Indicators and Quality Care

WINANDY Patricia, Head of Nursing Department

Quintens Carole, Project Coordinator, Coordinator of clinical pathways Nursing Department

St-Elisabeth clinic and maternity

311 beds

2 sites : General hospital and palliative hospital

Attractive poles :

- maternity,
- dialyis (33 places),
- maxillofacial surgery,
- SORMN : Nuclear Medicine, Oncology, Radiotherapy
  (Certification ISO9011)

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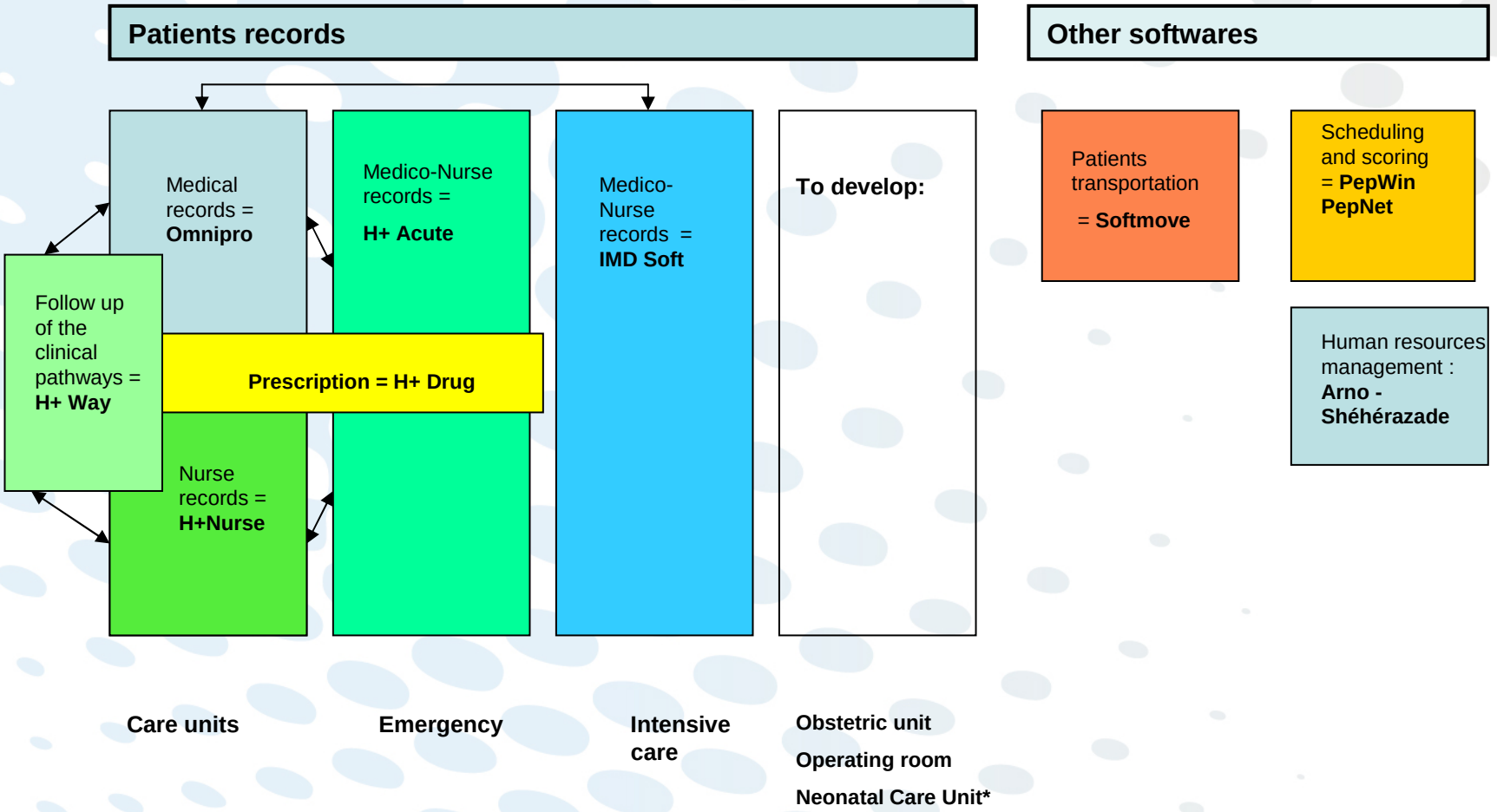
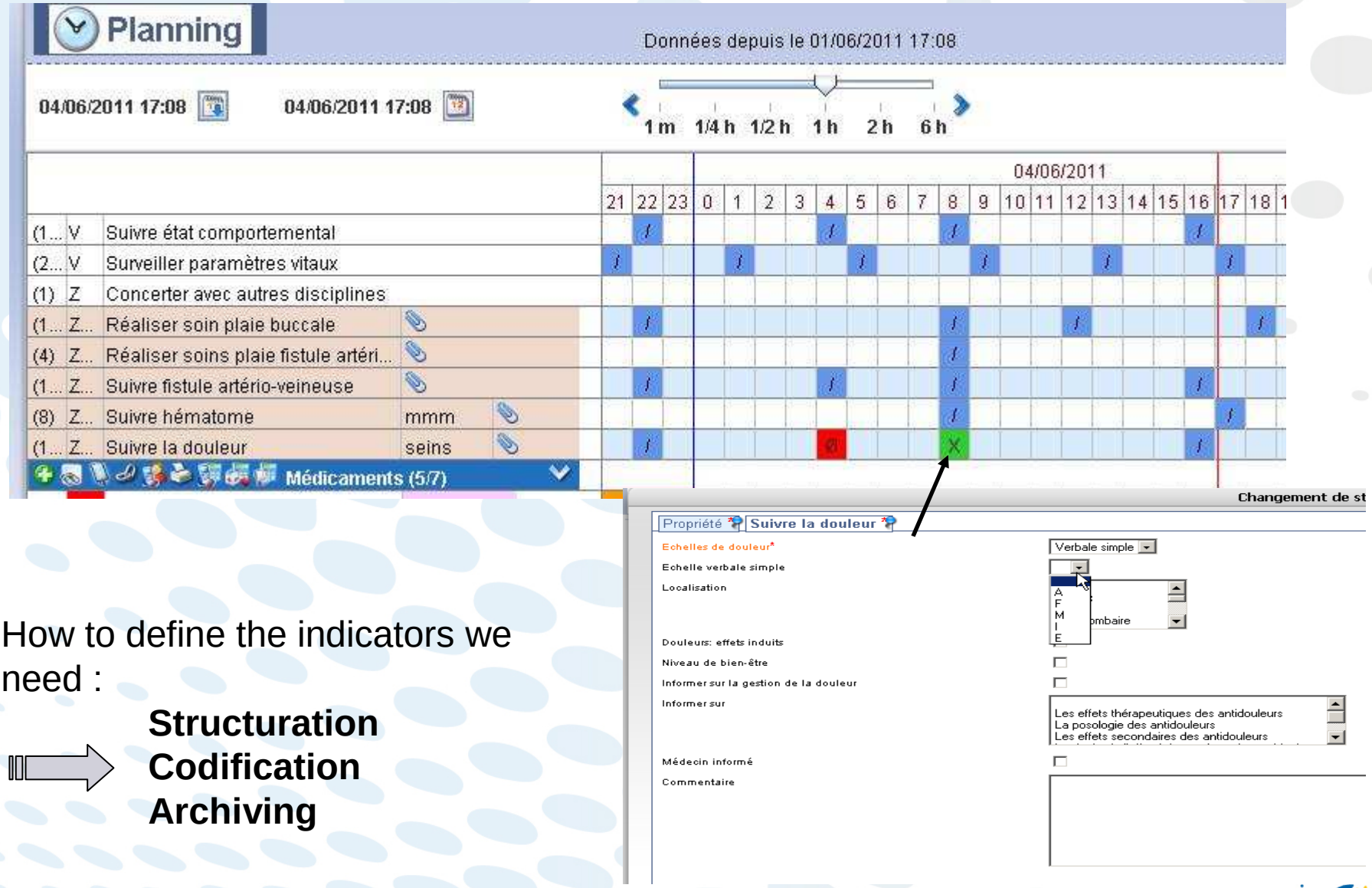
Communication Map.

