

EMIS Health Analytics

Primary Care & Commissioning



Vision

“To support longer and healthier lives for everyone by providing integrated, excellent and innovative healthcare IT for patients and those involved in their care”

Reducing
emergency
admissions



Reducing
health
inequalities



Improving
management
of long-term
conditions



Optimised
medications



Supporting
patients
and
clinicians



Access
anywhere,
at any time



Continuing
IT hardware
and support



Measuring
performance
against
targets

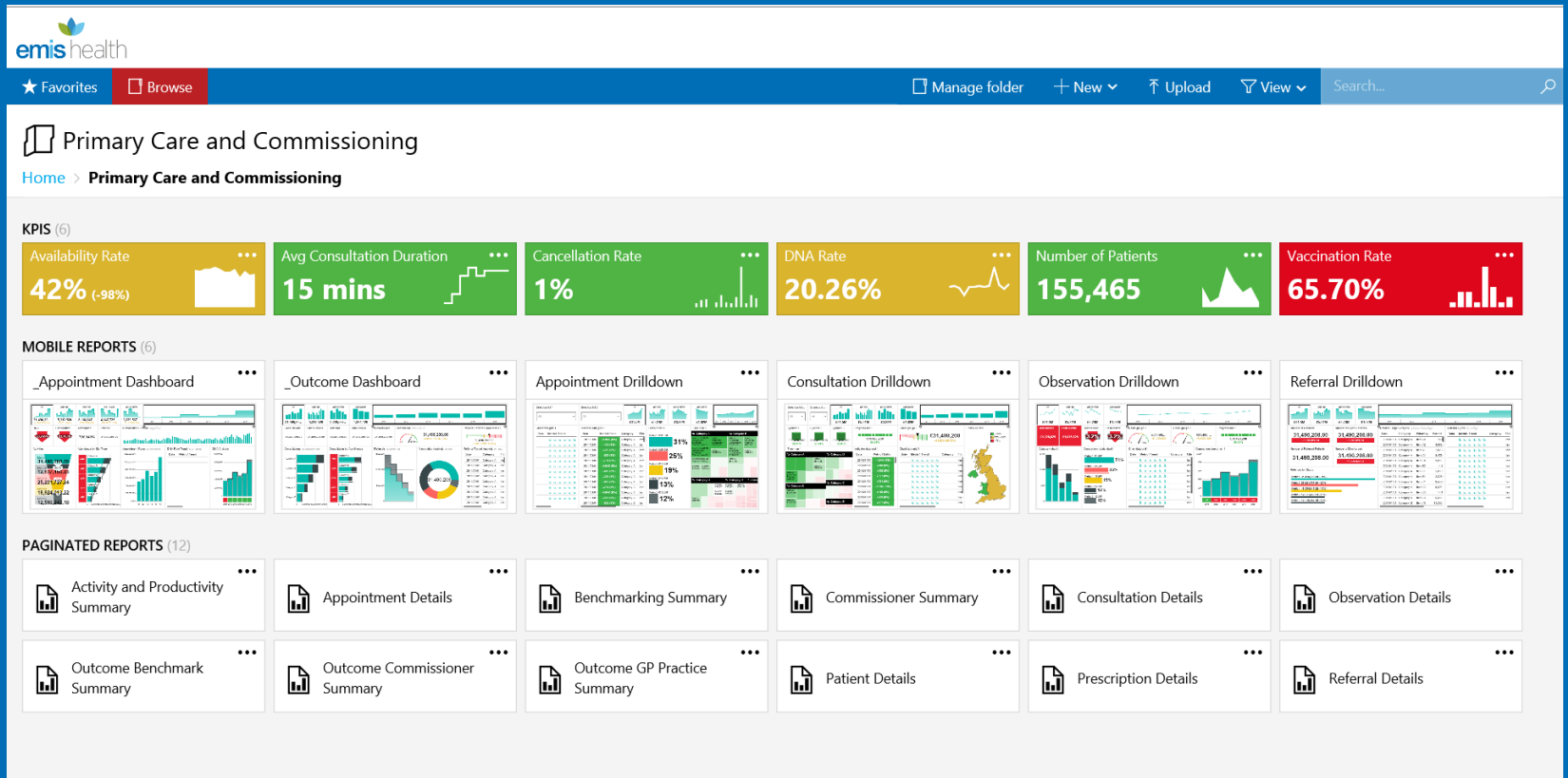


Improving
efficiency



emis health

EMIS Health Analytics



What is EMIS Health Analytics?

