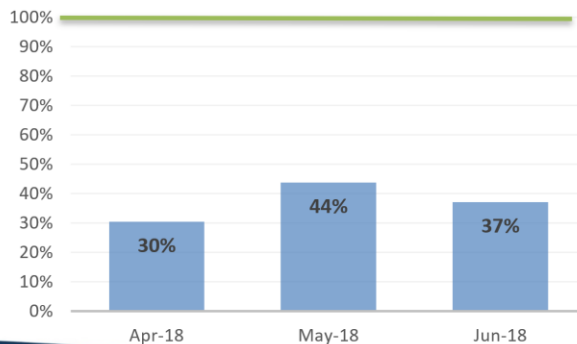
Outcome Measures

Jun 2018 Vs Jun 2020 Reporting

Clinical Update Apr-18 to Jun-18

Core Assessments KPI – Admissions (Company)

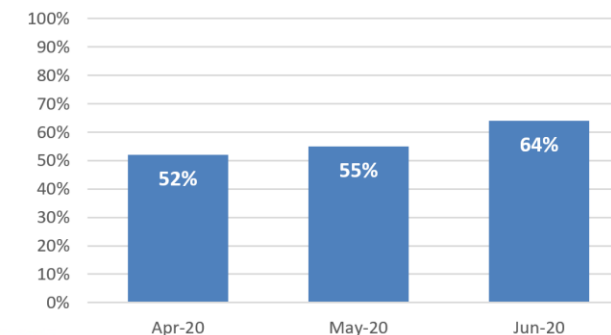
	No. Admissions	Core Assessments Completed	Percent Complete	Missed KPI Count
Apr-18	79	24	30%	55
May-18	96	42	44%	54
Jun-18	81	30	37%	51



Clinical Update Apr-20 to Jun-20

Core Assessments KPI – Admissions

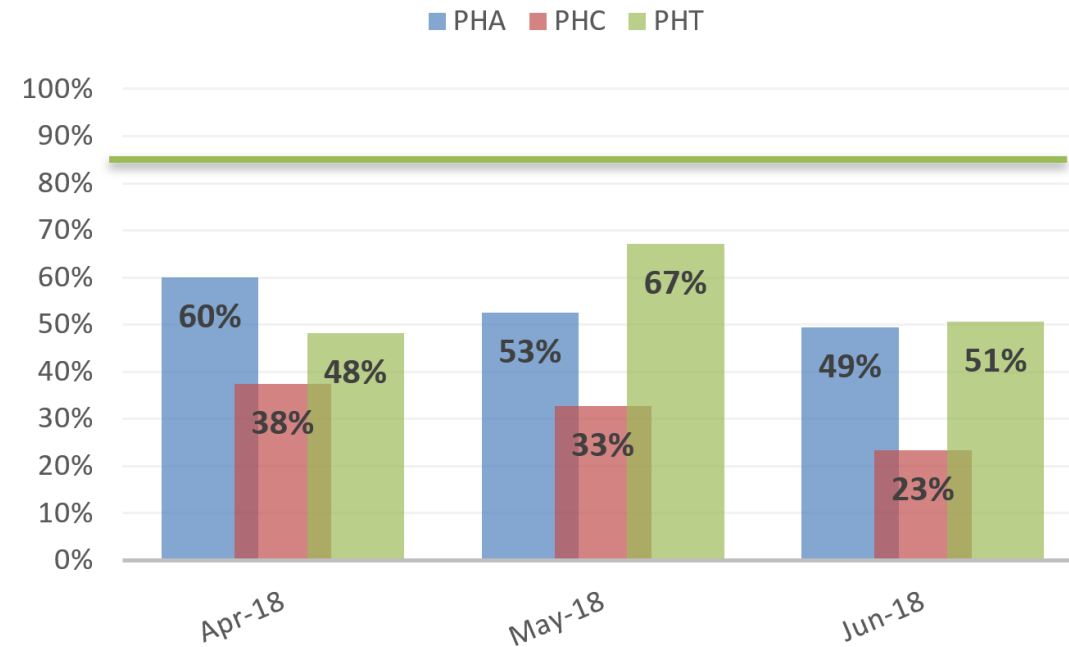
	No. Admissions	Core Assessments Completed	Percent Complete	Missed KPI Count
Apr-20	90	56	62%	34
May-20	78	43	55%	35
Jun-20	67	43	64%	24



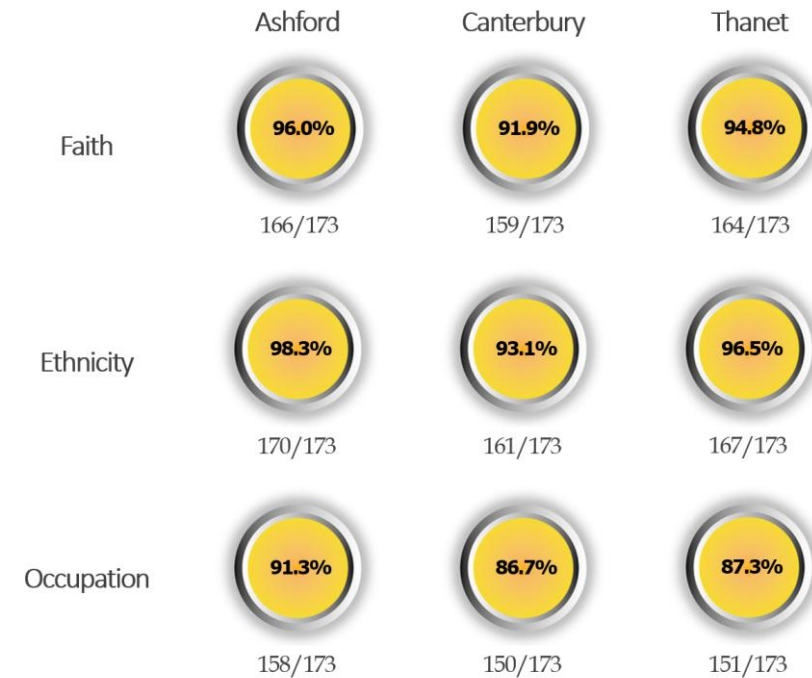
Outcome Measures

Jun 2018 Vs Jun 2020 Reporting

Percentage of Faith Stats with Valid Entry
(Benchmark = 85%)

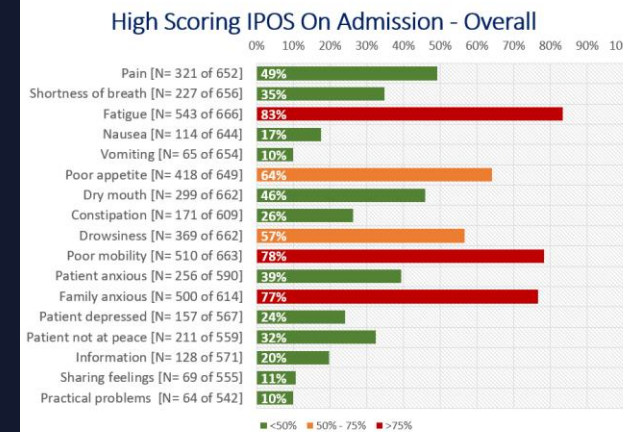
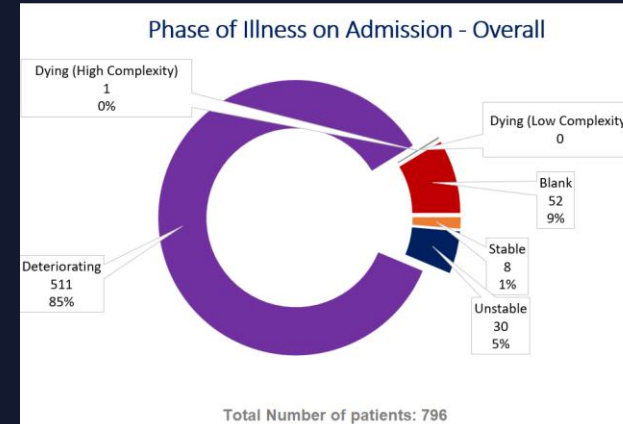


ADMISSION METRICS – APR-20 TO JUN-20

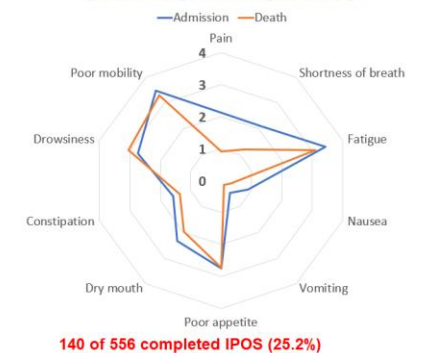


Outcome Measures Task & Finish Group

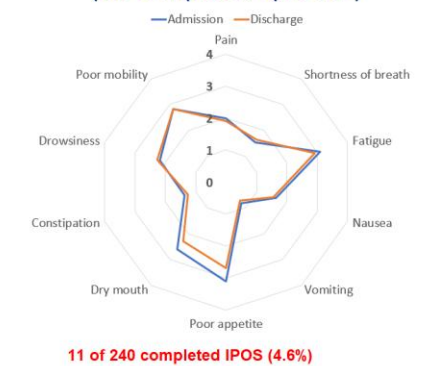
- Outcome Measure Task & Finish Group set up in Feb 2022
- Senior leads from different departments to identify useful insights.
- Group ran for six months to create a dashboard
- Focus on 3 KPI's
 - What is the symptom burden at beginning of spell of care (admission/first assessment)?
 - Change of high scoring symptoms from beginning to end of Spell of care
 - Feedback on the impact of care from service user (VOC)
- First Outcome Measures Dashboard designed in Excel in Aug 2022



Mean IPOS (Symptom) on Death (On Completed Episodes)



Mean IPOS (Symptom) on Discharge (On Completed Episodes)



Outcome Measures Champions Group

- Task & Finish Group closed and turned into an Outcome Measures Champion Group
- A mixture of staff from all disciplines attend and supply useful input
- Group meet monthly to discuss analysis of the dashboards and any future developments
- Exception Reporting discussed to improve the completed data and further help with useful insights
- January 2023 saw the first Outcome Measures dashboard for IPU shared with all staff. This was printed and displayed in the Staff canteens on all three sites



Outcome Measures Exception Reporting

- Agenda item all around Exception Reporting (Jun-25 as an example)
- Automated email subscriptions from SQL Server Reporting Studios (SSRS) identifying Exceptions

Jun-25	PHA				PHC				PHT			
Inpatient	Completed	Missed	% Complete		Completed	Missed	% Complete		Completed	Missed	% Complete	
Reporting Group	18	0	100.0%	✔	25	0	100.0%	✔	25	0	100.0%	✔
Phase of Illness	18	0	100.0%	✔	25	0	100.0%	✔	25	0	100.0%	✔
IPOS on Admission	17	1	94.4%	⚠	21	4	84.0%	✖	24	1	96.0%	⚠
IPOS on Discharge	2	1	66.7%	✖	5	0	100.0%	✔	2	0	100.0%	✔
IPOS on Death	12	2	85.7%	⚠	24	0	100.0%	✔	21	1	95.5%	⚠
Unstable 3+ Days		0				0				0		
Community	Completed	Missed	% Complete		Completed	Missed	% Complete		Completed	Missed	% Complete	
Reporting Group	79	0	100.0%	✔	68	0	100.0%	✔	52	1	98.1%	⚠
Phase of Illness	77	2	97.5%	⚠	68	0	100.0%	✔	53	0	100.0%	✔
IPOS on First Assessment	76	3	96.2%	⚠	67	1	98.5%	⚠	48	5	90.6%	⚠
Unstable 7+ Days		6				1				5		

