Technology & business KPIs diagnostic & data platform implementation

Veterinary care roll-up

Conducted a data and reporting infrastructure assessment for a U.S.-based Veterinary Care Aggregator with 30+ clinics, followed by designing a future state. Built the data architecture based on this assessment by integrating data from 10+ practice management, accounting and payroll systems. Set up the reporting suite to unlock visibility into key financial and operational metrics, enhancing decision-making and operational efficiency.

Veterinary company needs to conduct KPIs diagnostic and design enterprise data warehouse

Picture this…

You're looking for key opportunities to streamline, standardize, and augment the data infrastructure and reporting, develop an Enterprise Data Warehouse along with the executive reporting suite. Currently, there is no visibility into financial and operational performance due to the absence of a scalable data environment results in manual reporting processes with high errors and turnaround time across departments.

You turn to Accordion.

We partner with your team to conduct a data and reporting infrastructure assessment by integrating data from 10+ practice management, accounting and payroll systems, set up the reporting suite for visibility into key financial and operational metrics, including:

1) Performing an assessment of the current state of data and reporting infrastructures encompassing over 200 KPIs, and business processes and documented the gaps in data, process, and technology
2) Designing and recommending the optimal Enterprise Data Architecture with the functionality to automatically onboard new clinics on same platform and thus provide faster visibility into the new practices post-acquisition to support accelerated M&A activity and clinic growth targets for the upcoming years
3) Building a robust Enterprise Data Warehouse on Azure, serving as a single source of truth for reporting across functions along with the next steps to enhance current reporting in terms of integration of additional dimensions and new KPIs
4) Unlocking visibility into key financial indicators such as revenue, revenue per patient, profit and operational indicators such as visits, active patients, clinic utilization, inventory and patient details across clinics and DVMs (Doctors of Veterinary Medicine) with 10 executive & functional Power BI dashboards

Your value is enhanced.

You have automated self-serve enterprise reporting suite to eliminate the manual report preparation resulting in potential savings of ~$2.5M in 2 years. You have savings of $200K per annum from the enhancement of the control environment to reduce the risk of material error, data discrepancies, etc. You also have reduced the turnaround time for gaining visibility into the performance of newly acquired practice from 3 months to 3 weeks and reduced risks by maintaining data integrity and security, particularly during the planned 5X expansion of practices over the coming years.

TECHNOLOGY & BUSINESS KPIS DIAGNOSTIC & DATA PLATFORM IMPLEMENTATION

KEY RESULT

- ~$2.5M of potential savings
- ~$200K savings per annum
- Reduced TAT from 3 months to 3 weeks

VALUE LEVERS PULLED

- Technology & Tool diagnostic
- Data Maturity Assessment
- Enterprise KPI Gap Assessment
- Sponsor dashboard design
- Future state enterprise data warehouse design

Technology & Business Diagnostic

Data assessment and EDW build for a veterinary care aggregator

Situation

- Client lacked visibility into financial and operational performance within the organization due to the absence of a scalable data environment which had resulted in manual reporting processes with high errors and turnaround time across different departments
- Partnered with the client to perform an assessment to identify key opportunities to streamline, standardize, and augment the data infrastructure and reporting and developed an Enterprise Data Warehouse along with the Executive reporting suite

Accordion Value Add

- Performed an assessment of the current state of data and reporting infrastructures encompassing over 200 KPIs, and business processes and documented the gaps in data, process, and technology.
- Designed and recommended the optimal Enterprise Data Architecture with the functionality to automatically onboard new clinics on same platform and thus provide faster visibility into the new practices post-acquisition to support accelerated M&A activity and clinic growth targets for the upcoming years
- Built a robust Enterprise Data Warehouse on Azure, serving as a single source of truth for reporting across functions along with the next steps to enhance current reporting in terms of integration of additional dimensions and new KPIs
- Unlocked visibility into key financial indicators such as Revenue, Revenue per patient, Profit and operational indicators such as visits, active patients, clinic utilization, inventory and patient details across clinics and DVMs (Doctors of Veterinary Medicine) with 10 Executive & functional power BI dashboards