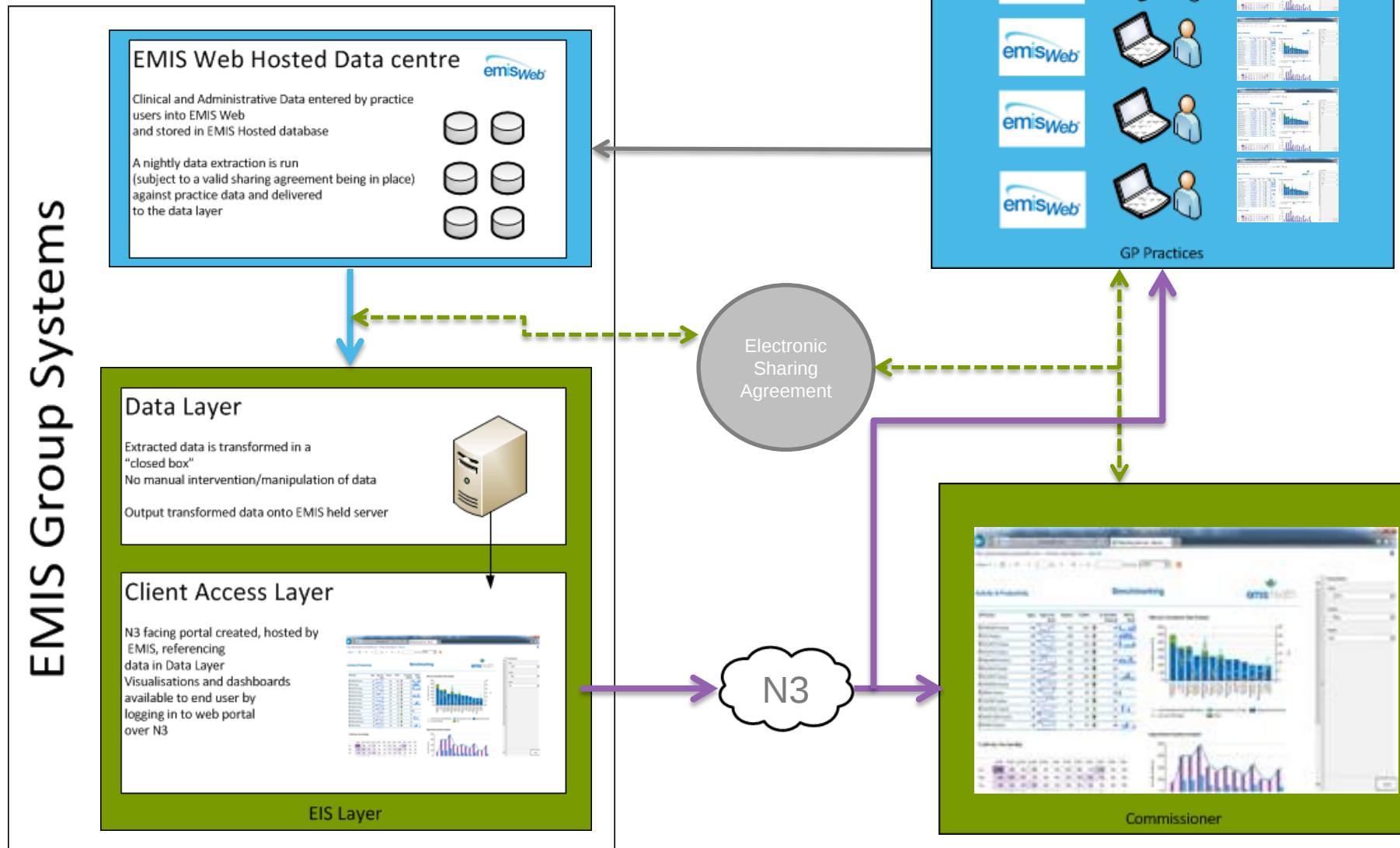
- A robust and scalable data warehouse and Business Intelligence solution
- Provided as a fully hosted service (or hybrid option)
- Consisting of data marts, multi-dimensional models, and reports and dashboards
- Suitable for business and clinical users to access their EMIS Web data in structures that have been designed for simple and intuitive reporting and data discovery
- Whilst not in the core offering currently, additional data sources can be integrated into the platform in the future
- Advanced analytics around predictive modelling and population health also in roadmap

Who is it for?

- Health Boards
- GPs within a HB
- GPs as federations
- Clinical services
- New model of care orgs
- Public Health & Local Authority



How does it work?



Major Features

- Data transformed into simple, intuitive data marts for analysis and reporting
- Suite of pre-built dashboards along themes of capacity, access, outcomes and LTCs
- Data visualised as grids, charts, maps, heat and tree maps, box plots
- Data automatically refreshed on a daily basis
- Supports data discovery by users allowing them to drill up/down and 'slice and dice' data
- Fully hosted and presented over secure N3

Report Portal



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Primary Care and Commissioning

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KPIS (6)

Availability Rate

42% (-98%)



Avg Consultation Duration

15 mins



Cancellation Rate

1%



DNA Rate

20.26%



Number of Patients

155,465



Vaccination Rate

65.70%



MOBILE REPORTS (6)

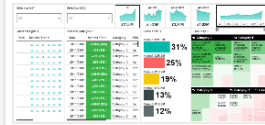
_Appointment Dashboard



_Outcome Dashboard



Appointment Drilldown



Consultation Drilldown



Observation Drilldown



Referral Drilldown



PAGINATED REPORTS (12)

