



Understand data and improve healthcare

Better insights in statistics led to fewer complications in obstetric care at Uppsala University Hospital.



by Ivbar

Background



After having access to the Era platform and for the first time having access to comprehensive information on case mix adjusted performance in terms of health out-comes, resource use and care processes, the obstetrics department at Uppsala University hospital - Akademiska sjukhuset (the 4th largest hospital in Sweden) decided to implement a system for advanced local performance monitoring at the end of 2016.

The department had identified a number of areas where performance was not on par with the other regions in the benchmarking.

One major obstacle for improvement projects had been the fragmentation of data and the lack of real-time information on current performance and the resulting lack of quick feedback-loops.

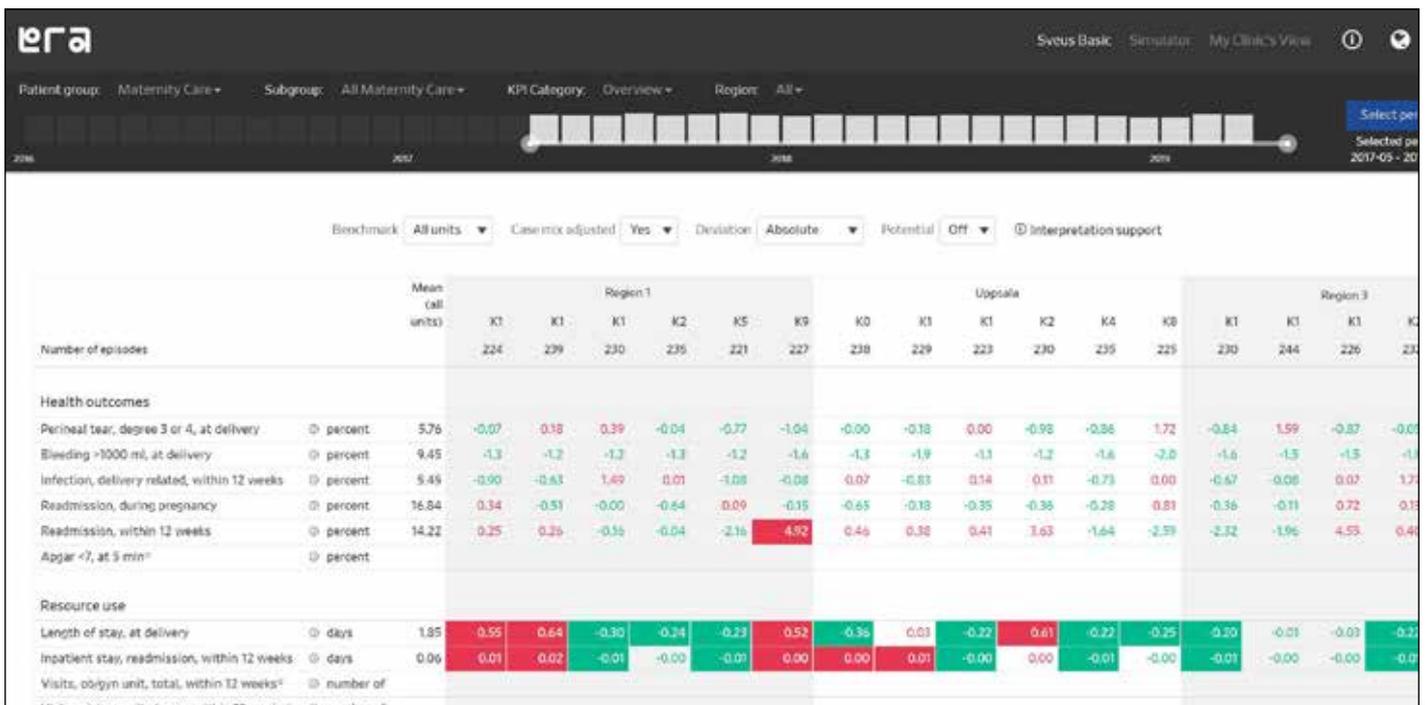
The solution: Era Analytics

Era Analytics is a flexible solution that combines real-time information on case mix adjusted performance from the Era benchmarking platform with additional information from local systems.

At Uppsala University Hospital's obstetrics department, Era Analytics consists of the management dashboard, project dashboards and a staff dashboard.

