

Optimize complex and analytical queries in a hospital – Case Study

Daive Li Cavoli, Projectleader & CEO, Hicron Schweiz AG

Agenda



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Hicron at a glance

2

How to optimize complex analytical queries in a hospital? Case Study

- Business Requirements and Business Benefits

3

References. Areas of expertise

Hicron at a glance. **How numbers define us**

Over 270 Hicron employees work for the success of our Customers.

90% of our consultants speak English, **50%** German

Hicron has offices in **5 locations** (Wroclaw; Poznan; Warsaw; Winterthur, Switzerland; Stockholm, Sweden).

We work on **5 continents** and have completed successfully **over 300 projects.**

9 awards and certificates have been granted to Hicron.

Thanks to our solutions, **over 200 companies** are developing even faster.

How to optimize complex and analytical queries? **Case Study**

Business Background:

1. Billions records of customer data to be well-maintained
2. Various data sources – IT solutions
3. Data analysis taking too long
4. 'Customer First' – attitude
5. One of the most modern and innovative hospitals in Switzerland

VS

Business Requirements:

1. Needs of fast, detailed and correct data analysis
2. Using all the features of the available IT solutions
3. Minimise the risk of errors

How to optimize complex and analytical queries? **Case Study**

How the cooperation started:

- 1** Analysis of business processes, hospital procedures and IT solutions
- 2** Suggestions on how to speed up and optimize the analytical processes
- 3** Preparation of the IT background to carry out analytical scenarios

How to optimize complex and analytical queries? **Case Study**

Analytical scenarios:

- **Hospital Supervisor:** How many Fall and Decubitus cases occur in the hospital? Which categories of these cases occur, in which department/subject area? How long patients stay in the hospital?
- **Hospital analyst:** What is the number of cases divided by Outpatients/Stationary per month/quarter/year? How long do patients from Stationary Cases stay in hospital?
- **DRG and refunded treatment:** How much did the patient treatment cost in previous months? How much was refunded? How much was paid by the insurer? How much are we still owed?

How to optimize complex and analytical queries? **Case Study**

Business Requirements:

1. Needs of fast, detailed, consolidated and correct data analysis
2. Using all the features of the available IT solutions
3. Minimise the risk of errors

VS

Business Benefits:

1. Data analysis speeded up: from days to minutes.
2. New analytical possibilities leading to even better management and advanced planning The risk of errors significantly minimized.

How many «Fall» and «Bedsore» (Dekubitus) cases occur?