- Informatic tools in the Nursing Department
- Informatic structure in different patients records
- Indicators in the Nursing Department
- Building these indicators : audits and extractions
- From theory to practice : exemple
- Remarks
- Conclusions

The informatic tools in the Nursing Department



Informatic structure in different patients records



How to define the indicators we need :

Structuration
Codification
Archiving

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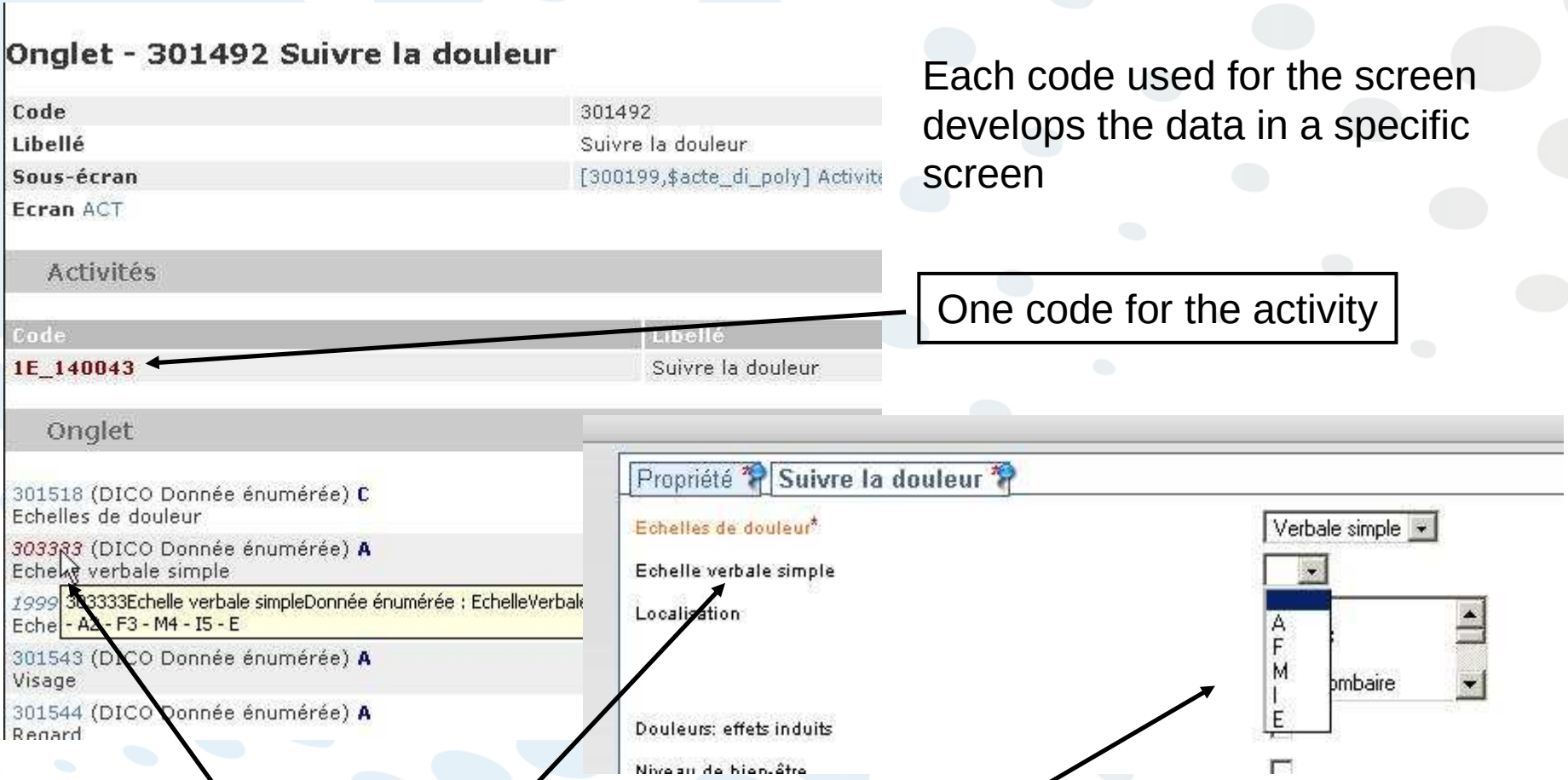
Informatic structure in different patients records