Activity and Productivity Summary

Appointment Details

Benchmarking Summary

Commissioner Summary

Consultation Details

Observation Details

Outcome Benchmark Summary

Outcome Commissioner Summary

Outcome GP Practice Summary

Patient Details

Prescription Details

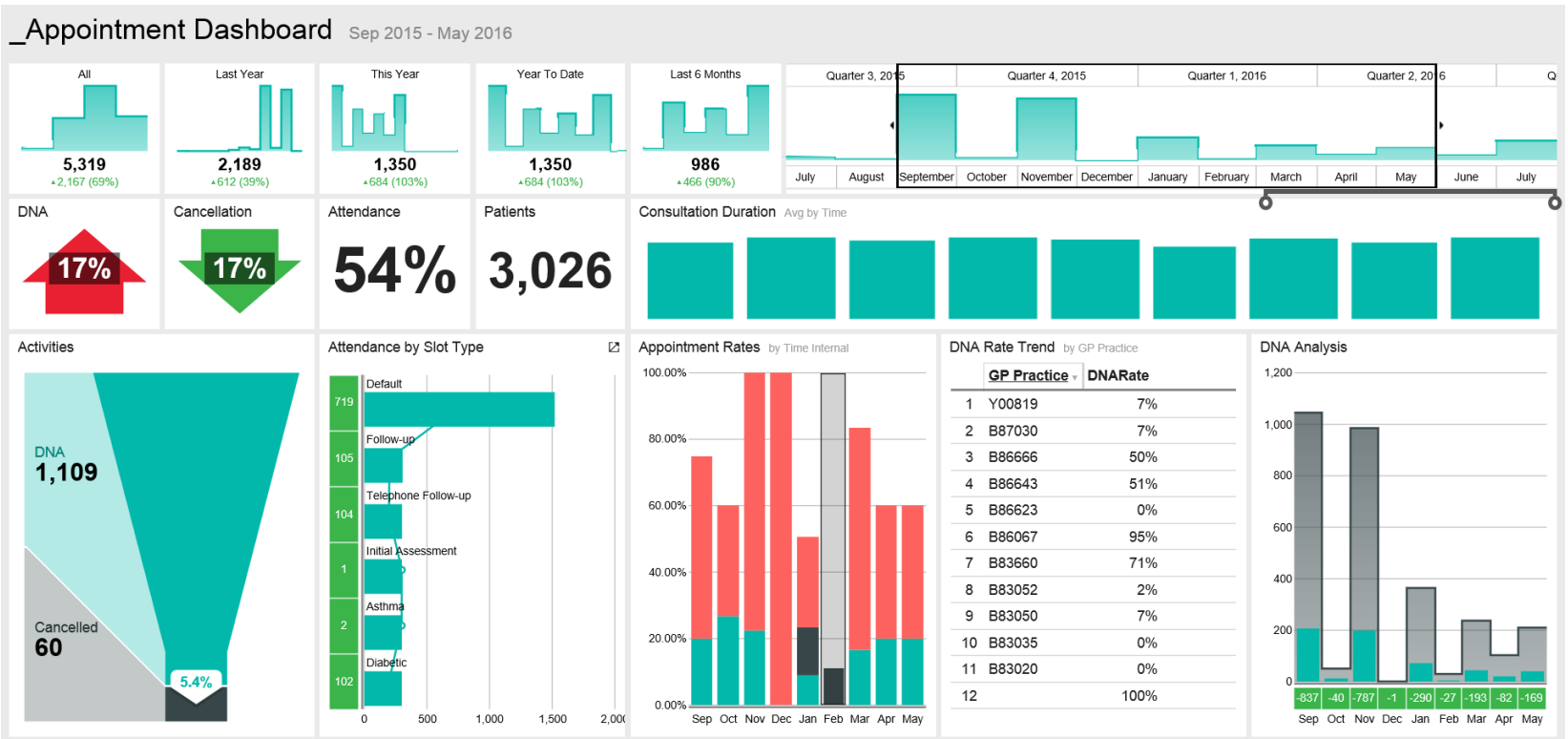
Referral Details

Appointment Dashboard



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Appointment Dashboard – click through