Dashboard

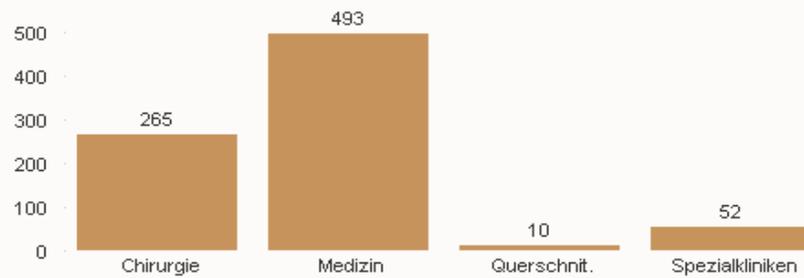
Anzahl Fälle
1.713

Pflegetage
5.202

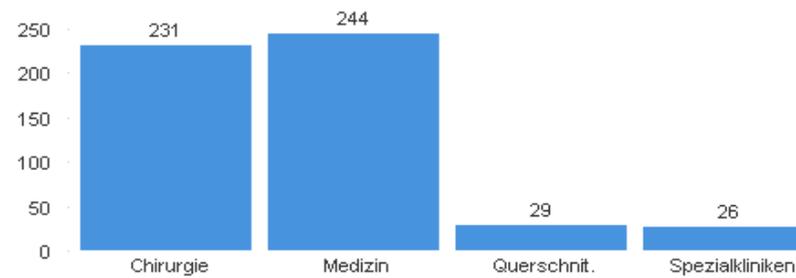
Anzahl Sturze
820

Anzahl Dekubitus
530

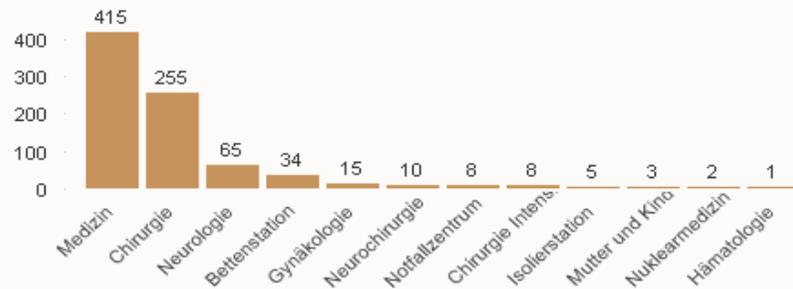
Anzahl Sturze per Fachbereich



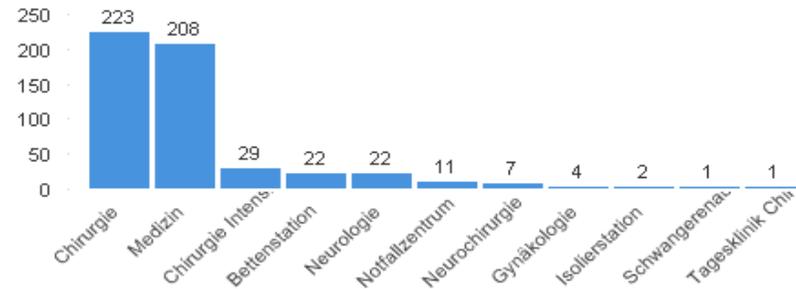
Anzahl Dekubitus per Fachbereich



Anzahl Sturze per OE Pflege



Anzahl Dekubitus per OE Pflege



Which categories of these cases occur, in which department/subject area?



Analyze

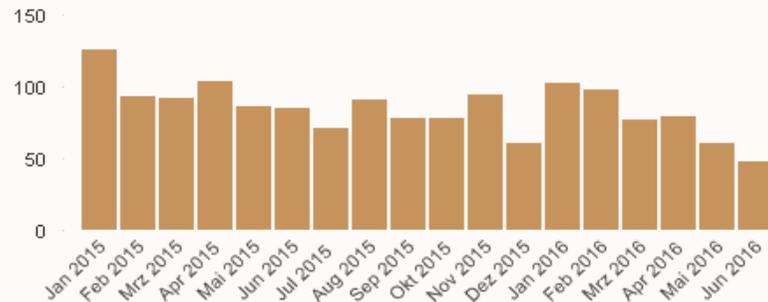
Anzahl Fälle
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Pflegetage
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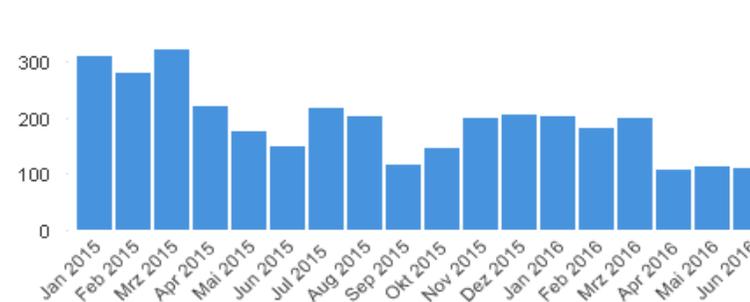
Anzahl Sturze
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Anzahl Dekubitus
530

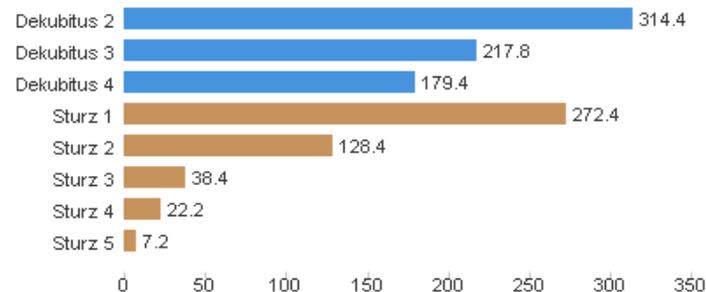
Sturz



Dekubitus



Leistungsdatum per Sturz & Dekubitus Klassifikation



OE Pflege	Sturz 2016	/	Sturz 2015	%	Dekubitus 2016	Dekubitus 2015	%
Medizin	149		320	114%	176	481	173%
Chirurgie	82		195	137%	245	732	198%
Neurologie	21		49	134%	21	40	89%
Bettenstation	10		27	165%	22	64	186%
Gynäkologie	6		10	60%	1	4	250%
Neurochirurgie	5		8	44%	3	20	580%
Isolierstation	3		3	0%	13	26	100%
Chirurgie Intensiv	1		8	600%	63	139	121%

Examples of other possible analysis

Analytical scenarios:

- How many **tariff points** are settled and how many are to be settled in the chosen departments for ambulatory cases in 2015 and in 2014?
- How many stationary cases are in chosen departments in 2014 and 2015 and which of them generate **the biggest cost**?
- What does the **distribution of men and women cases** looks like in the chosen departments in 2015 and 2014?
- What are the age groups of patients that generate **the biggest quantity of cases** for “heart surgery” and “internal medicine” in 2015 and 2014?

References



Backup

Areas of expertise

SAP

Niche, industrial solutions

**Enterprise
Software**

Java, .Net, IoT,
Frontend, Hadoop...

Hicron Labs

Ready to implement



Maintenance and administration



Business Consulting

Areas of expertise. **Who we are, what we do**



What we do: we support our customers by providing state-of-the-art IT solutions which meet their business requirements



Our goal: business success of our customer



Customer's benefit: fully optimized processes running smoothly with a support of the chosen IT solution



Quality approved:

Over 300 projects, over 200 customers, over 10 years on the market

How many tariff points are settled/are to be settled in the chosen departments for ambulatory cases?



Bestellung
3.164

Taxpunkte verrechnet
448.899

Taxpunkte verrechenbar
450.591

Anzahl der Fälle
458.129