Each code used for the screen develops the data in a specific screen

One code for the activity

Each item has a code and often a dictionary.
The dictionary data are codified.

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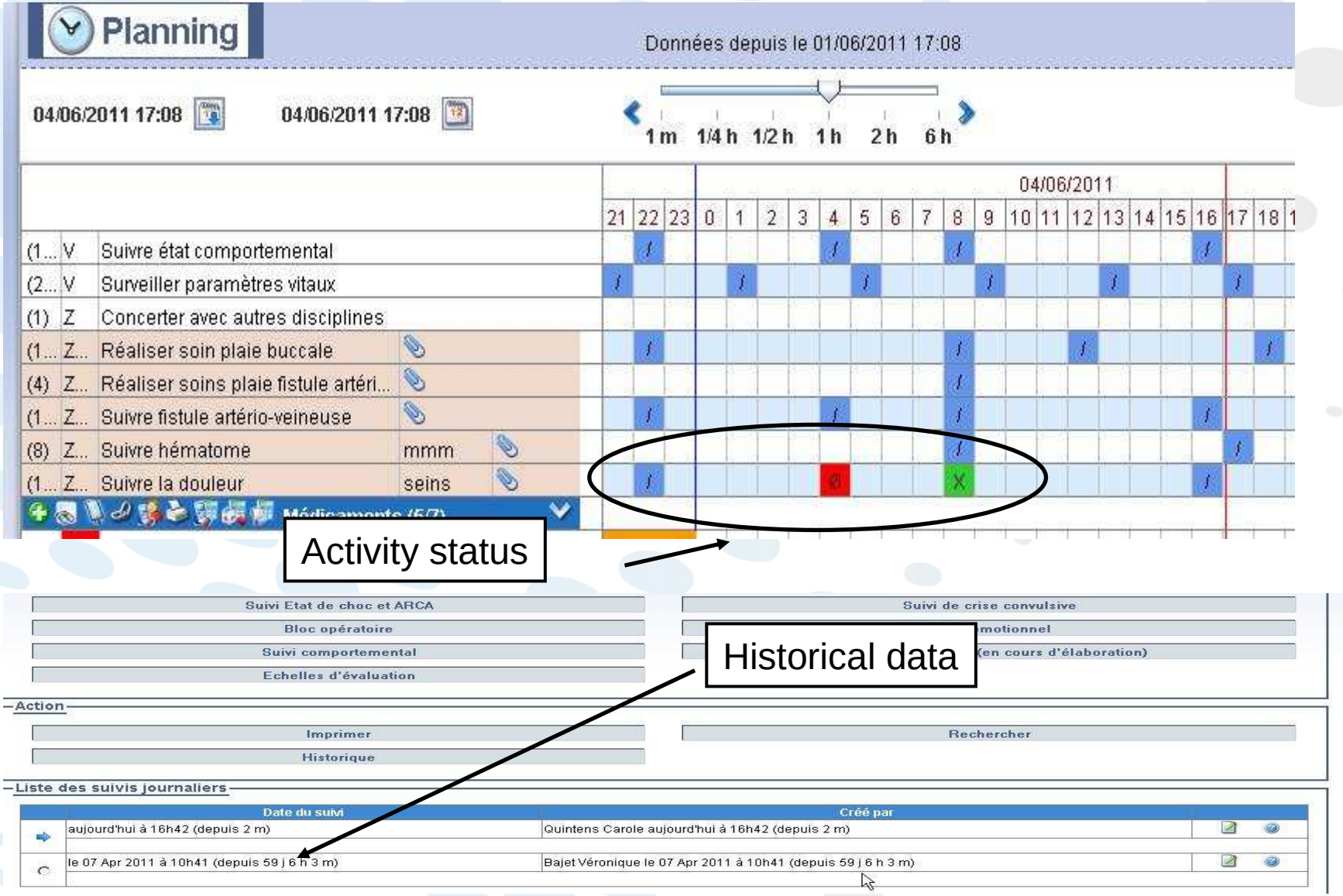
Informatic structure in different patients records