Together these dashboards empower the clinicians with up-to-date information including:

-  Overall performance (where are we performing well and where should we focus our efforts)
-  Progress in improvement projects with deviation from defined targets
-  Early alerts of adverse events and changes in clinical practice
-  Information on how patient characteristics and care processes interact and effect health outcomes and costs



The screenshot shows the Era Analytics dashboard interface. At the top, there are navigation elements like 'era' logo, 'Sveus Basic', 'Simulator', and 'My Clinics View'. Below that, filters for 'Patient group: Maternity Care', 'Subgroup: All Maternity Care', 'KPI Category: Overview', and 'Region: All' are visible. A horizontal bar chart shows a distribution of data points. The main table displays performance metrics for 'Number of episodes', 'Health outcomes', and 'Resource use' across various KPIs (K1-K12) for 'Regen 1', 'Uppsala', and 'Region 3'. The table includes a 'Mean (all units)' column and uses color coding (red for negative, green for positive) to indicate performance relative to benchmarks.

	Mean (all units)	Regen 1						Uppsala						Region 3				
		K1	K1	K1	K2	K5	K9	K0	K1	K1	K2	K4	K8	K1	K1	K1	K1	
Number of episodes		224	229	230	235	221	227	238	229	223	230	235	225	230	244	226	231	
Health outcomes																		
Perineal tear, degree 3 or 4, at delivery	percent	5.76	-0.07	0.18	-0.39	-0.04	-0.77	-1.04	-0.00	-0.18	0.00	-0.98	-0.86	1.72	-0.84	1.59	-0.87	-0.05
Bleeding >1000 ml, at delivery	percent	9.45	-1.3	-1.2	-1.3	-1.3	-1.2	-1.6	-1.3	-1.9	-1.1	-1.2	-1.6	-2.0	-1.6	-1.3	-1.5	-1.1
Infection, delivery related, within 12 weeks	percent	5.49	-0.90	-0.83	1.49	0.01	-1.08	-0.08	0.07	-0.83	0.14	0.11	-0.73	0.00	-0.67	-0.08	0.07	1.71
Readmission, during pregnancy	percent	16.84	0.34	-0.51	-0.00	-0.64	0.09	-0.15	-0.65	-0.18	-0.35	-0.36	-0.28	0.81	-0.36	-0.11	0.72	0.15
Readmission, within 12 weeks	percent	14.22	0.25	0.26	-0.35	-0.04	-2.16	4.92	0.46	0.38	0.41	3.63	-1.64	-2.59	-2.32	-1.96	-4.55	0.40
Apgar <7, at 5 min ²	percent																	
Resource use																		
Length of stay, at delivery	days	1.85	0.55	0.64	-0.30	-0.24	-0.23	0.52	-0.36	0.03	-0.22	0.61	-0.22	-0.25	0.20	-0.01	-0.03	-0.22
Inpatient stay, readmission, within 12 weeks	days	0.06	0.01	-0.02	-0.01	-0.00	-0.01	0.00	0.00	0.01	-0.00	0.00	-0.01	-0.00	-0.01	-0.00	-0.00	-0.01
Visits, ob/gyn unit, total, within 12 weeks ²	number of																	

The project

Uppsala University hospital decided to use Ivbar's solution for advanced performance monitoring.

The system combined information on case mix adjusted performance from the benchmarking platform with detailed local information from local systems with granular information on the care process during delivery.

The following five different areas of improvement were targeted:

- Post-partum infections
- Newborn with low Apgar score
- Urinary retentions
- Caesarean sections
- Labour inductions

Clinical experts defined the improvement projects, including target levels, selection of relevant process measures, and potential adverse effects of changes in clinical practice. The clinical experts also took active part in developing their dashboards and deciding how data should be presented.

Dashboards were developed to support the clinic management in weekly follow ups, providing improved ability to make data-driven decisions. Dashboards were also set up in common areas for all members of the staff to see and interact with the data, presenting aggregated data of main KPIs and status of the improvement projects in place.

Era is capable of ingesting data in near to real time and updating views of the data. Therefore, the constraining factor is the client's ability to generate output from their operational systems. Where benchmarking against other organisations is desired the timelines of updating is determined by the "slowest" organisation to provide updated data.