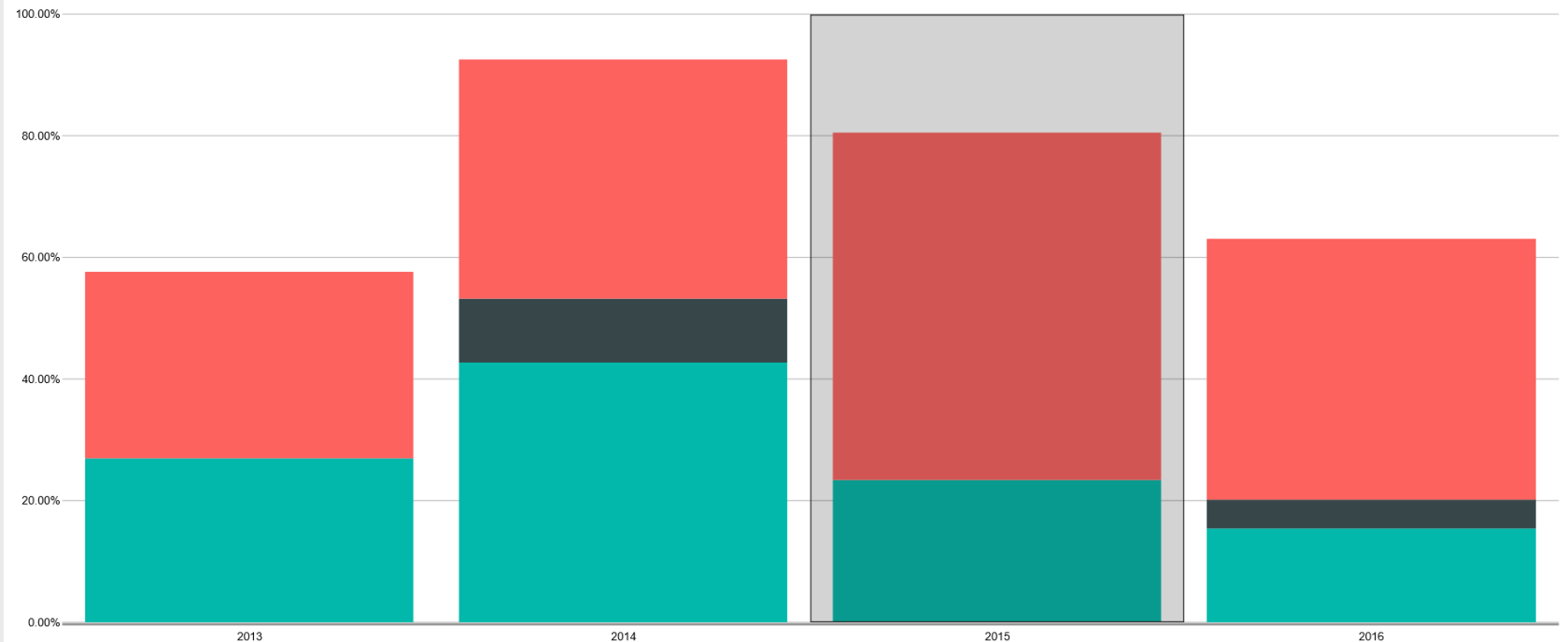


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_Appointment Dashboard Aug 2013 - Jul 2016

Appointment Rates by Time Interval



Appointment Dashboard – drilldown details



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Year	2015	Quarter Name	Q3	GP Practice	[Organisation].[Organisation Name].[A]
Month Name	All, Sep	Week Name	Wk38	Slot Type	All

1 of 1 100% Find | Next

Appointment Details

Date	Time	Session Category	Session Type	Slot Type	Nhs Number	Current Status	Status	Actual Duration
18/09/2015	10:00:00	Default List Category	Timed appointments	Asthma	VCY89723	Unknown	Attended	0
18/09/2015	11:00:00	Default List Category	Timed appointments	Asthma	IU8734	Unknown	Attended	0
18/09/2015	14:30:00	Default List Category	Timed appointments	Asthma	CVY9872	Unknown	Attended	0
18/09/2015	10:30:00	Default List Category	Timed appointments	Default	CH8934	Did not attend - no advance warning given	DNA	0
18/09/2015	11:00:00	Default List Category	Timed appointments	Default	IU8734	Did not attend - no advance warning given	DNA	0
18/09/2015	11:30:00	Default List Category	Timed appointments	Default	DHF8234	Did not attend - no advance warning given	DNA	0
18/09/2015	12:00:00	Default List Category	Timed appointments	Default	VCUIB8934	Did not attend - no advance warning given	DNA	0
18/09/2015	13:00:00	Default List Category	Timed appointments	Default	CH8934	Did not attend - no advance warning given	DNA	0
18/09/2015	15:00:00	Default List Category	Timed appointments	Default	CUY8934	Did not attend - no advance warning given	DNA	0
18/09/2015	15:30:00	Default List Category	Timed appointments	Default	IU8734	Did not attend - no advance warning given	DNA	0
18/09/2015	16:30:00	Default List Category	Timed appointments	Default	CVY9872	Did not attend - no advance warning given	DNA	0
18/09/2015	17:00:00	Default List Category	Timed appointments	Default	CUV89734	Did not attend - no advance warning given	DNA	0
18/09/2015	12:00:00	Default List Category	Timed appointments	Default	VCUIB8934	Unknown	Attended	0
18/09/2015	13:30:00	Default List Category	Timed appointments	Default		Unknown	Attended	0
18/09/2015	11:30:00	Default List Category	Timed appointments	Follow-up	DHF8234	Activity / Intervention completed		0
18/09/2015	16:30:00	Default List Category	Timed appointments	Follow-up	CVY9872	Activity / Intervention completed		0
18/09/2015	12:30:00	Default List Category	Timed appointments	Initial Assessment	JHSDF837	Unknown	Attended	0
18/09/2015	16:00:00	Default List Category	Timed appointments	Initial Assessment	VCBU98234	Unknown	Attended	0
18/09/2015	17:00:00	Default List Category	Timed appointments	Initial Assessment	CUV89734	Unknown	Attended	0