Impact

- The automated self-serve Enterprise reporting suite could eliminate the manual report preparation resulting in potential savings of ~$2.5M in 2 years
- Potential savings of $200K per annum from the enhancement of the control environment to reduce the risk of material error, data discrepancies, etc.
- The Data Warehouse would reduce the turnaround time for gaining visibility into the performance of newly acquired practice from 3 months to 3 weeks
- The designed architecture would improve decision-making and reduce risks by maintaining data integrity and security, particularly during the planned 5X expansion of practices over the coming two years

Methodology/ approach of data infrastructure assessment

	Assess Current State Data & Reporting Infrastructure	Design Target State Reporting	Implementation Roadmap & Sponsor dashboard mock-up
Reporting & Analytics	• Evaluated existing reporting process through **interviews and working sessions** with functional leads • Identified the **key pain points** with respect to development and maintenance of the reports • Documented and **prioritized existing KPI metrics** and data gaps in the systems	• Performed **Enterprise KPI data mapping** with source systems • Conceptualized the list of dashboards and additional KPIs that could be tracked for **comprehensive operational and strategic review**	• Finalized the **KPI Metrics Matrix** that maps systems to KPIs, along with the feasibility analysis, complexity and priority of deriving a KPI across different dimensions • Developed reporting **mock-ups for sponsor and practice leadership**
Data Management & Technology	• Assessed current technology, tools and identified key systems in each function which need to be **ingested & standardized across practices** • Identified **high impact systems** in terms of efforts and benefits of integration and harmonization	• Designed the **Future state Enterprise Data Architecture diagram** • Performed a **comparative analysis of different technologies** to derive the final recommendation	• **Assessed API availability of key systems** in each function and identified the right technology to connect the data to the data warehouse. • Derived detailed **roadmap of the build of Enterprise Datawarehouse**

Roadmap from current state to end state

Current State

Manual process
Reporting in Flat files
XX clinics

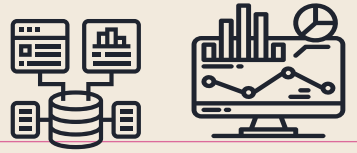
Future State

EDW Build & Reporting

EDW – Technology Stack
~10-12 reports in Power BI
XX Clinics
YY systems

Scaled EDW

EDW – Upgraded Technology Stack
~25-30 reports in Power BI
~20 self-serve analytical models
~ XX+ 100 clinics
YY systems + New systems from newly acquired clinics



End State

EDW – Upgraded Technology Stack
~100 reports in Power BI
~ XX+500 clinics
YY systems + New systems from newly acquired clinics