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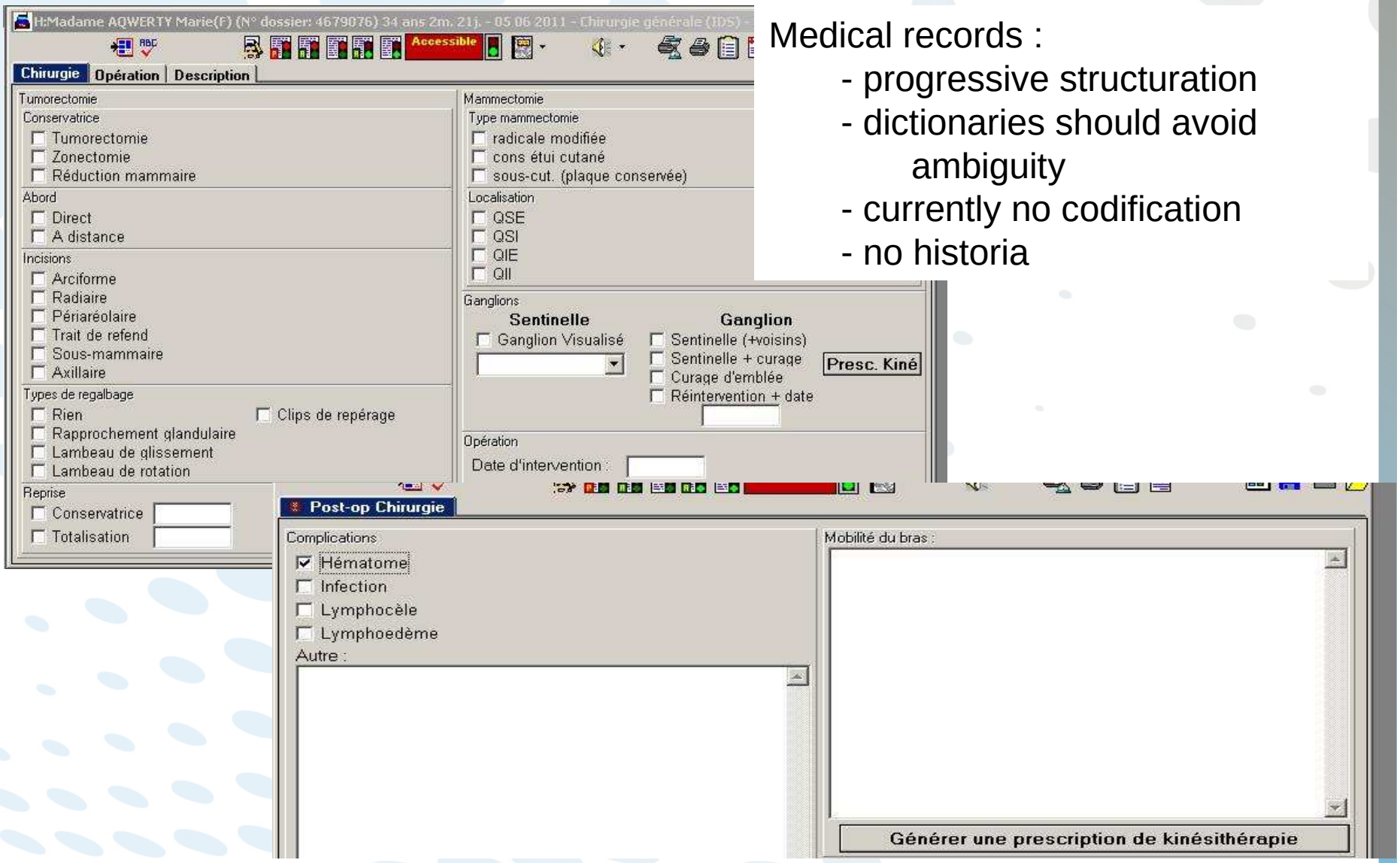
Informatic structure in different patients records