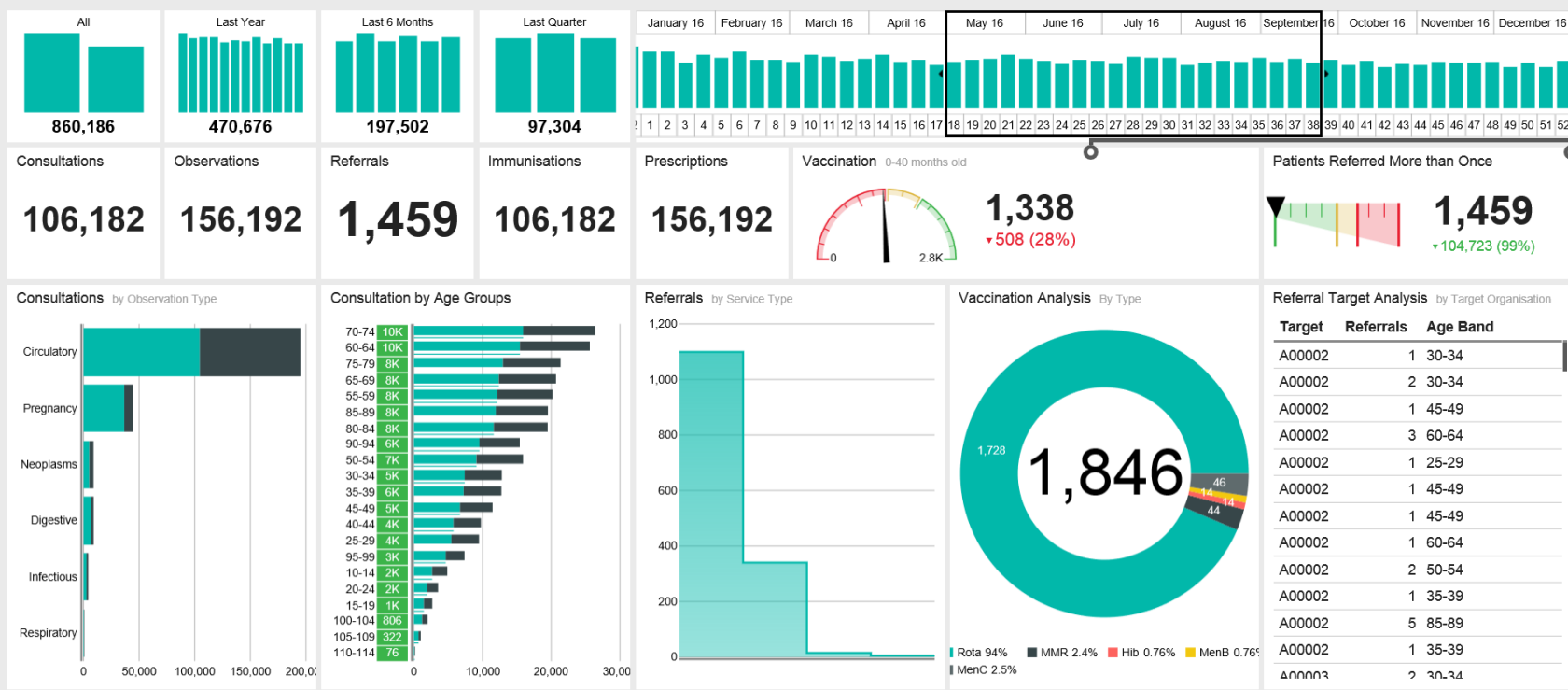
Outcome Dashboard



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_Outcome Dashboard May 1 - Sep 24, 2016



Outcome Dashboard - drillthrough



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60-64

81,212

±66%

No_of_Consultations 32,356 No_of_Observations 48,856



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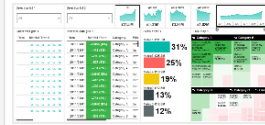
_Appointment Dashboard



_Outcome Dashboard



Appointment Drilldown



Consultation Drilldown



Observation Drilldown



Referral Drilldown



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Summary Reports

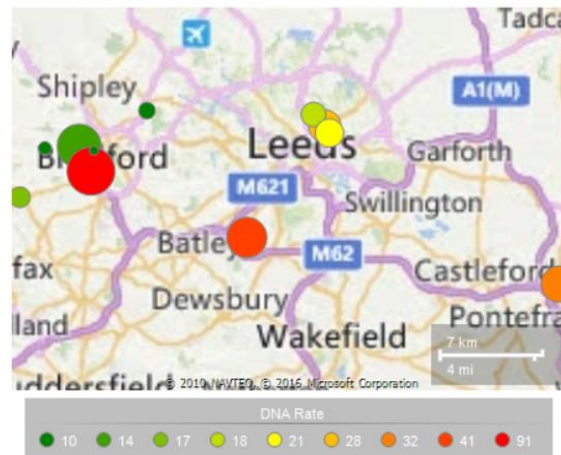
Commissioner - Activity & Productivity

Appointment Slot Type	Appts	Appts by Week	No of Patients	% DNA	Attended
Default	2,836		2,649	40%	
Diabetic	566		551	1%	
Asthma	564		513	1%	
Initial Assessment	564		524	1%	
Telephone Follow-up	564		517	1%	
Follow-up	564		517	1%	
Provisionally Booked	1		1	100%	
Comment	1		1	100%	

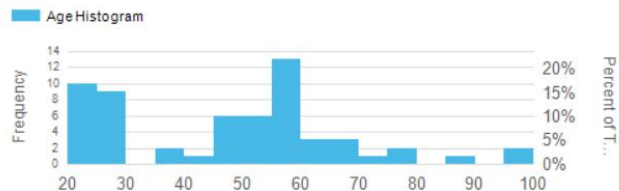
% DNA Day Time Heat Map

Time	8	9	10	11	12	13	14	15	16	17	18	19	20
Mon		23	20	26	21	19	26	24	20	19	18		
Tue		21	21	16	23	17	21	24	16	21			
Wed		18	21	21	18	22	18	22	21	20	100	50	50
Thu	10	17	21	19	19	23	19	21	19	21			
Fri	21	17	25	25	17	21	9	25	17	25			