Please see below a list of patients who are missing the Cancer/Non-Cancer entry



Outcome Measures Exceptions Cancer/Non-Cancer Diagnosis

Missing: 5

Latest Consultation Date: Jul 11 2025 9:32AM

EMIS No.	Diagnosis
54026	Chronic kidney disease stage 3, Congestive heart failure, Frailty
54028	Metastatic carcinoma to prostate
54030	Carcinoma of pancreas, Metastatic malignant neoplasm to liver
54031	Metastatic malignant neoplasm to liver, Malignant tumour of breast
54035	
54033	
54034	Frailty, Transient cerebral ischaemia

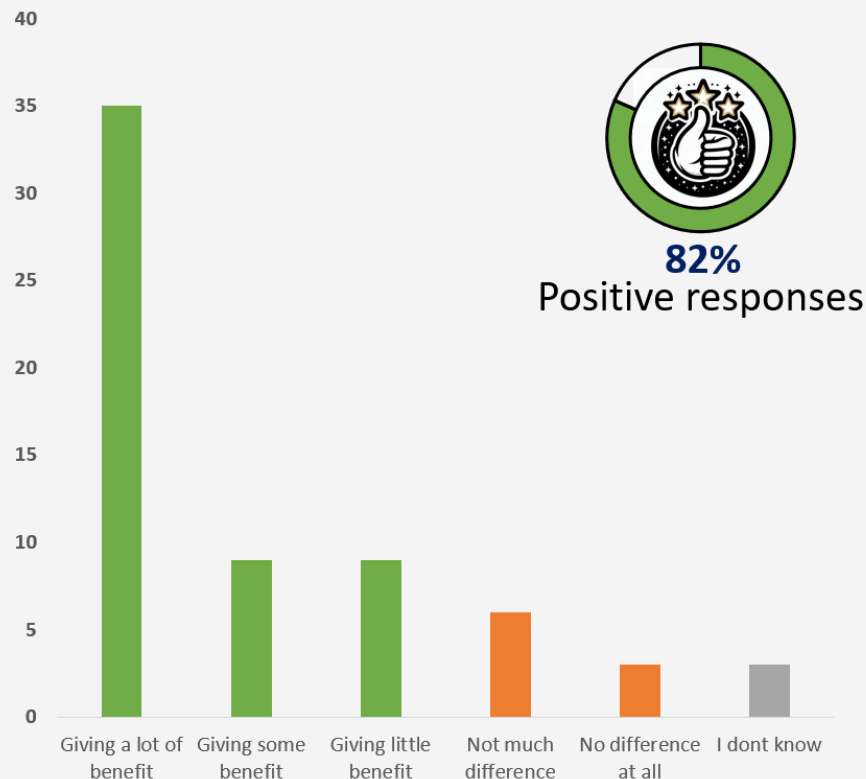
IPU - Discharges

EMIS_number	admitted_site	date_admitted	discharge_date	discharge_method	length_of_stay	IPOS	EXCEPTIONS
53579	PHA	23/05/2025	04/06/2025	Death	12	✓	
52949	PHA	30/05/2025	04/06/2025	Death	5	✓	
50744	PHA	04/06/2025	08/06/2025	Death	4	✓	
53260	PHA	28/05/2025	09/06/2025	Death	12	✓	
53140	PHA	11/05/2025	11/06/2025	Discharge	31	✓	
52478	PHA	09/06/2025	12/06/2025	Discharge	3	✗	Exception Required
52498	PHA	04/06/2025	15/06/2025	Death	11	✓	
51030	PHA	01/05/2025	16/06/2025	Discharge	46	✓	
52014	PHA	17/06/2025	21/06/2025	Death	4	✓	
52567	PHA	29/05/2025	22/06/2025	Death	24	✓	
52946	PHA	14/06/2025	23/06/2025	Death	9	✗	Exception Required
52960	PHA	11/06/2025	23/06/2025	Death	12	✓	
53818	PHA	23/06/2025	25/06/2025	Death	2	✗	Exception Required

Outcome Measures

Jan 2023 Dashboard (Qtr Data)

Views on Care Analysis



- When patients are discharged from the ward, those that are able are asked to complete a Views on Care assessment, one of the questions asks do you think the care team has made a difference to how things are. This graph represents the outcome from this

Outcome Measures Public Viewing & Other versions

- Work quickly began on producing a Public version
- Outcome Measures Group helped to decided what to show
- Development started, again using PowerPoint as a means for presentation
- Details passed on to a Volunteers Committee to seek approval
- Public IPU Dashboard first printed Jan 2024
- Community & Wellbeing Dashboards created and discussed mid way through 2024
- Total revamp of Outcome Measures. Colours/infographics all changed



Outcome Measures

Inpatient

Jul-24 to Jun-25

Demographics

956 admissions over **845** patients

413 Male

432 Female



Average Age

74yrs

Age Range

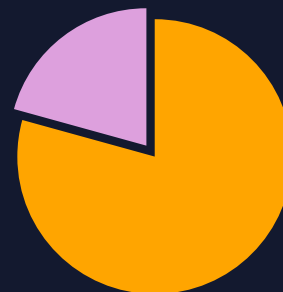
25yrs – 102yrs



Median length of stay

6 Days

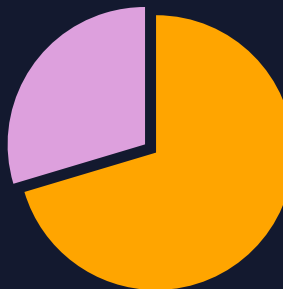
Primary Diagnosis



79% Cancer (670)

21% Non-Cancer (175)

0% Not Recorded (0)

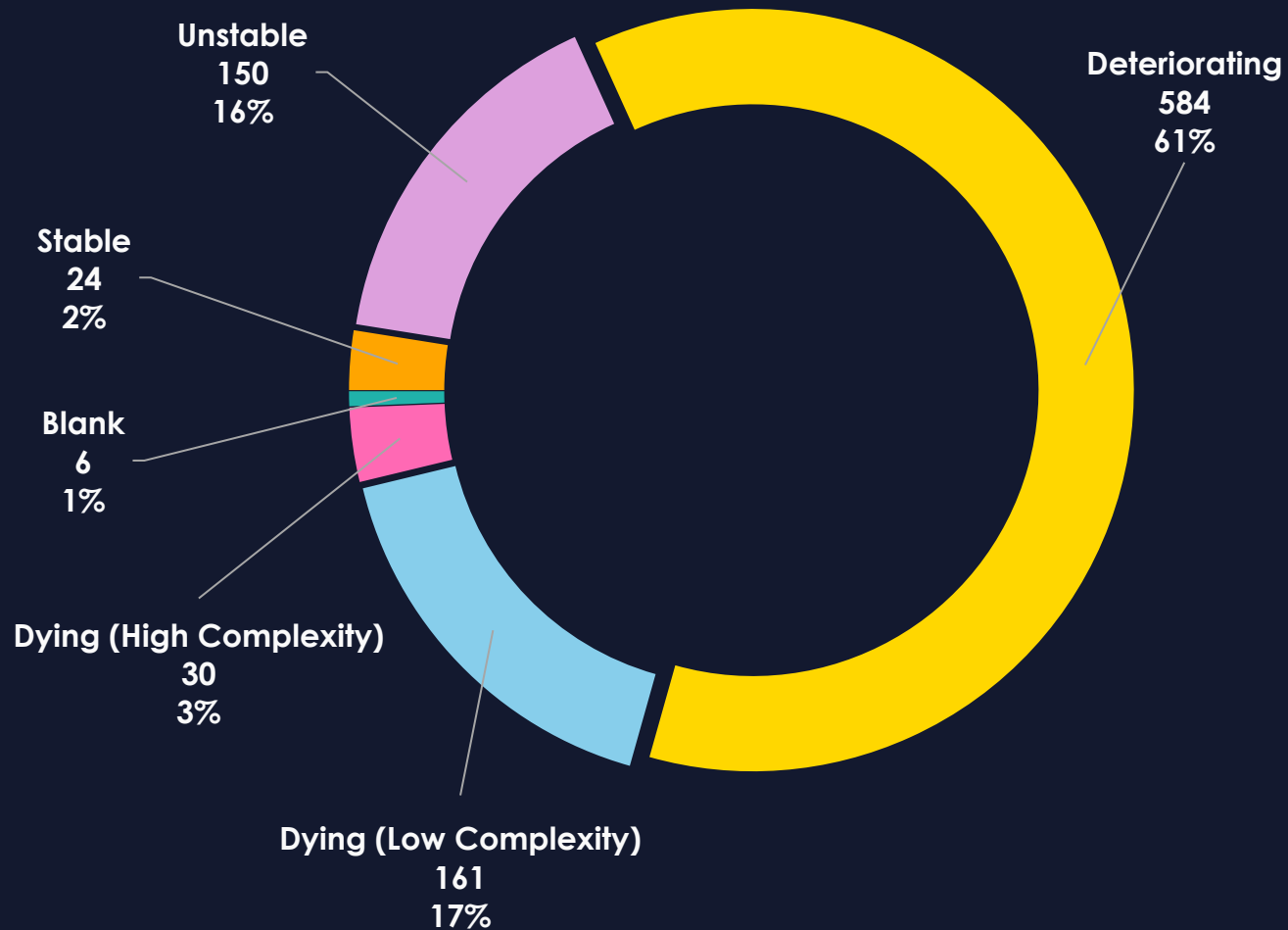


Ended Episode Outcomes

70% Died (658)

30% Discharged (277)

Phase of Illness on Admission



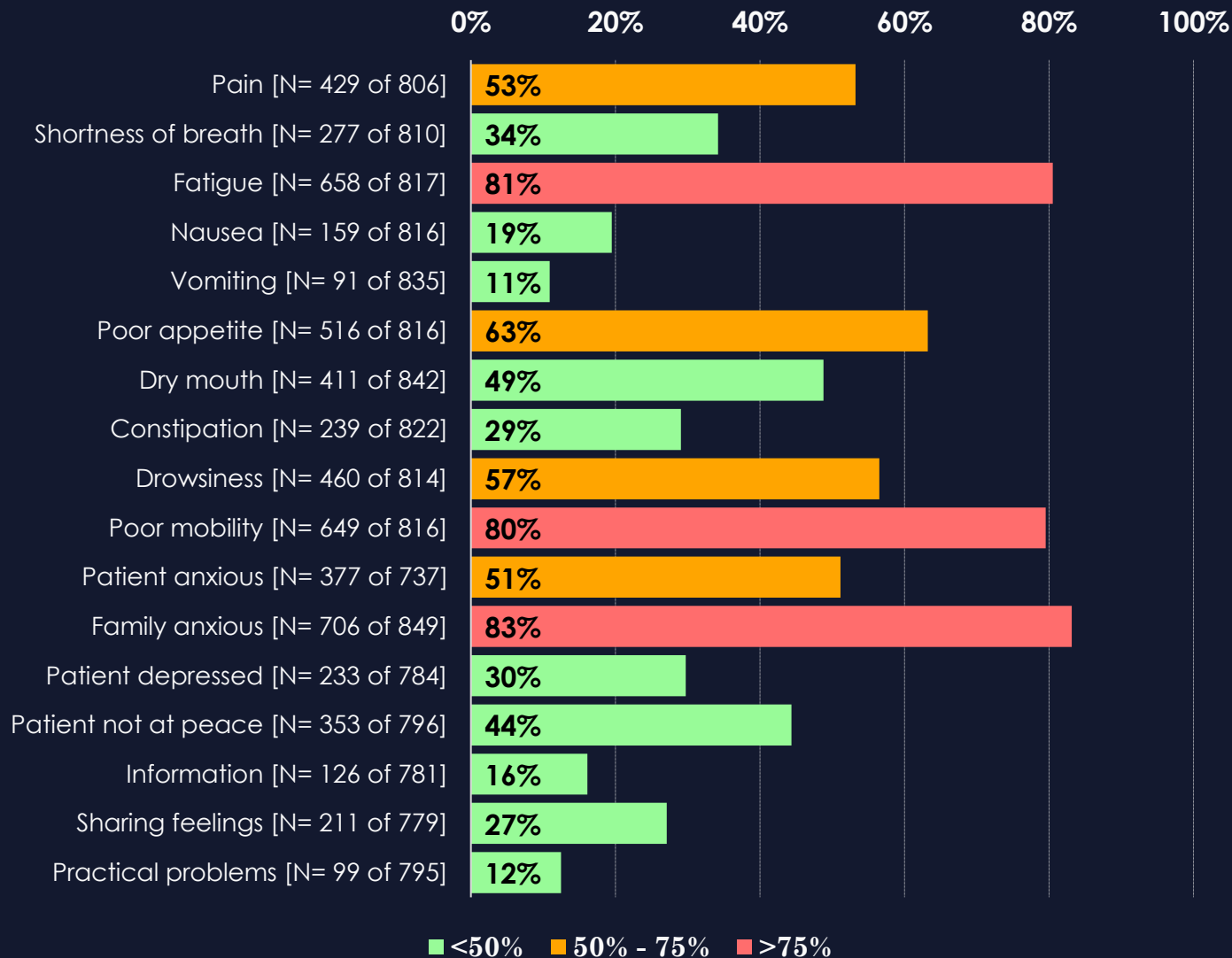
- Phase of illness describes the urgency with which a care plan requires adjustment. Care plans can address physical, social or psychological needs:

- Unstable – new care plan urgently needed
- Deteriorating – current care plan needs tweaking
- Stable – current care plans effective and no need to change
- Dying high / low complexity – death expected within days and patient / family requires a lot of support / are coping

- This is showing the Phase of Illness that the patient was on the day of admission.

- **16%** (150 patients) were Unstable on admission

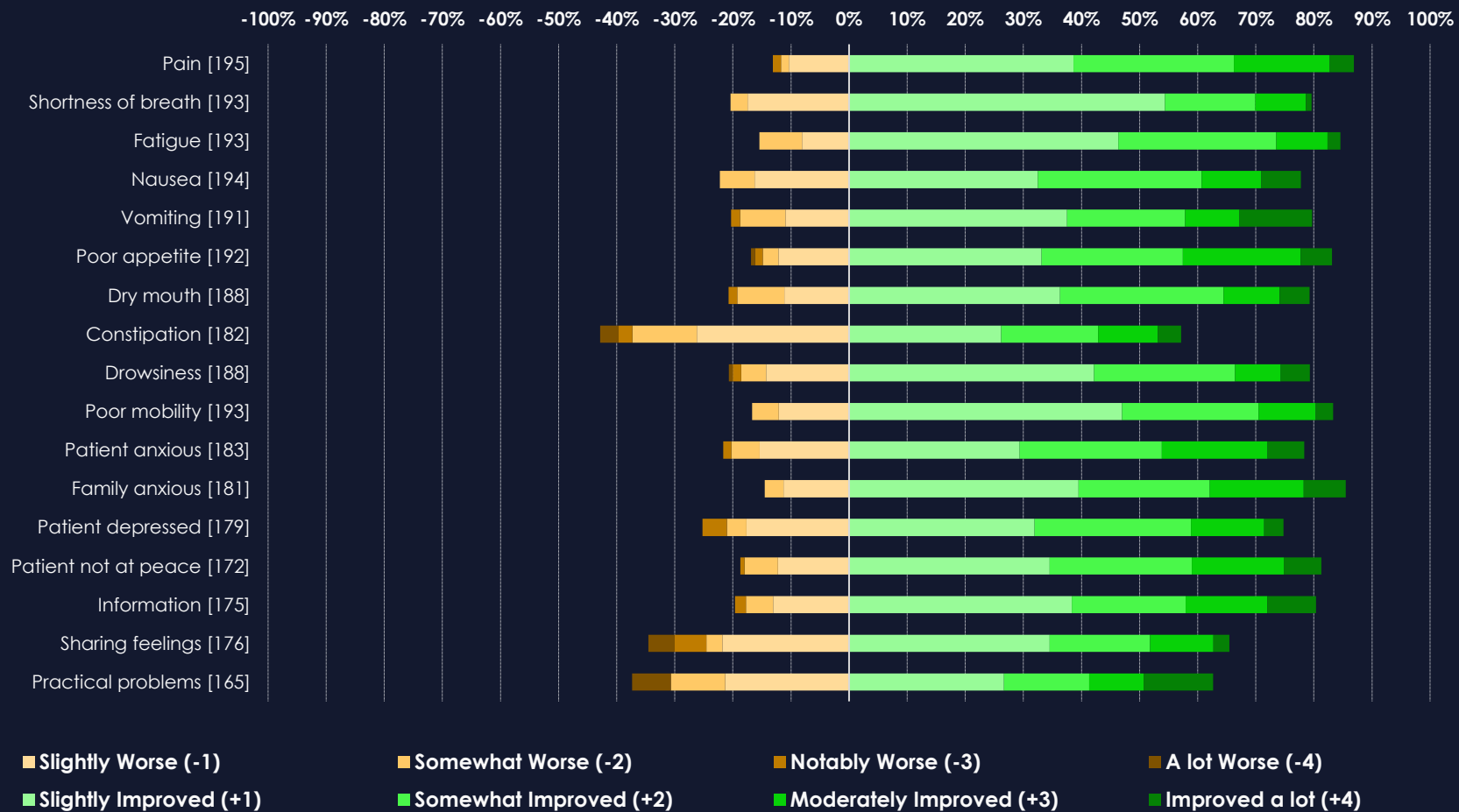
High Scoring IPOS on Admission



- This graph is collecting the IPOS scores that were recorded on admission and showing the percentage of those that scored high (3 or 4). Scores are coloured depending on the percentage. Against each score it is showing the number of IPOS scores that are high.
- For this time period, **Fatigue, Poor mobility & Family Anxious** are scoring high)

IPOS Score Change Admission to Discharge

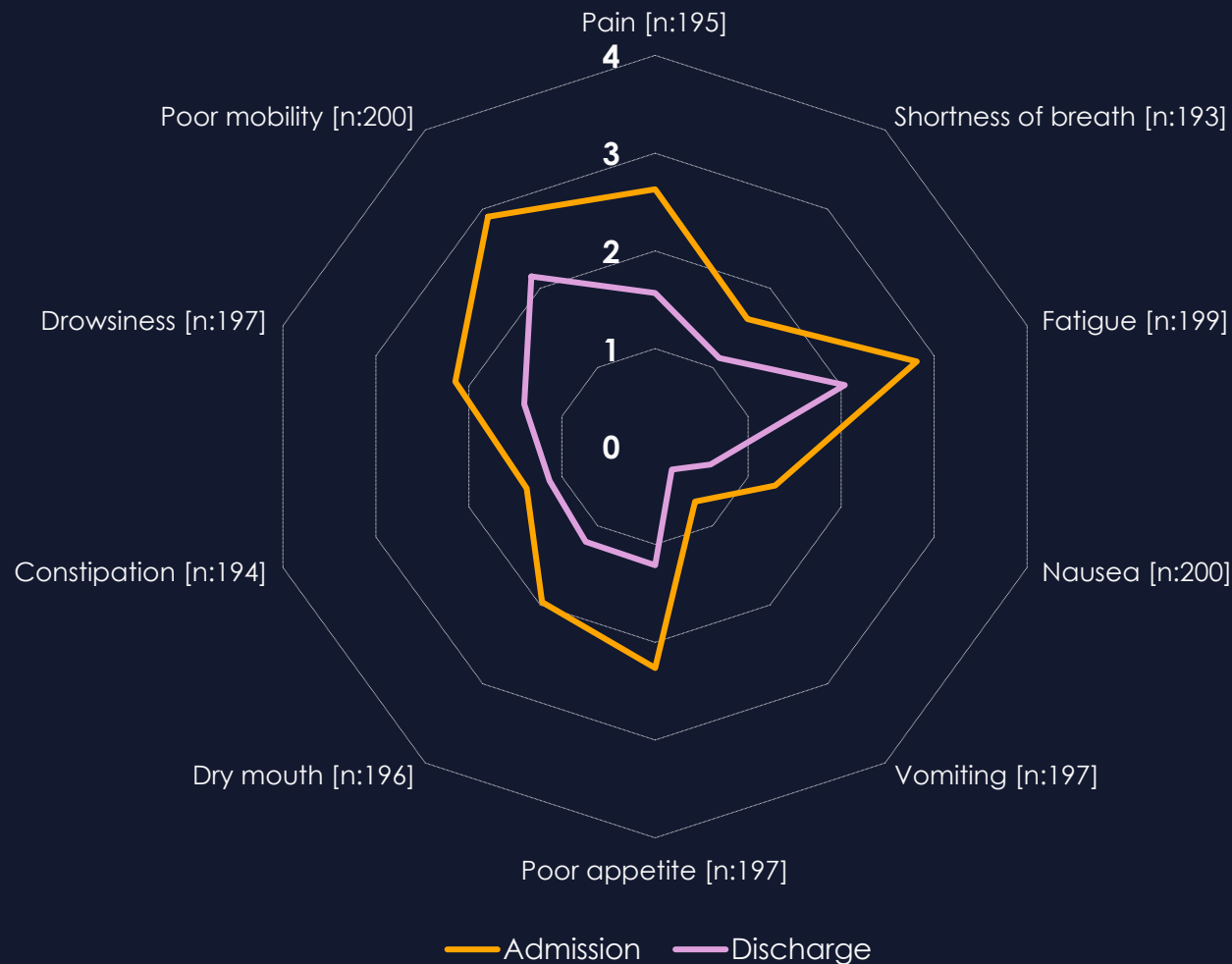
(Total Discharges: 277)