Medical records :

- progressive structuration
- dictionaries should avoid ambiguity
- currently no codification
- no historia

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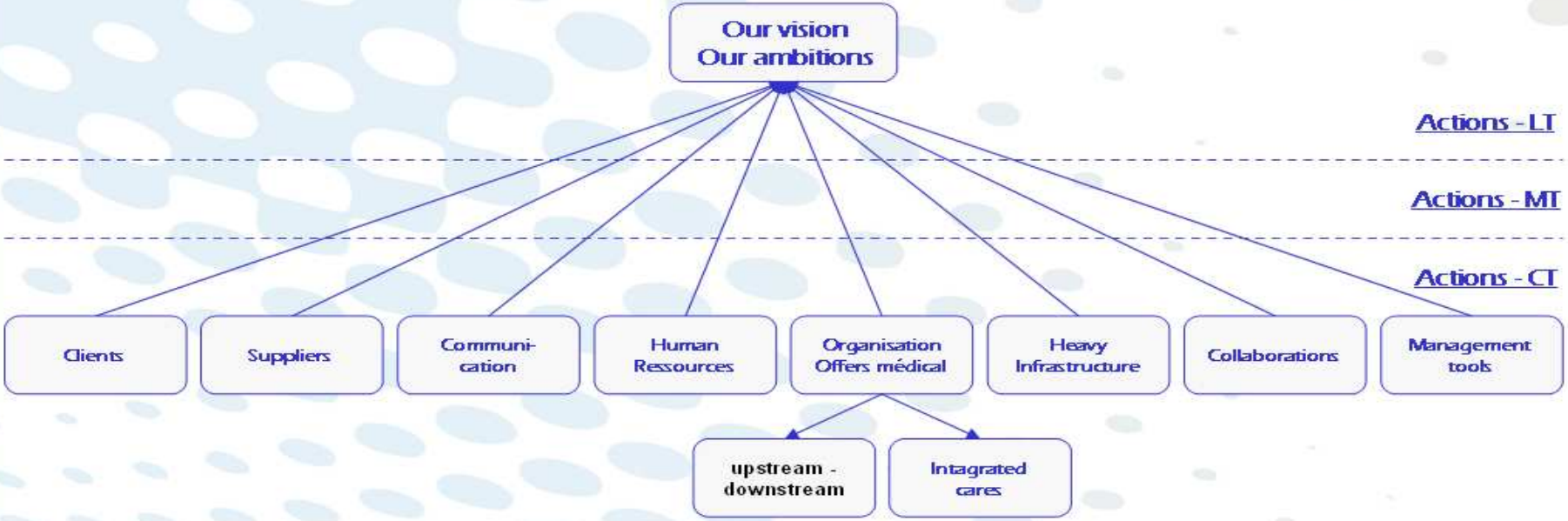
Indicators in the Nursing Department

- Business plan
- « Russian dolls » » :
  - actions and indicators located in each institutional level and in each strategic axis
- Indicators production: Goals !!!
  - Initialize actions
  - Score effects
  - Monitor the performance

Business plan

« By cultivating its values of life and mutual respect, CMSE places the patient at its heart, through careful listening and comprehensive care. Cope with external constraints, staff and all of its employees guarantee high quality of specific care and personalized support »



Previous situation
Our values | Diagnostic | Strengths & weaknesses - Opportunities & threats