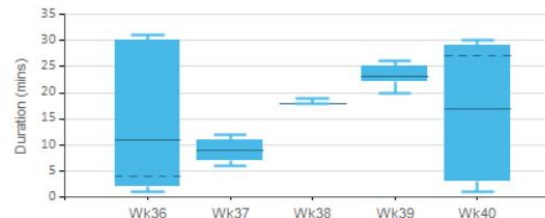
DNA Rates



Number of Patients Attending More than Once in a Month



Consultation Duration Weekly Analysis



Summary Reports



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Year: Quarter:
 Month: Week:

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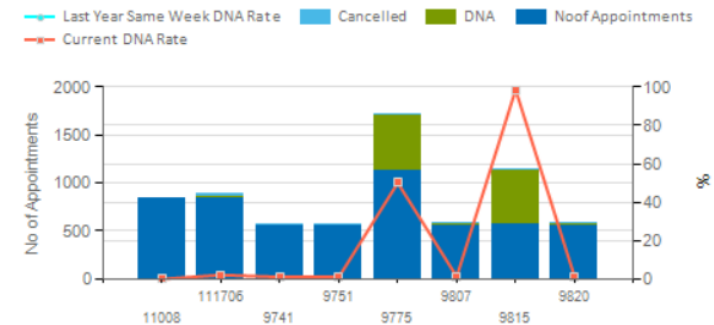
Benchmarking - Activity & Productivity

GP Practice	Appts	Appts Last Week	Patients	% DNA	DNA by Week
9775	1132		990	50%	
111706	843		733	2%	
11008	842		839	0%	
9807	568		527	1%	
9815	568		519	99%	
9751	564		524	1%	
9820	564		517	1%	
9741	564		517	1%	

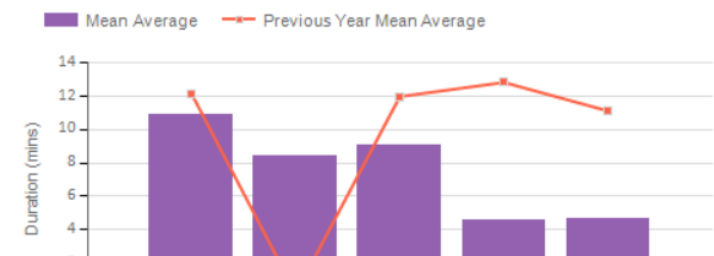
% DNA Day Time Heat Map

	8	9	10	11	12	13	14	15	16	17	18	20
Mon	0%	23%	21%	26%	21%	19%	25%	23%	20%	19%	18%	0%
Tue	0%	22%	21%	16%	23%	17%	21%	24%	16%	21%	0%	0%
Wed	0%	18%	21%	21%	18%	22%	18%	21%	21%	20%	100%	50%
Thu	10%	17%	21%	19%	19%	23%	19%	21%	19%	21%	0%	0%
Fri	21%	17%	25%	25%	17%	21%	9%	25%	17%	25%	0%	0%

DNA and Cancellation Rate Analysis



Consultation Duration Analysis



Summary Reports



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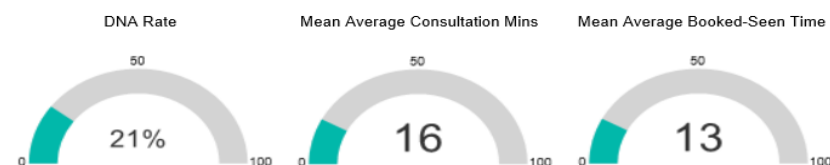
Home > Primary Care and Commissioning > Activity and Productivity Summary

Year: 2015 Quarter: Q3 GP Practice: [Organisation].[Organisation Name].[A]

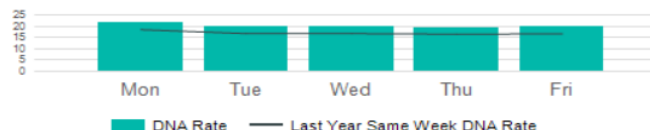
Month: All Week: All

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GP Practice Summary - Activity and Productivity



DNA Analysis By Week



Available (unbooked) Appointment Slots Day Time Heat Map

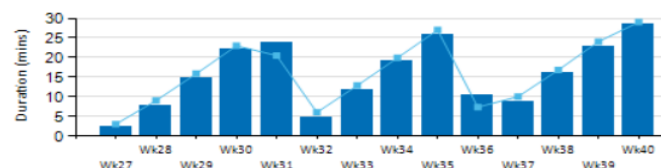
	8	9	10	11	12	13	14	15	16	17	18	19	20
Mon	0%	41%	46%	40%	43%	44%	43%	43%	41%	41%	43%	0%	0%
Tue	0%	39%	40%	42%	38%	44%	38%	37%	43%	40%	0%	0%	0%
Wed	0%	41%	41%	40%	40%	39%	43%	39%	40%	42%	0%	100%	50%
Thu	50%	37%	42%	42%	40%	40%	38%	42%	45%	33%	0%	0%	0%
Fri	37%	50%	50%	25%	17%	50%	59%	33%	33%	25%	0%	0%	0%