Patients with no Entry in IPOS Score on either Admission or/and Discharge

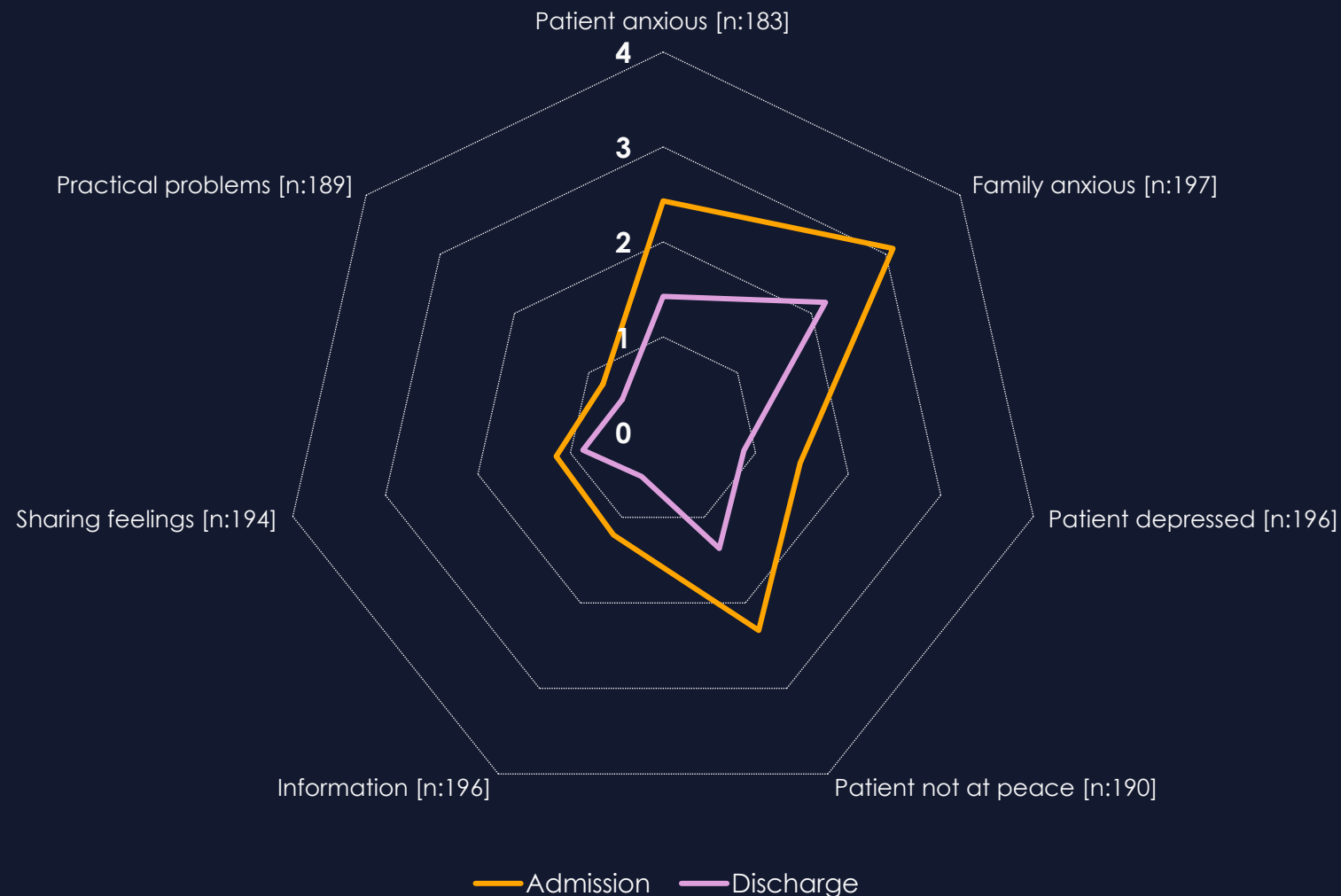
	No Entry	%
Pain	82	30%
Shortness of breath	84	30%
Fatigue	78	28%
Nausea	77	28%
Vomiting	80	29%
Poor appetite	80	29%
Dry mouth	81	29%
Constipation	83	30%
Drowsiness	80	29%
Poor mobility	77	28%
Patient anxious	94	34%
Family anxious	80	29%
Patient depressed	81	29%
Patient not at peace	87	31%
Information	81	29%
Sharing feelings	83	30%
Practical problems	88	32%

Mean IPOS scores (Symptom) on Discharge



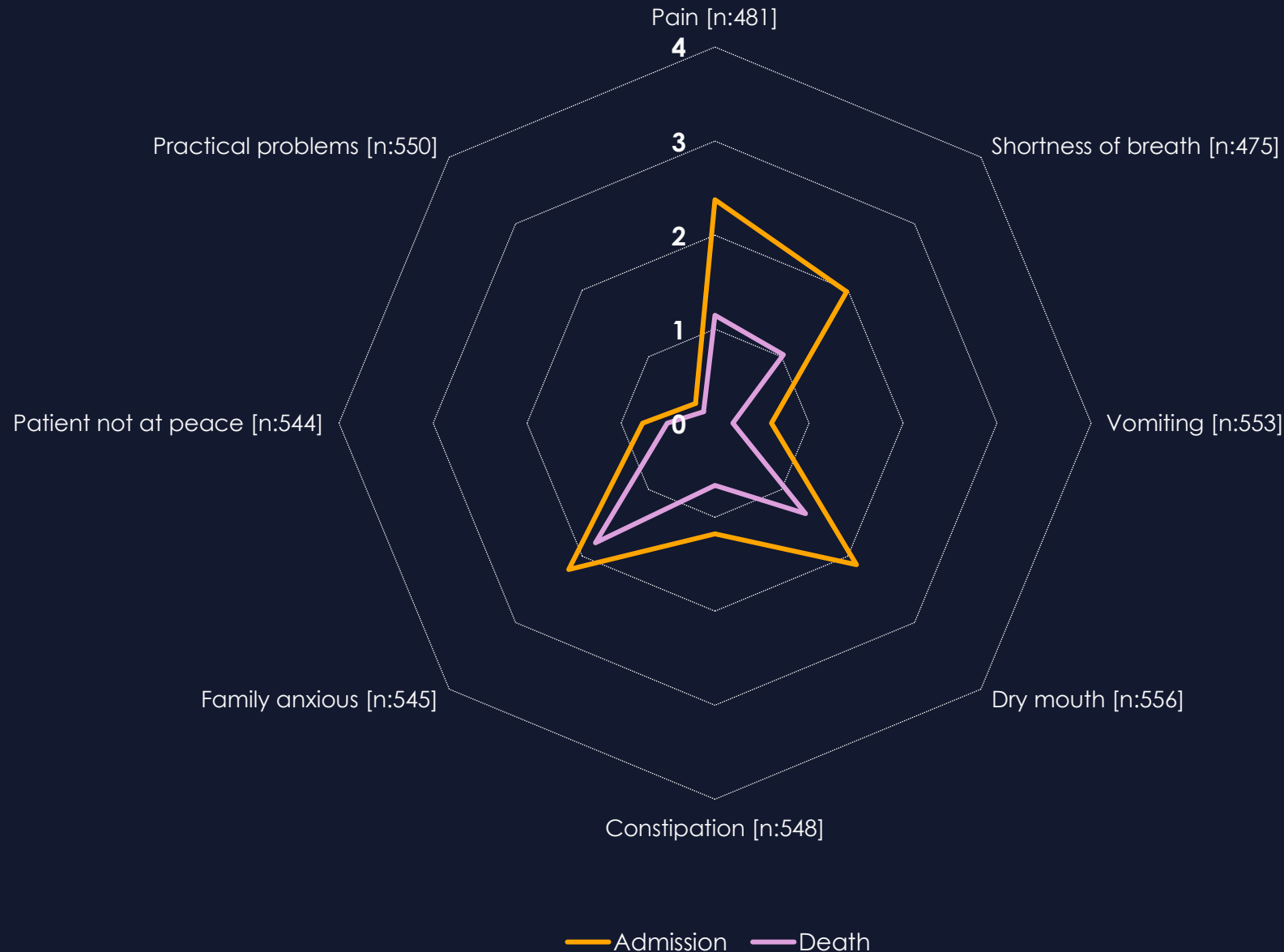
- This graph is providing the average IPOS scores completed on admission to discharge for each patient. We can see from this that the average scores have decreased on discharge proving that the patients time on the ward has been beneficial to them.
- Under each symptom we can see how many patients this relates to.

Mean IPOS scores (Psychosocial) on Discharge



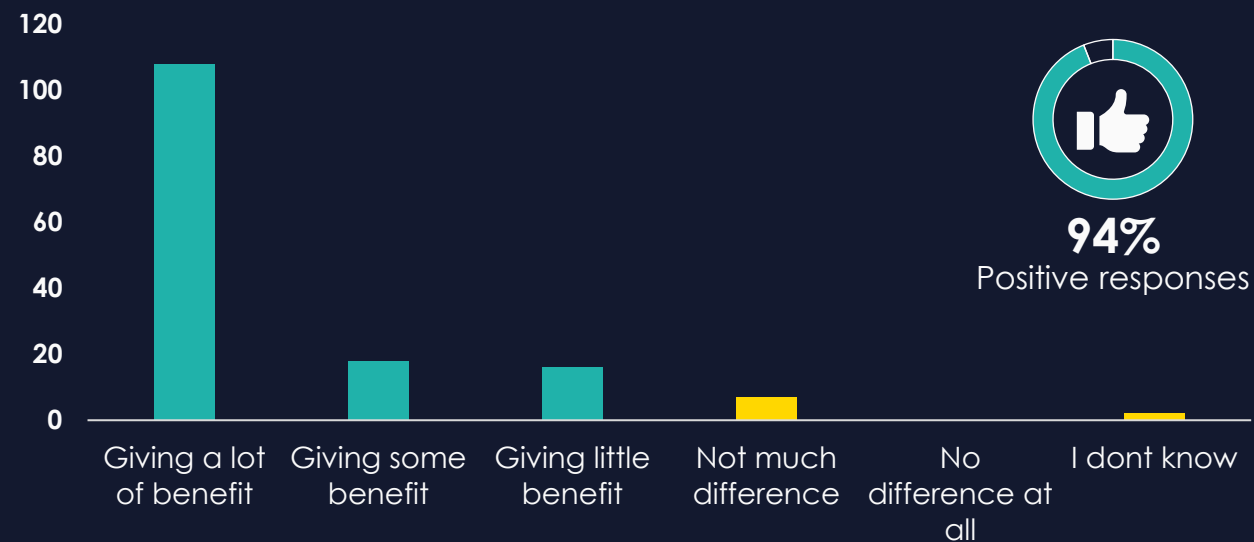
- This graph is providing the average IPOS scores completed on admission to discharge for each patient. We can see from this that the average scores have decreased on discharge proving that the patients time on the ward has been beneficial to them.
- Under each symptom we can see how many patients this relates to.

Mean IPOS scores on Death



- This graph is providing the average IPOS scores completed on admission to death for each patient. We can see from this that the average scores have generally decreased on death proving that the patients time on the ward has been beneficial to them. The only one to increase here is practical problems
- Under each symptom we can see how many patients this relates to.

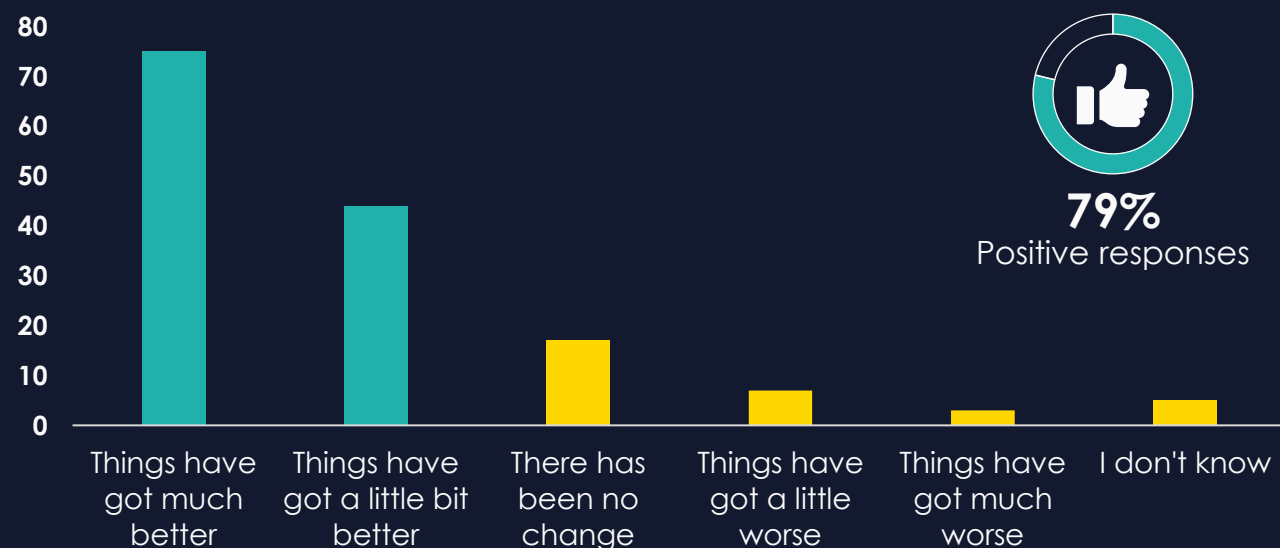
Views on Care Analysis



94%
Positive responses



Views on Care completed
151 Responses



79%
Positive responses

- When patients are discharged from the ward, those that are able are asked to complete a Views on Care assessment, one of the questions asks do you think the care team has made a difference to how things are. This graph represents the outcome from this
- They are also asked 'Over the last week, thinking about your main problems and concerns would you say that...' This graph represents the responses for this question



Outcome Measures Inpatient

Between **July 2024** to **June 2025**, the three Inpatient wards at Pilgrims Hospices reported the following patient outcome data...