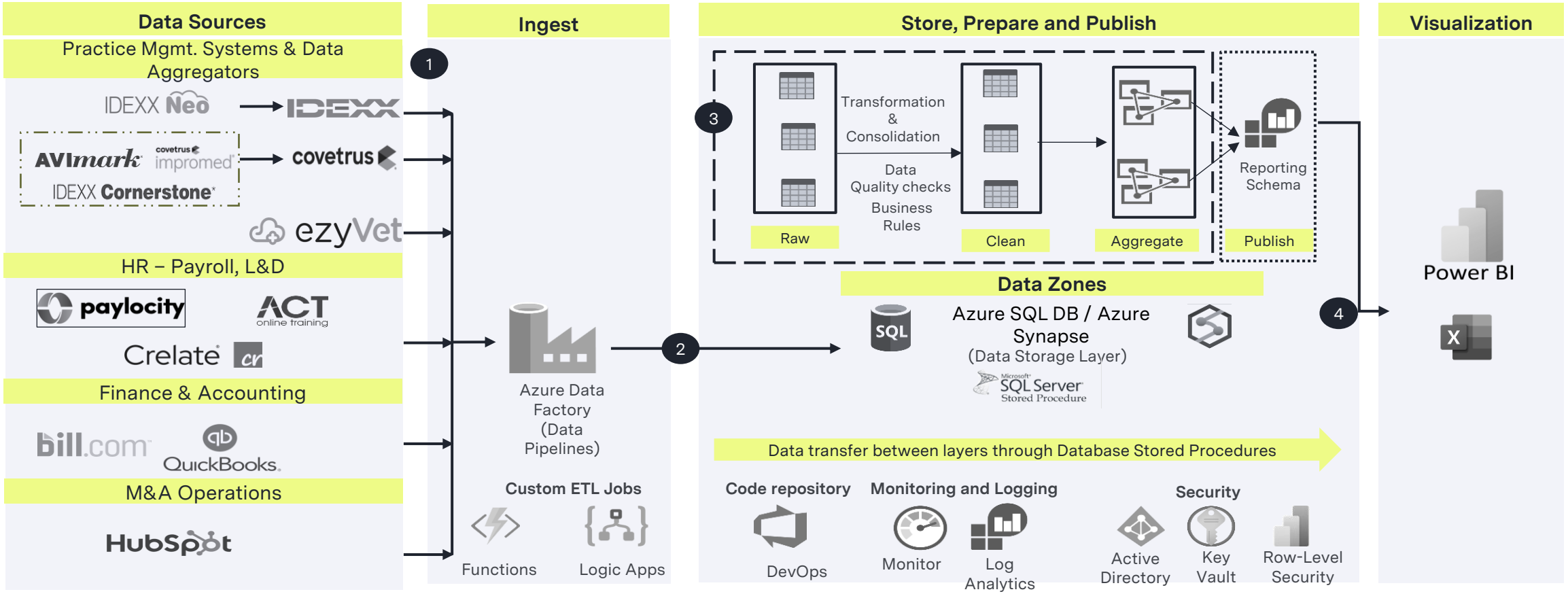
Master Data Management
Data Governance Framework
Advanced Analytics

3-6 months

6 months -2 years

2+ years

Design of enterprise data warehouse



1. Leverage Ezyvet APIs, PMS data aggregator platforms such as IDEXX Enterprise Manager and Covetrus Connect to ingest the compatible Practice Mgmt. Systems
2. Collate and ingest data from different source systems using Azure Data Factory into the Azure SQL Database
3. Transform the data stored into Azure SQL Database through Azure Data Factory
4. Revamped reporting suite consisting of automated and self-serve Power BI dashboards