% DNA Day Time Heat Map

	8	9	10	11	12	13	14	15	16	17	18	19	20
Mon		23%	20%	26%	22%	17%	26%	24%	19%	20%	18%		
Tue		20%	22%	15%	23%	18%	18%	25%	15%	20%			
Wed		19%	18%	21%	18%	21%	19%	19%	22%	19%	100%	50%	50%
Thu	10%	17%	21%	19%	19%	23%	19%	21%	19%	21%			
Fri	22%	17%	25%	25%	17%	22%	9%	25%	17%	25%			

Appointment Slot Type	Appts	DNA	Cancellation	% DNA	No of Patients
Default	2838	1141	474	40%	2,650
Diabetic	566	7	94	1%	551
Asthma	564	7	94	1%	513
Telephone Follow-up	564	7	104	1%	517
Initial Assessment	564	6	94	1%	524
Follow-up	564	6	94	1%	517
Provisionally Booked	1	1	04	100%	1
Comment	1	1	04	100%	1

Consultation Duration Monthly Analysis



Summary Reports



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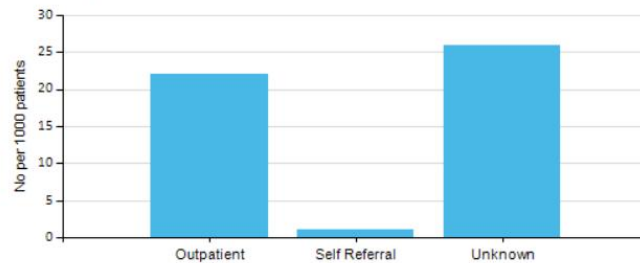
Home > Primary Care and Commissioning > Outcome Commissioner Summary

Navigation bar with controls: back, forward, search, refresh, zoom (100%), save, print, and a search box with 'Find | Next'.

Commissioner - Outcome

No of Patients	Consultations	Observations	Referrals	Immunisations	Prescriptions Issued	Prescription Courses
	7,201	31,446	297	452		

Referral Type Analysis



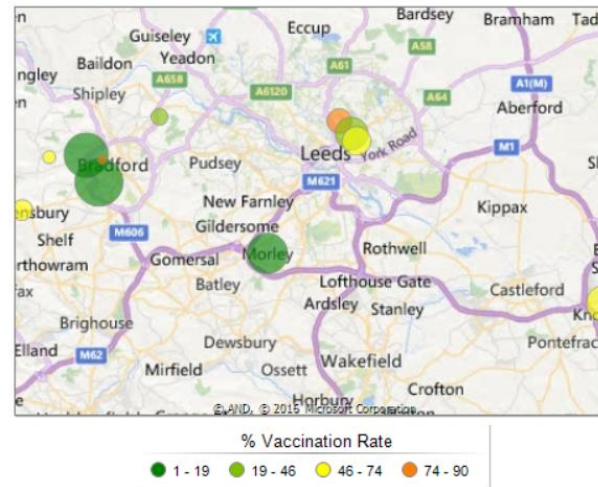
Number of Consultations by Observation Type

Age	10-14	15-19	20-24	25-29	30-34	45-49	50-54	55-59	60-64	65-69	70-74
Circulatory	1247	841	1914	3944	4002	3857	6206	7279	7859	5945	1450
Digestive	551	290	116	493	290	232	957	725	725	493	87
Infectious		87	87	174	261	232	348	580	435	319	116
Neoplasms				493	435	464	696	986	783	667	406
Pregnancy	406	145	522	783	1247	638	725	986	1044	870	261
Respiratory			29		87			58	145	145	

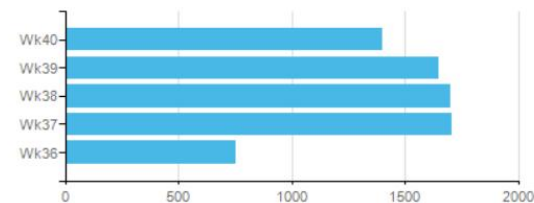
Number of Patients Referred to More than One Service in a Month



GP Vaccination Rates



Number of Consultations Weekly Analysis



Summary Reports



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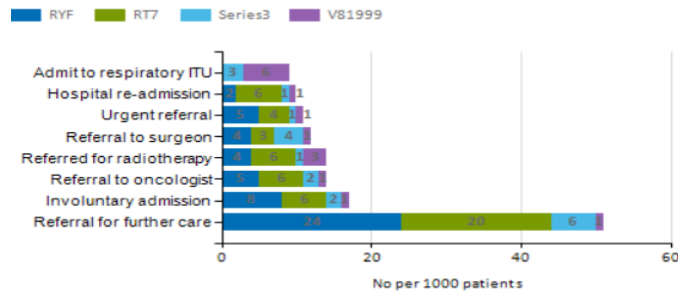
me > Primary Care and Commissioning > Outcome GP Practice Summary

Year: Quarter: Month: Week:
 Practice: Age Band: Ethnicity: Gender:
 Country of Birth:

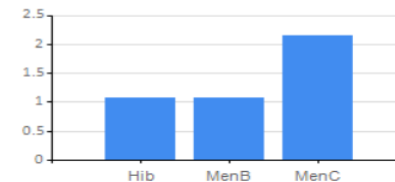
< of 1 > | | | Next

Practice - Outcome

Referral Type Analysis



Vaccination Rate of Children Ages 0-40 Months

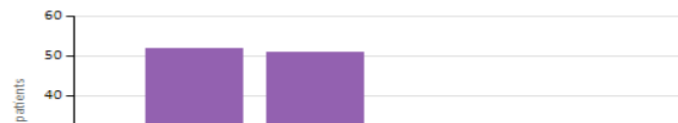


Total Number of Patients	4397
Number of Female Patients	1492
Number of Male Patients	1372
Deprivation	8
Spoken Language	100%

Number of Consultations by Observation Type and Age Group

Observation	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Circulatory	11	13	6	26	34	41	28	31
Digestive	3	5	1	5	5	6	4	1
Infectious		1	1	2	2	5	1	
Neoplasms		1		7	2	2	2	5
Pregnancy	1	4	1	9	7	9	5	9
Respiratory					1	2		

Referral Target Analysis



Date	Consultations	Observations	Referrals	Immunisations	Vacc Rate	Prescriptions Issued
20/09/2015	260	1154	24	12	13%	
21/09/2015	233	960	23	16	17%	
22/09/2015	264	1316		24	26%	
23/09/2015	269	1132	8	34	37%	
24/09/2015	283	1482	23	24	26%	
25/09/2015	261	1190	59	14	15%	

Details



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Year	2016	Quarter	All, Q3	GP Practice	[Organisation].
Month	All, Apr, Aug, Dec, Oct	Week	All		

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Patient Details

Patient Number	Patient Name	EMIS Number	Date Of Birth	Age	Gender	Ethnicity	Usual GP Name	Address
2	Raymond Red	K987	1929-08-04	87			Dr David Stables	1 Harehills
22	Isaac Indigo	8934	1991-03-03	25			Dr David Stables	11 Broken
31	Briony Brown	9834	1994-06-30	22			Dr David Stables	51 High St

Patient Details Report run on: 04/08/2016 11:30:54 Page 1 of 1

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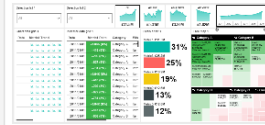
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What is its value?

- Off-the-Shelf reports & data discovery
- Close to real-time
- Huge savings in time spent by Information Teams not having to process data
- Hosted, therefore no hardware/software or additional licensing needs to be provisioned by the customer
- No internal development costs and mitigates the risk of knowledge being lost due to leavers or wider NHS organisational change
- Solution pays for itself many times over in equipment and staff cost savings

Information Governance

- Data streamed to EMIS Health Analytics platform only where a valid, active Data Distribution agreement in EMIS Web
- Patient opt outs and opt ins (93C0 etc.)
- Personal Confidential Data (PID)
- Security framework
- Integration with EMIS Health Identity Service (planned)

How does it compare to extracts & ES&R?

	Data Extractions	Enterprise Search and Reports	EMIS Health Analytics
Brief description	Raw data, suitable for analysis by sufficiently skilled organisations, or to feed their own Risk Stratification or monitoring tools – Suitable for larger organisations which have in-house data warehouses, or ability to interrogate large volumes of data.	Ad-hoc population searching and clinical auditing tools. Suitable for small to medium sized customers reporting on EMIS Web practice data.	Robust and scalable data warehouse and Business Intelligence solution provided as a fully hosted service. Consisting of data marts, multi-dimensional models, and reports and dashboards; a rapid deployment enables business and clinical users to immediately access their EMIS Web data in structures that have been designed for simple and intuitive reporting and data discovery via a 'drag and drop' interface.
Transfer mechanism	SFTP file download of restorable .bak file (SQL database)	EMIS Web client installed	Web Portal (N3)
Support	Standard EMIS Health Support	Standard EMIS Health Support	Standard EMIS Health Support
Hosted	No	Yes - client required	Yes - web access
Frequency	Up to weekly	Ad hoc	Daily
Population size	Unlimited but long extraction times	Optimised for <60K patients	Unlimited
Reporting type	Full database backup	Executed queries against live EMIS Web data	Pre-built transformed data models and visualisations– Off the shelf, with local configurability
Organisation	Sufficiently skilled analysts to interrogate a raw SQL Database back-up, SQL Server (2008r2 or above) and associated reporting/analysis tools	N3 Connectivity, EMIS Web client, end-user training for Search and Reports module – See IF2255 for client hardware requirements	N3 Connectivity, IE9 or equivalent

Roadmap

- Outcomes
- Long Term Conditions
- CCG Assessment Framework
- Mixed estates
- Population Health
- Create your own reports/dashboards
- EMIS Web Analytics Portal and Single Sign On
- Transformed Model available for local use
- Integration with Community Data
- Predictive modelling, Machine Learning, text analysis...
- 'Bolt on' modules

Next Steps

- Early Adopter version available now
- 15 day lead time from order to activation
- Pre order now for October activation
- Sign up by end 2016 to be part of EAP