Number of patients
admitted to the Wards



845 patients

**25yrs to
102yrs**



The age range of
patients admitted

Percentage of patients that were discharged
from the Hospice back home or a Care Home



30%

12 Days



Average number of days our patients
stay before being discharged

Percentage of patients discharged that said their
stay made a positive difference to their quality of
life



94%

What are Outcome Measures?

These are special tools that help describe the progress of care, support and treatment. Think of them as a compassionate way to ensure that patients and their families receive the best possible support during challenging times.

There are many different assessments that make up a suite of Outcome Measures. One of these assessments is something called an **IPOS** form which stands for **I**ntegrated **P**alliative-care **O**utcome **S**core.

We use this tool to monitor the effectiveness of each person's care throughout their time with us. This is completed ideally by the patient (or family/healthcare professionals involved in their care) and helps us make sure we are meeting each person's needs fully.

Each question gives a scoring scale. Below shows a summary of some of these questions that are asked both on admission and again on discharge or completed by a healthcare professional on death.

Pilgrims Hospices

IPOS - How are you?

Please write clearly. Your answers will help us to keep improving the support we offer you, and the support we offer others. Thank you.

Name: _____ Date of Assessment: _____

EMIS Number: _____

1. What is important to you right now? _____

2. What would you like to achieve in the next short while? _____

3. What have been your main problems or concerns over the past 3 days? _____

4. Over the past 3 days, have any of these symptoms affected you? For each symptom please tick the box that best describes how it has affected you.

	Not at all	Slightly	Moderately	Severely	Overwhelmingly	Cannot Assess
Pain	0	1	2	3	4	
Shortness of breath	0	1	2	3	4	
Weakness or lack of energy	0	1	2	3	4	
Nausea (feeling sick)	0	1	2	3	4	
Loss of appetite	0	1	2	3	4	
Feeling dizzy or lightheaded	0	1	2	3	4	
Feeling tired or exhausted	0	1	2	3	4	
Feeling nervous or anxious	0	1	2	3	4	
Feeling sad or depressed	0	1	2	3	4	
Feeling lonely	0	1	2	3	4	
Feeling confused	0	1	2	3	4	
Feeling dizzy or lightheaded	0	1	2	3	4	
Feeling tired or exhausted	0	1	2	3	4	
Feeling nervous or anxious	0	1	2	3	4	
Feeling sad or depressed	0	1	2	3	4	
Feeling lonely	0	1	2	3	4	
Feeling confused	0	1	2	3	4	

Are there any other symptoms? Please select one box to show how you feel each of these symptoms have affected you over the past 3 days (Optional)

1. _____

2. _____

3. _____

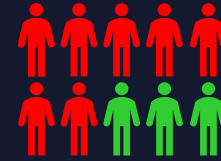
If a member of staff, if you are asked to do a short form

When patients were admitted to the ward...

6 out of 10 patients said that they had a *poor appetite* to a severe or overwhelming degree



6 out of 10 patients were experiencing *feeling anxious* at a severe or overwhelming degree



When patients were discharged from the ward...

Only 2 out of 10 patients still had a *poor appetite* to a severe or overwhelming degree



Only 2 out of 10 still experienced *feeling anxious* at a severe or overwhelming degree



When patients were admitted to the ward...

5 out of 10 said that they are experiencing *pain* at a severe or overwhelming degree



5 out of 10 said that they are experiencing *sore or dry mouth* at a severe or overwhelming degree



Of those patients that died the ward...

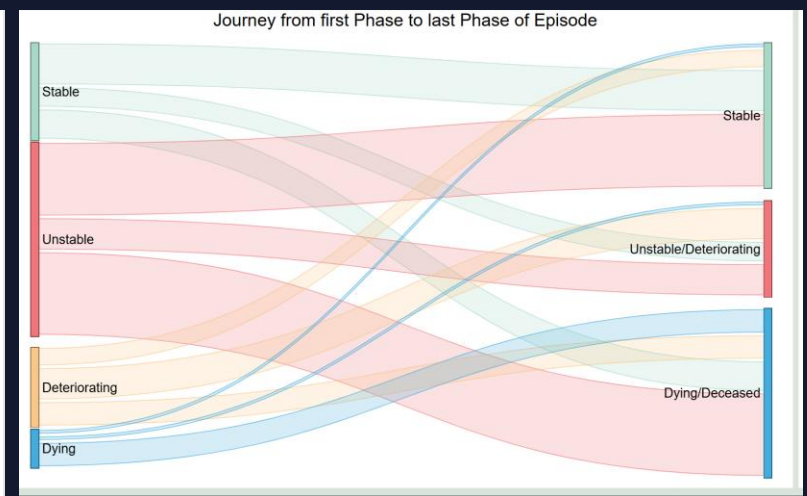
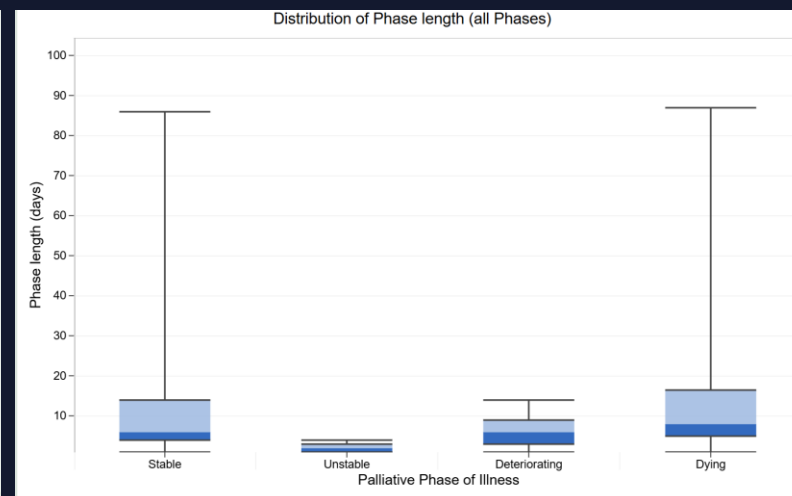
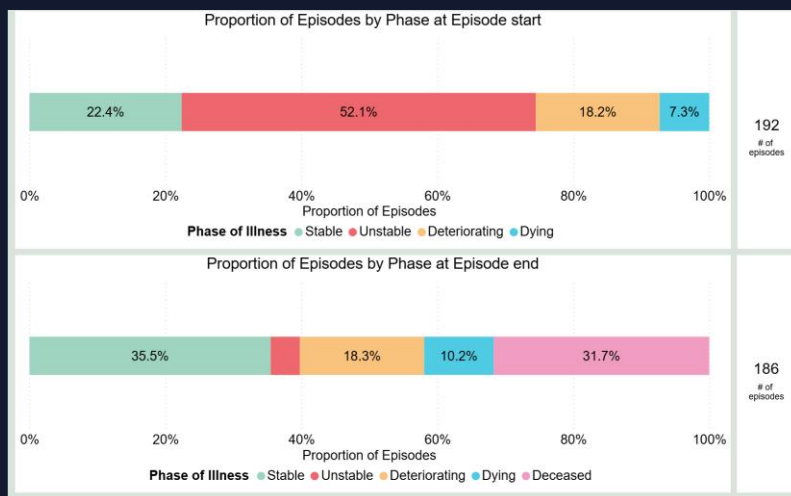
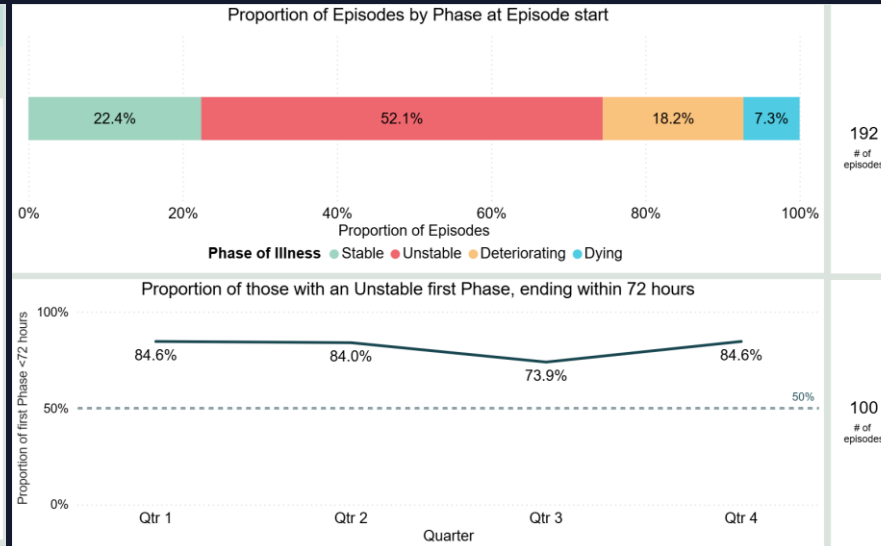
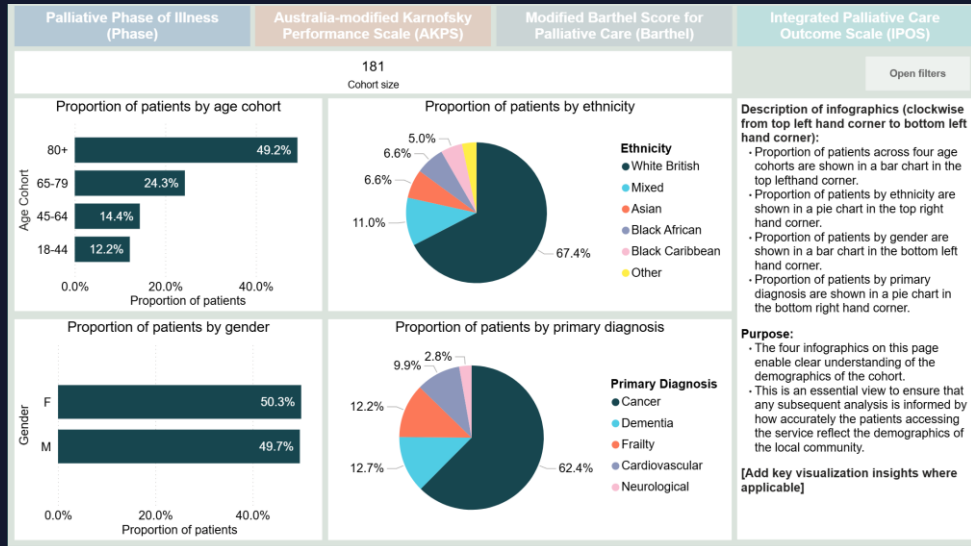
Only 1 out of 10 still experienced *pain* at a severe or overwhelming degree