Capability assessment of practice management systems

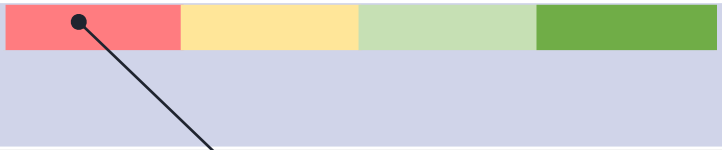
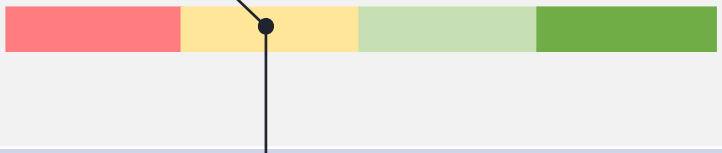
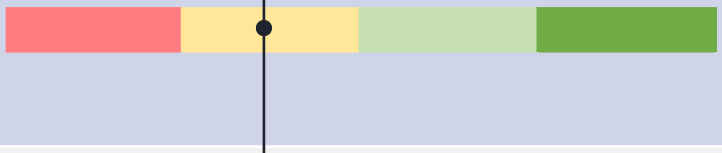
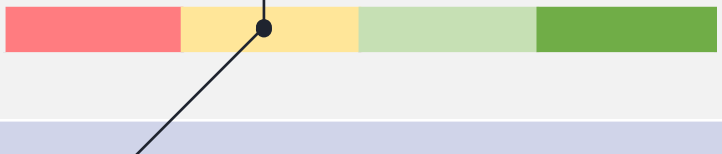
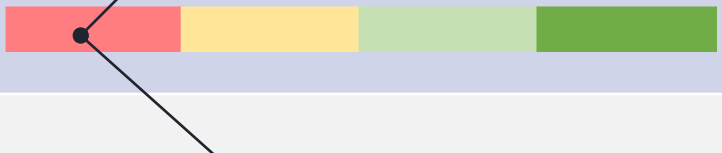
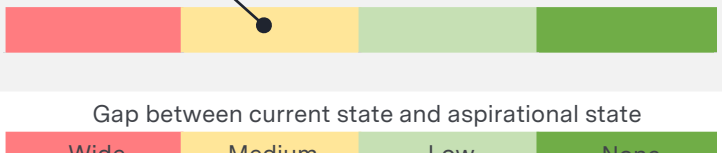
Practice Mgmt. System	Appointment Scheduling	Communication	Inventory Mgmt. & Vendor Payment	Invoicing & Payment Processing	Diagnostic Management	Patient Health Record	Reporting
PMS 1	◕	◕	◕	◕	●	●	◑
PMS 2	●	◕	◕	◕	●	◕	◕
PMS 3	●	◕	◕	◑	●	●	◕
PMS 4	●	◔	◑	◕	●	●	◕
PMS 5	◕	◕	◔	◔	●	◕	●

Comparison of the PMS systems across the practices in terms key features & functionalities

● – Feature present & utilized ◕ - Feature present, not fully utilized ◑ - Feature present, not utilized ◔ - Has similar feature with lower capability ○ - Does not have the feature

ILLUSTRATIVE

Data maturity scorecard

Data Strategy Element	Current state vs. Aspirational state	Comments
Data Governance		Currently most of the **checks are carried out manually** by respective function heads. However, formalized data governance best practices are not implemented.
Data Availability		Data sourcing process is manual with differing frequencies for functional areas. There is an opportunity to have a **centralized data warehouse** to collate the data from practices, ERP, Application Tracking System, Payroll tracker etc. for reporting purpose.
Data Quality		Data cleansing and reconciliation across systems is manual, with opportunities to set up formal standards or procedures**. Timing gaps in updating output reports** could also be resolved through a data warehouse with automated data ingestion.
Data Access		Opportunity to enhance the data access by **limiting the usage of personal folders, shared sheets** etc. Additionally, there are challenges in exporting reports from the ERP tool.
Data Management		The team relies on data exports from different systems and manual processes for transforming the data. Setting up a warehouse or consolidated sources for data standardization would **enhance the turnaround time.**
Business Intelligence		A consolidation tool is utilized for reporting purposes along with manually generated weekly/monthly reports. Dashboarding capabilities which are present across various systems are not fully used. Opportunity to integrate the data from the systems together to **augment the org-wide BI capability**.

Benchmarking the current state of data maturity and processes against the aspirational end state with comments and recommendations