“ Era has provided us with insights that really helps us continuously improve our processes for the benefit of both our staff and our patients. ”

Gunilla Hallberg, head of obstetric department

The results

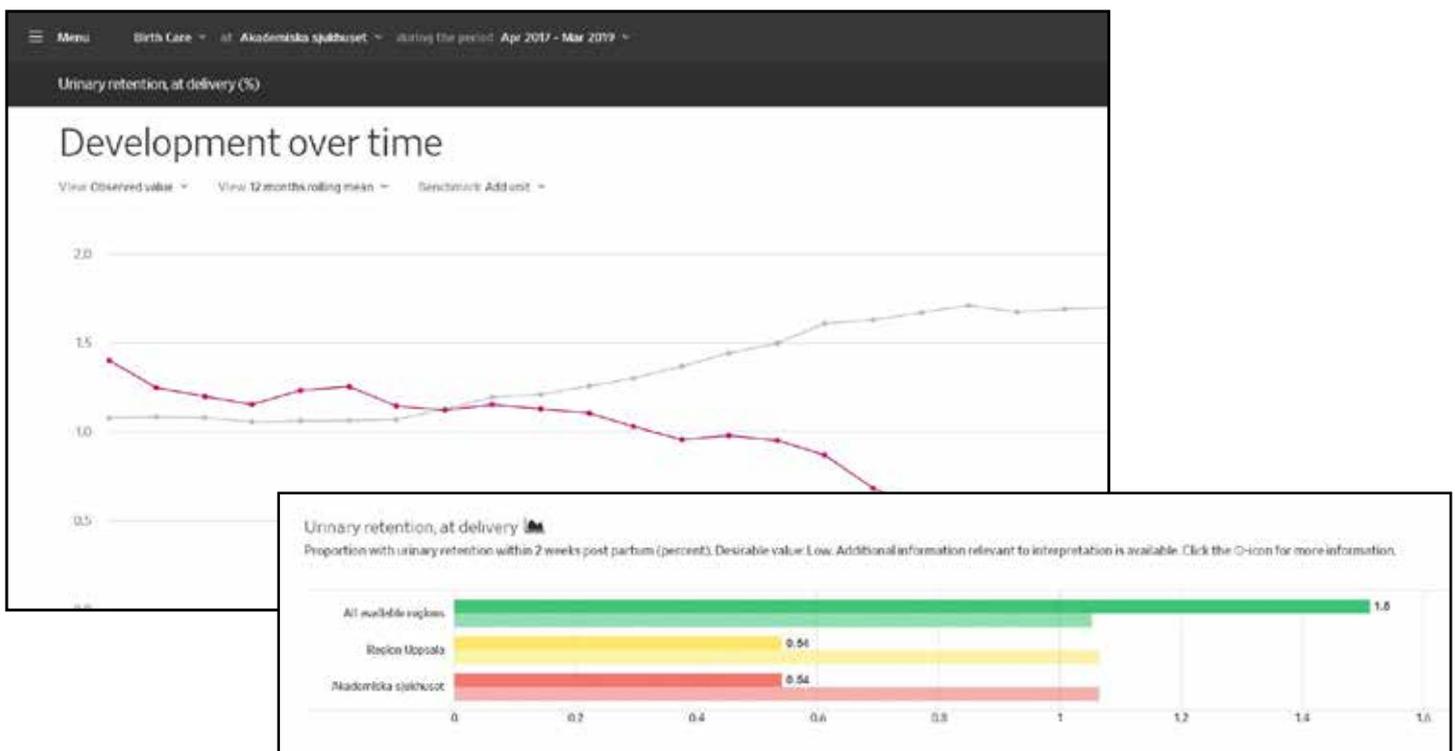
The Obstetric department is very satisfied with the new system and continuously use it to monitor performance and work with improvements.

The head of division claims the dashboards have contributed to a change of culture and has united the staff around how the clinic performs, with a more evidence- and data-focused discussions based on tracking of main KPIs and ongoing improvement projects.

Case mix adjusted performance has developed positively since the initiation of the work, with notable improvements observed from any of the most important KPIs.

Since the implementation of Era Analytics the department has seen an overall reduction in the rate of infections, urinary retentions, cesarian sections and inductions

Example: urinary retention at delivery (% within two weeks post partum)



Ivbar is a value driven high-tech company with deep understanding of healthcare. Our goal is better health for more people throughout the world – and we are well on our way.

Ivbar was founded in Stockholm in 2012. Our mission is to revolutionise healthcare by giving medical professionals easy-to-use tools to analyse data, share insights and thereby understand and improve their performance.

In addition, our products help governments and insurance companies achieve transparency, and manage payment models to secure that financial incentives are aligned with the need of the patient.

To make this possible, we combine software developers with experts in medicine, mathematics, health economics, epidemiology and healthcare management.

Today, Ivbar is a trusted provider of products for payers covering more than eight million lives.

For information, please contact:



Emilie Erhardt
emilie.erhardt@ivbar.com
+46 (0)705 28 27 07



by Ivbar

Ivbar institute AB
Hantverkargatan 8
112 21 Stockholm, Sweden
+46 (0)730 860 686
stockholm@erahealth.com
www.erahealth.com