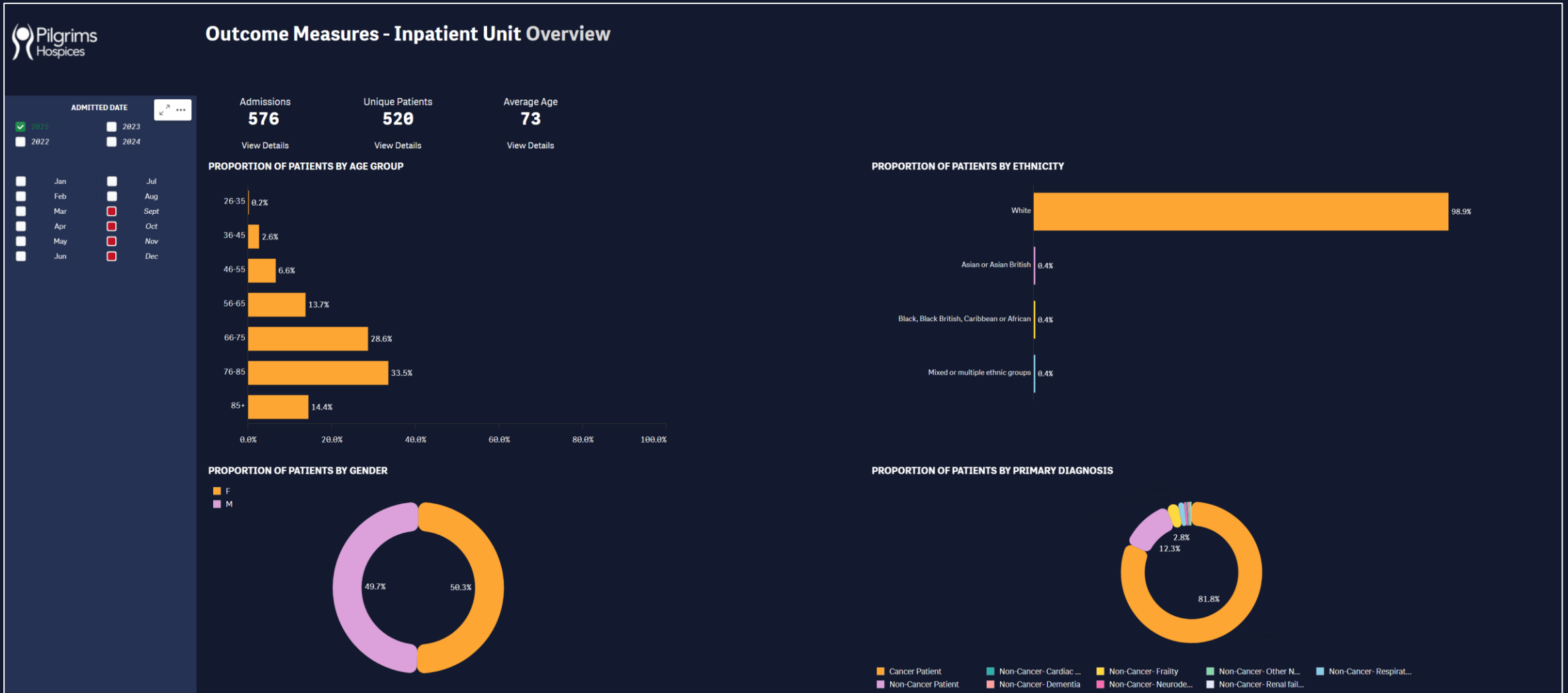
2 out of 10 still experienced *sore or dry mouth* at a severe or overwhelming degree



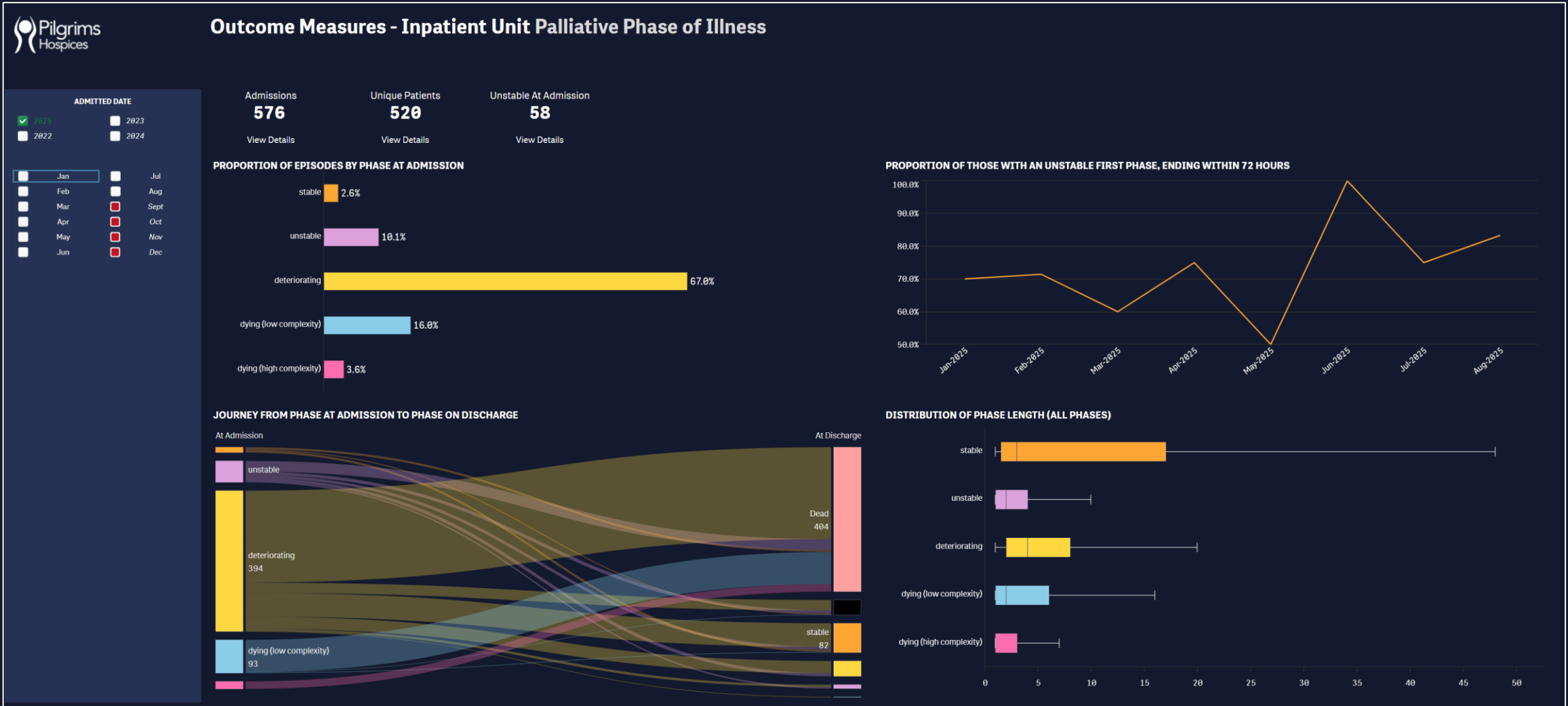
PCOM360 - Examples



Qlik Sense Examples



Qlik Sense Examples



Thank you for your time

Any Questions?



Outcome Measures (PCOM/OACC) Data Reporting

Robert Fletcher

Business Intelligence & IG Manager

Southern Hospice Group



Who are we

Southern Hospice Group was created by the merger of Martlets, St Barnabas and Chestnut Tree House hospices.

We operate within an Office 365 environment

We migrated from Crosscare to SystmOne through 2020, going live at the end of January 2021

We implemented strategic reporting as soon as we could following go-live.

St Barnabas have been using SystmOne a lot longer but only enabled strategic reporting once the merger was complete

We are currently engaged in a program of clinical and SystmOne integration

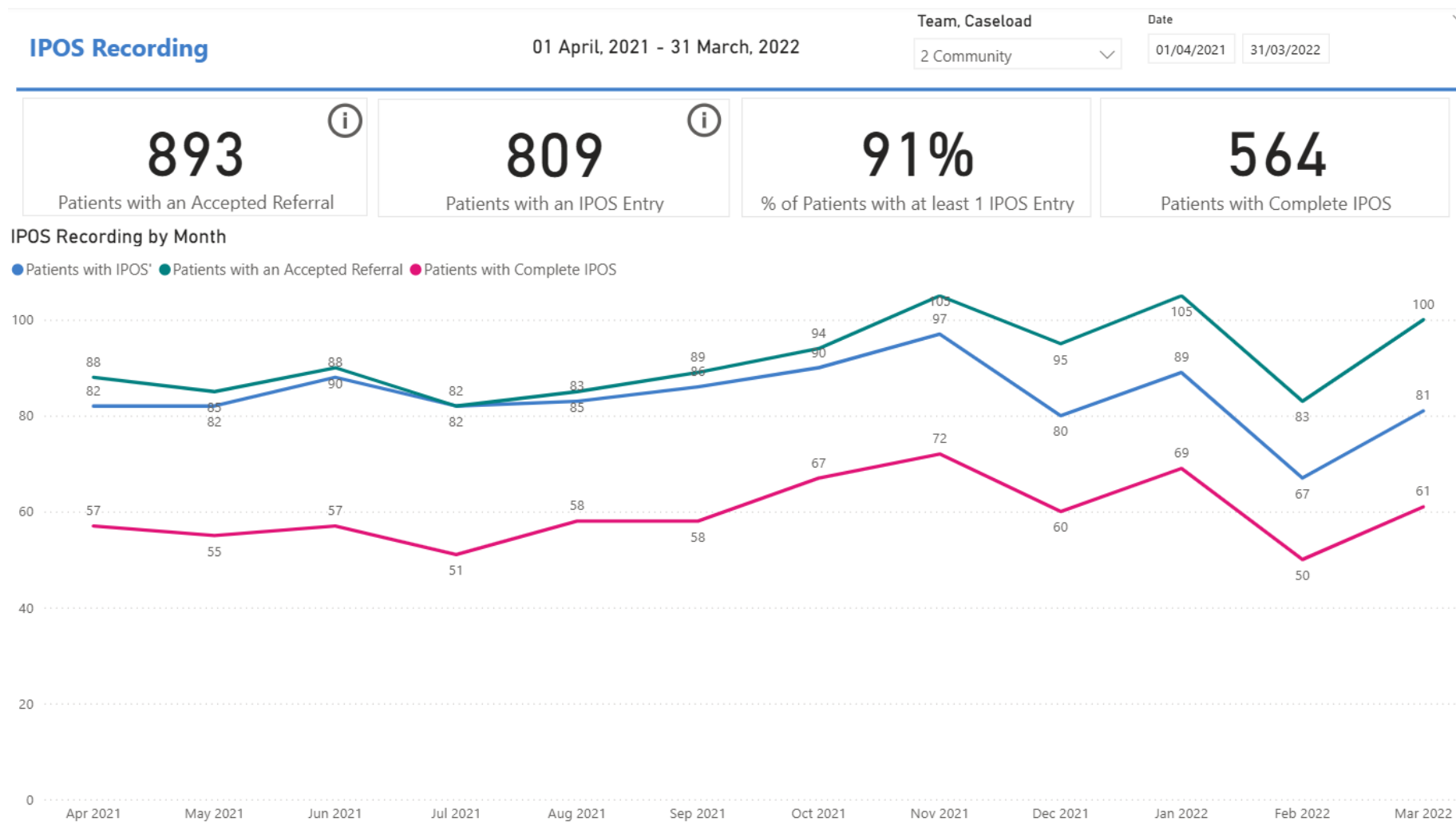


Contents

1. How IPOS measures are currently presented.
2. Working with related tables to isolate relevant IPOS values.
3. Explore some of the complex calculated columns that are needed to create a 'First/Latest' field.
4. Using these to derive metrics such as average First and Latest scores.