KPI metrics matrix

#	Metric	Future State Priority			Clinic																												Source Systems									Other Dimensions, By:								
		High	Mid	Low	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Src 1	ERP	Lead Tracker	Learning Portal	ATS	Src 2	Src 3	Payroll Tracker	Manual Source	Dim 1	Dim 2	Dim3	Dim4	Dim5	Dim6	Dim7	Dim8	Dim9
					Clinic 1	Clinic 2	Clinic 3	Clinic 4	Clinic 5	Clinic 6	Clinic 7	Clinic 8	Clinic 9	Clinic 10	Clinic 11	Clinic 12	Clinic 13	Clinic 14	Clinic 15	Clinic 16	Clinic 17	Clinic 18	Clinic 19	Clinic 20	Clinic 21	Clinic 22	Clinic 23	Clinic 24	Clinic 25	Clinic 26	Clinic 27	Clinic 28	Clinic 29	Clinic 30																			
FINANCIAL KPIs																																																		
Revenue																																																		
1.01	Service Revenue	X			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	X									Y	Y	Y	Y	Y			Y	Y
1.02	Inventory Revenue	X			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	X									Y	Y	Y	Y	Y			Y	Y
1.03	Total Revenue	X			A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A									Y	Y	Y	Y	Y			Y	Y
1.04	Service Revenue Growth	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	X									Y	Y	Y	Y	Y			Y	Y
1.05	Inventory Revenue Growth	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	X									Y	Y	Y	Y	Y			Y	Y
1.06	Total Revenue Growth	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A									Y	Y	Y	Y	Y			Y	Y
1.07	Service Revenue as a % of Original Underwriting	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											Y						
1.08	Inventory Revenue as a % of Original Underwriting	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											Y						
1.09	Total Revenue as a % of Original Underwriting	X			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											Y						
1.10	Average Revenue per Patient	X			D	D	D	D	D	D	D	D	D	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A	D	A									Y	Y	Y	Y	Y			Y	Y
1.11	Average Revenue per Household		X		D	D	D	D	D	D	D	D	D	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A	D	X									Y	Y	Y	Y	Y			Y	Y
1.12	Average Revenue per Invoice	X			D	D	D	D	D	D	A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A									Y	Y	Y	Y	Y			Y	Y
1.13	Average Revenue per Patient Visit (All Types)	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	A									Y	Y	Y	Y	Y			Y	Y
1.14	Average Revenue per Visit Type (Wellness)	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	X									Y	Y	Y	Y	Y			Y	Y
1.15	Average Revenue per Visit Type (Sick)	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	X									Y	Y	Y	Y	Y			Y	Y
1.16	Average Revenue per Visit Type (Surgery Spay/Neuter)	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	X									Y	Y	Y	Y	Y			Y	Y
1.17	Average Revenue per Visit Type (Dentistry)	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	X									Y	Y	Y	Y	Y			Y	Y
1.18	Average Revenue per Visit Type (Euthanasia)	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	X									Y	Y	Y	Y	Y			Y	Y
1.19	Average Revenue per Visit Type (Pet Boarding)	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	X									Y	Y	Y	Y	Y			Y	Y
1.20	Average Revenue per Visit Type (ER Visit)	X			D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	X									Y	Y	Y	Y	Y			Y	Y

A	KPI is available
D	KPI can be derived
X	KPI unavailable
	Not relevant
Y	Available at the granularity/cadence
T	TRUE

Summary of the feasibility of deriving a metric across multiple dimensions and gap assessment against existing systems across the clinics

Dashboard snippets (1/2)

Month	Jan		Feb			
Practice	Revenue per Invoice	Revenue	Revenue per Invoice	Revenue	Revenue per Invoice	Rev
All	$349	$6,359,388	$157	$4,601,030	$517	$8,92
Practice 1	$137	$195,130	$182	$294,677	$138	$18
Practice 2	$146	$199,574	$206	$313,129	$280	$30
Practice 3	$112	$214,092	$164	$327,192	$221	$24
Total	**$304**	**$6,968,184**	**$161**	**$5,536,028**	**$465**	**$9,65**

Visuals showcasing the consolidated performance of clinics, along with cross functional KPIs for key financial KPIs

Dashboard snippets (2/2)

Month		Jan		Feb		Mar
Practice	New Patients	Active Patients	New Patients	Active Patients	New Patients	Active Patients
All	1133	5151	656	4378	785	3925
Practice 1	46	272	84	366	54	389
Practice 2	48	306	60	232	36	160
Practice 3	68	358	26	200	19	196
Total	1295	6087	826	5176	894	4670

Visuals showcasing the consolidated performance of clinics, along with cross functional KPIs leveraging operational data along with providing insights at a patient level