Chatham House rules – data is 'real' for Martlets Hospice, 2021 to 2022 only but recording not fully embedded across all services so not representative of true current picture

How IPOS measures are currently presented



How IPOS measures are currently presented

IPOS Score Spread

01 April, 2021 - 31 March, 2022

Setting

☒ Community
☐ IPU

Date

01/04/2021

31/03/2022

IPOS Score Spread by First/Last, NumericValue and CTV3Text

NumericValue ● 0 ● 1 ● 2 ● 3 ● 4



How IPOS measures are currently presented

Physical IPOS

01 April, 2021 - 31 March, 2022

Setting

Community
IPU

Date

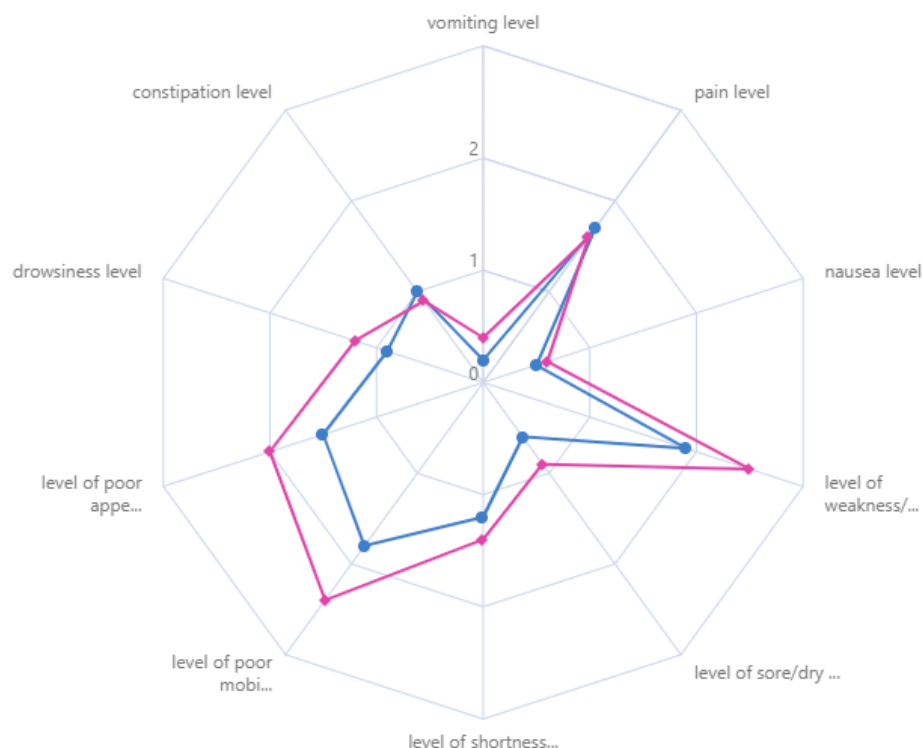
01/04/2021

31/03/2022

The Average First Value and Average Latest Value by IPOS Measure

Legend

Average First Value Average Latest Value



Number of Patients Represented

IPOS Measure	Patients	Entries
constipation level	401	802
drowsiness level	393	786
level of poor appetite	446	892
level of poor mobility	450	901
level of shortness of breath	439	878
level of sore/dry mouth	371	742
level of weakness/lack of energy	467	935
nausea level	392	784
pain level	458	917
vomiting level	385	770
Total	493	8407

Patients - The number of patients covered by the radar chart

Entries - The number of entries covered by the radar chart. This should be around double the patients count as each patient should have a first and latest. May be more due to duplicate entries.

Average First Value - This is the average value of the first IPOS Score for all patients with at least two entries.

Average Latest Value - This is the average value of the latest IPOS entry for all patients with at least two entries.

What do we need

- Patient data
 - Has to have at least 2 recordings of each measure we want to visualise
- Identification of the setting of care
- Methods to identify first and latest records
- Calculations to provide totals and other statistics

Working with related tables to isolate relevant values

- How do we find which patients have IPOS recorded?
- How do we find how many have a 'full set' of IPOS measures?
- How do we go about identifying the first and latest recording?

Strategic Reporting Files

SRCode – source of our patient level IPOS recordings

SRConfiguredListOption – source of event location, contact method and other text values

SRPatient – allows us to add other patient information when merged with main query

SRHospitalAdmissionAndDischarge – source of dates to identify IPU as setting of care

SREvent – source for our setting of care and other markers when merged with configured list option and hospital admission and discharge

Strategic Reporting Files 'merger relationships'

Merge

Select a table and matching columns to create a merged table.

IPOS

	SNOMEDCode	SNOMEDText	IsNumeric	NumericValue	NumericUnit	EpisodeType	IDEvent
	-1		TRUE	3		12259	28294856787
	-1		TRUE	3		12259	28294856787
nds	-1		TRUE	3		12259	28294856787
	-1		TRUE	3		12259	28294856787

Event

RowIdentifier	DateEventRecorded	DateEvent	IDProfileEnteredBy	IDDoneBy	IDStaffMemberProfile
26792874472	23/10/2020 08:23:40	23/10/2020 08:23:40	11901388	1585537	
28336062237	07/12/2020 17:10:58	07/12/2020 17:10:58	12292024	1187023	
28412906901	18/12/2020 18:43:16	18/12/2020 18:43:16	11987768	406535	
28823539868	06/01/2021 21:23:51	06/01/2021 21:23:51	12292024	1187023	

Join Kind

Left Outer (all from first, matching from second)

☐ Use fuzzy matching to perform the merge

▸ Fuzzy matching options

OK Cancel

Expand Event

Select the columns to expand.

- ☒ (Select All Columns)
- ☐ ClinicalEvent
- ☐ Contact Event Location
- ☐ Contact Method
- ☐ Date
- ☐ DateEvent
- ☐ DateEventRecorded
- ☐ EventIncomplete
- ☐ IDAuthorisedBy
- ☐ IDDoneBy
- ☐ IDPatient
- ☐ IDProfileAuthorisedBy
- ☐ IDProfileEnteredBy
- ☐ IDReferralIn
- ☐ IDStaffMemberProfileRole
- ☐ IDTeam
- ☐ IPU
- ☒ IPUDestinationAfterDischarge
- ☐ RowIdentifier
- ☒ Setting

Default column name prefix (optional)

OK Cancel

Finding IPOS records

= Table.SelectRows(#"Removed Columns", each not Text.StartsWith([CTV3Text], "IPOS - completed") and not Text.StartsWith([CTV3Text], "IPOS - main"))

RowIdentifier	DateEventRecorded	DateEvent	CTV3Text	NumericValue	IDEvent	IDPatient
1	29390906205	13/12/2020 12:02:22	IPOS - depression level		28294856787	
2	29390906205	13/12/2020 12:02:22	IPOS - level of feeling at peace		28294856787	
3	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
4	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
5	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
6	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
7	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
8	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
9	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
10	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
11	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
12	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
13	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
14	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
15	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
16	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
17	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
18	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
19	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
20	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
21	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
22	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
23	29390906205	13/12/2020 12:02:22	IPOS - level of anxiety or worry from family/friends		28294856787	
24	02/01/2021 09:52:16	02/01/2021 09:52:16	IPOS - depression level		28905274208	
25	02/01/2021 09:52:16	02/01/2021 09:52:16	IPOS - level of feeling at peace		28905274208	
26	02/01/2021 09:52:16	02/01/2021 09:52:16	IPOS - level of anxiety or worry from family/friends		28905274208	

Filter Rows

Apply one or more filter conditions to the rows in this table.

☐ Basic ☒ Advanced

Keep rows where

And/Or	Column	Operator	Value
	CTV3Text	does not begin with	IPOS - completed
And	CTV3Text	does not begin with	IPOS - main
And	CTV3Text	begins with	IPOS -

Add Clause

OK Cancel

Pivot and count

We are now going to pivot our table to produce columns of the CTV3Text and add a custom column to count how many of those columns have a value

Outcome Measures Reporting HUK Workshop

File Home Transform Add Column View Tools Help

Group By Use First Row as Headers Count Rows Transpose Reverse Rows

Data Type: Text Replace Values Fill Pivot Column Move Convert to List

Split Column Format Merge Columns Extract Parse Statistics Standard Scientific Rounding Information

Date Time Duration Run R script Run Python script

Queries [23]

- Transform File from Patient Demo [2]
 - Helper Queries [3]
 - Sample File
 - Parameter1 (Sample File)
 - Transform File
 - Transform Sample File
 - Transform File from Patient [2]
 - Helper Queries [3]
 - Sample File (2)

Pivot Column

Use names in the currently selected column to create new columns. Tables with nested columns are not supported.

Removed Columns", each not Text.StartsWith([CTV3Text], "IPOS - completed") and not Text.StartsWith([CTV3Text], "IPOS - main")

	A ^B _C CTV3Text	1.2 NumericValue	1 ² ₃ IDEvent	1 ² ₃ IDPatient
1	12/2020 13:02:29			
2	13/12/2020 13:02:29	IPOS - depression level	3	28294856787
3	13/12/2020 13:02:29	IPOS - level of feeling at peace	3	28294856787
4	13/12/2020 13:02:29	IPOS - level of anxiety or worry from family/friends	3	28294856787
5	13/12/2020 13:02:29	IPOS - sharing feelings with family/friends level	3	28294856787
6	13/12/2020 13:02:29	IPOS - level of practical problems addressed	3	28294856787
7	13/12/2020 13:02:29	IPOS - level of anxiety or worry about illness	3	28294856787
8	13/12/2020 13:02:29	IPOS - level of information received	3	28294856787
9	13/12/2020 13:02:29	IPOS - level of poor mobility	3	28294856787
9	13/12/2020 13:02:29	IPOS - drowsiness level	3	28294856787

Pivot and count

fx = Table.AddColumn(#"Pivoted Column", "IPOS Entries", each List.NonNullCount(List.Range(Record.FieldValues(_), 4, 17)))

	DateEventRecorded	DateEvent	IDEvent	IDPatient	IPOS - depression level	IPOS - level of feeling at peace	IPOS - level of anxiety or worry from family/friends	IPOS - sharing feelings with family/friends level
1	13/12/2020 13:02:29	13/12/2020 13:02:29	28294856787		3	3	3	
2	02/01/2021 09:52:16	02/01/2021 09:52:16	28905274208		1	1	1	
3	02/01/2021 12:03:42	02/01/2021 12:03:42	28905274206		null	null	null	
4	24/01/2021 16:27:09	24/01/2021 16:27:09	27032772652		null	null	null	
5	28/01/2021 13:05:34	28/01/2021 13:05:34	26942878141		3	null	null	
6	30/01/2021 09:33:21	30/01/2021 09:33:21	27071334140		1	1	2	

= Table.AddColumn(#"Pivoted Column", "IPOS Entries", each List.NonNullCount(List.Range(Record.FieldValues(_), 4, 17)))

	IPOS - constipation level	IPOS - level of poor appetite	IPOS - vomiting level	IPOS - nausea level	IPOS - level of weakness/lack of energy	IPOS - level of shortness of breath	IPOS - pain level	ABC 123 IPOS Entries
3	3	3	3	3	3	3	3	17
1	1	1	4	2	5	4	4	17
11				null	null	3	null	1
1				0	0	0	2	10
11				4	4	4	4	5
11				null	null	null	null	10
2				0	2	0	2	17
2	3	3	1	2	4	1	2	17
1	2	2	0	0	2	2	0	17
2	3	3	0	0	2	3	3	17
1	2	2	0	2	3	2	0	16
2	2	0	0	0	2	1	2	12
2	2	3	0	2	2	0	3	17
2	0	2	0	0	4	1	1	17
11	2	2	1	2	1	0	3	11
2	2	2	0	0	null	2	2	15
11	1	1	0	0	2	0	3	9
11	2	2	0	0	3	2	2	16

And at the other end our column counting entries

Learn about Power Query formulas

✓ No syntax errors have been detected.

OK Cancel

Where does this take us, what's next...?

[illegible]

Our expanded table after a bit of tidying up

	A ^B _C CTV3Text	1 ² ₃ IDPatient	DateEvent	1.2 NumericValue	1.2 Ro
1	IPOS - depression level		13/12/2020 13:02:29	3	
2	IPOS - depression level		02/01/2021 09:52:16	1	
3	IPOS - depression level		28/01/2021 13:05:34	3	
4	IPOS - depression level		02/02/2021 09:12:24	0	
5	IPOS - depression level		21/09/2021 08:48:30	2	
6	IPOS - level of feeling at peace		13/12/2020 13:02:29	3	
7	IPOS - level of feeling at peace		02/01/2021 09:52:16	1	
8	IPOS - level of feeling at peace		02/02/2021 09:12:24	0	
9	IPOS - level of feeling at peace		21/09/2021 08:48:30	4	
10	IPOS - level of anxiety or worry from family/friends		13/12/2020 13:02:29	3	
11	IPOS - level of anxiety or worry from family/friends		02/01/2021 09:52:16	1	
12	IPOS - level of anxiety or worry from family/friends		01/02/2021 08:13:35	4	
13	IPOS - level of anxiety or worry from family/friends		02/02/2021 09:12:24	0	
14	IPOS - level of anxiety or worry from family/friends		21/09/2021 08:48:30	4	
15	IPOS - sharing feelings with family/friends level		13/12/2020 13:02:29	3	
16	IPOS - sharing feelings with family/friends level		02/01/2021 09:52:16	1	
17	IPOS - sharing feelings with family/friends level		02/02/2021 09:12:24	0	
18	IPOS - sharing feelings with family/friends level		21/09/2021 08:48:30	0	
19	IPOS - level of practical problems addressed		13/12/2020 13:02:29	3	
20	IPOS - level of practical problems addressed		02/01/2021 09:52:16	1	
21	IPOS - level of practical problems addressed		21/09/2021 08:48:30	0	
22	IPOS - level of anxiety or worry about illness		13/12/2020 13:02:29	3	
23	IPOS - level of anxiety or worry about illness		02/01/2021 09:52:16	2	

What's next...?

Now we can create the measures that will allow us to build our various visualisations.

The first task is to build a formula to 'find' our First/Last records for each patient and for each IPOS measure

First and Last records

The following is a calculated column in our IPOS table and evaluates the criteria in a number of columns in the table in order to produce a valid 'First and Latest' marker for each patient and outcome measure

```
1 First/Last = IF(CALCULATE(MAX('IPOS'[Rank]),ALLEXCEPT('IPOS','IPOS'[IDPatient],'IPOS'[CTV3Text],IPOS[Setting]))
=CALCULATE(MIN('IPOS'[Rank]),ALLEXCEPT('IPOS','IPOS'[IDPatient],'IPOS'[CTV3Text],IPOS[Setting])), "Ignore", IF
(RANKX(CALCULATETABLE('IPOS',ALLEXCEPT('IPOS','IPOS'[CTV3Text],'IPOS'[IDPatient],IPOS[Setting])), 'IPOS'
[DateEvent],,asc,Dense)=CALCULATE(MIN('IPOS'[Rank]),ALLEXCEPT('IPOS','IPOS'[IDPatient],'IPOS'[CTV3Text],IPOS
[Setting])), "First", IF(RANKX(CALCULATETABLE('IPOS',ALLEXCEPT('IPOS','IPOS'[CTV3Text],'IPOS'[IDPatient],IPOS
[Setting])), 'IPOS'[DateEvent],,asc,Dense)=CALCULATE(MAX('IPOS'[Rank]),ALLEXCEPT('IPOS','IPOS'[IDPatient],'IPOS'
[CTV3Text],IPOS[Setting])), "Latest", "Ignore"))))
```

For each combination of **patient**, **IPOS measure**, and **setting**, this formula:

- Checks if there's **only one record** → returns "Ignore"
- If not:
 - Marks the **earliest record** as "First"
 - Marks the **latest record** as "Latest"
 - All others are "Ignore"

The main calculation is also dependent on a previously built calculated column to produce a rank based on the event date for the IPOS recording.

```
1 First/Last = IF(CALCULATE(MAX('IPOS'[Rank]),ALLEXCEPT('IPOS','IPOS'[IDPatient],'IPOS'[CTV3Text],IPOS[Setting]))  
=CALCULATE(MIN('IPOS'[Rank]),ALLEXCEPT('IPOS','IPOS'[IDPatient],'IPOS'[CTV3Text],IPOS[Setting])), "Ignore", IF  
(RANKX(CALCULATETABLE('IPOS',ALLEXCEPT('IPOS','IPOS'[CTV3Text],'IPOS'[IDPatient],IPOS[Setting])), 'IPOS'  
[DateEvent],,asc,Dense)=CALCULATE(MIN('IPOS'[Rank]),ALLEXCEPT('IPOS','IPOS'[IDPatient],'IPOS'[CTV3Text],IPOS  
[Setting])), "First", IF(RANKX(CALCULATETABLE('IPOS',ALLEXCEPT('IPOS','IPOS'[CTV3Text],'IPOS'[IDPatient],IPOS  
[Setting])), 'IPOS'[DateEvent],,asc,Dense)=CALCULATE(MAX('IPOS'[Rank]),ALLEXCEPT('IPOS','IPOS'[IDPatient],'IPOS'  
[CTV3Text],IPOS[Setting])), "Latest", "Ignore"))))
```

```
1 Rank = RANKX(CALCULATETABLE('IPOS',ALLEXCEPT('IPOS','IPOS'[CTV3Text],'IPOS'[IDPatient],IPOS[Setting])), 'IPOS'[DateEvent],,asc,Dense)
```

And finally...

The following measures now provide the calculations needed to produce our visualisations. As they are measures they react and adjust to all filters that are linked such as calendar, teams, settings and so on.

```
1 Average First Value = ROUND(CALCULATE(AVERAGE('IPOS'[NumericValue]),FILTER('IPOS','IPOS'[First/Last]="First")),1)
```

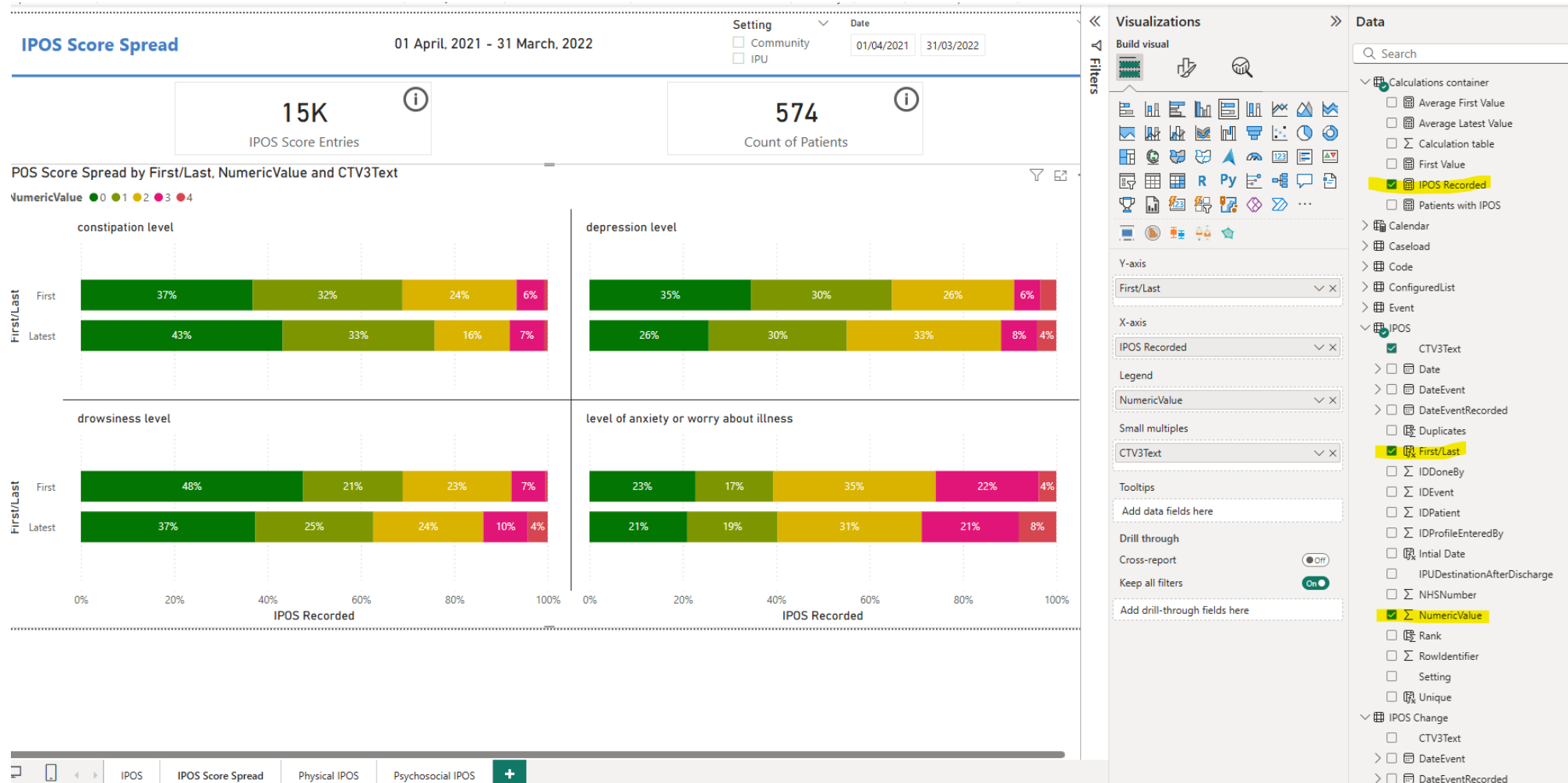
```
1 Average Latest Value = ROUND(CALCULATE(AVERAGE('IPOS'[NumericValue]),FILTER('IPOS','IPOS'[First/Last]="Latest")),1)
```

```
1 IPOS Recorded = COUNT(IPOS[IDPatient])
```

```
1 Patients with IPOS = DISTINCTCOUNT(IPOS[IDPatient])
```

```
1 Complete IPOS = 'IPOS Entries'[IPOS Entries] = "17"
```

Which brings us back to where we started from



Thank you

Questions...

Feedback Survey

Please consider sparing a few minutes to answer this survey, so that we can continue to improve future Big Conversation events:

<https://www.surveymonkey.com/r/RSLYXBS>

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ACC Liverpool, 25-27 November 2025

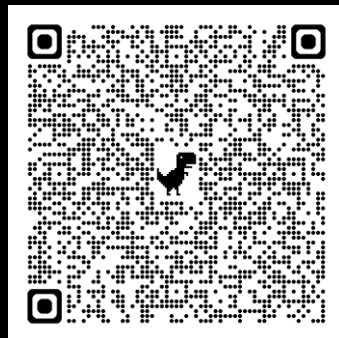
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