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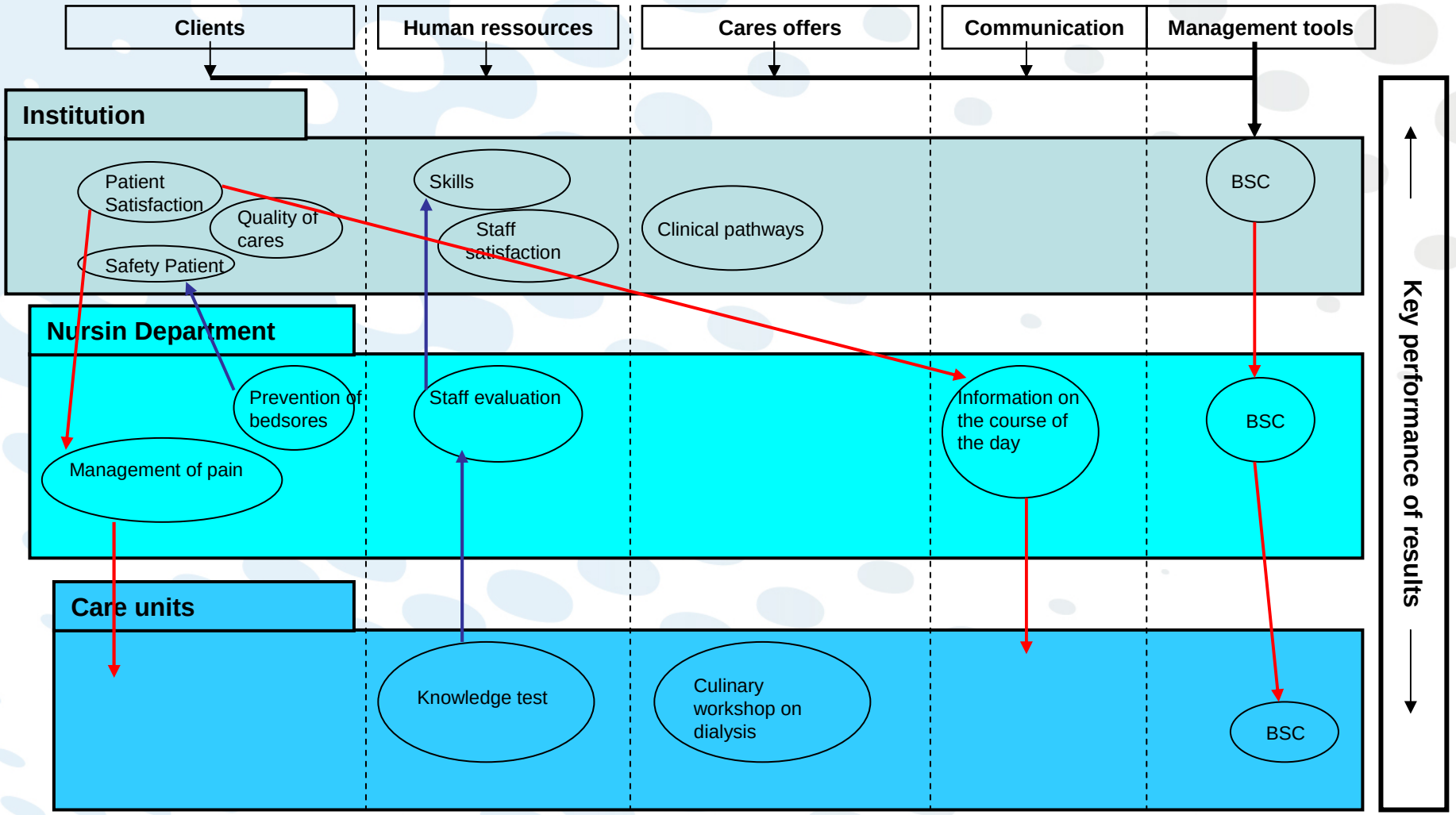
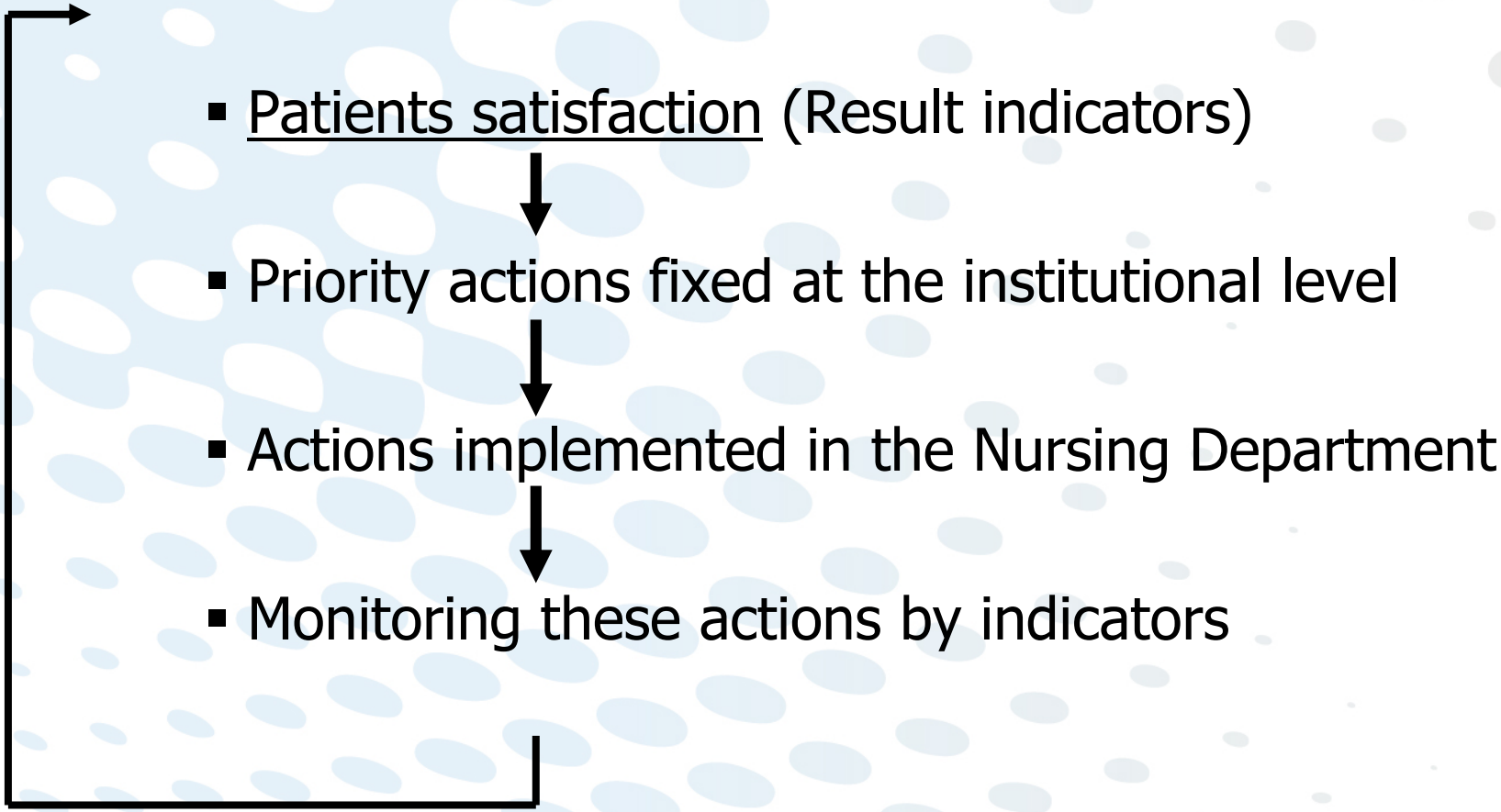
At every institutional level: actions § indicators



Indicators in the Nursing Department

Indicators « Top / Down » (To initialize actions) :



Indicators in the Nursing Department

Indicators « Bottom/ Up » (Monitoring the performance)

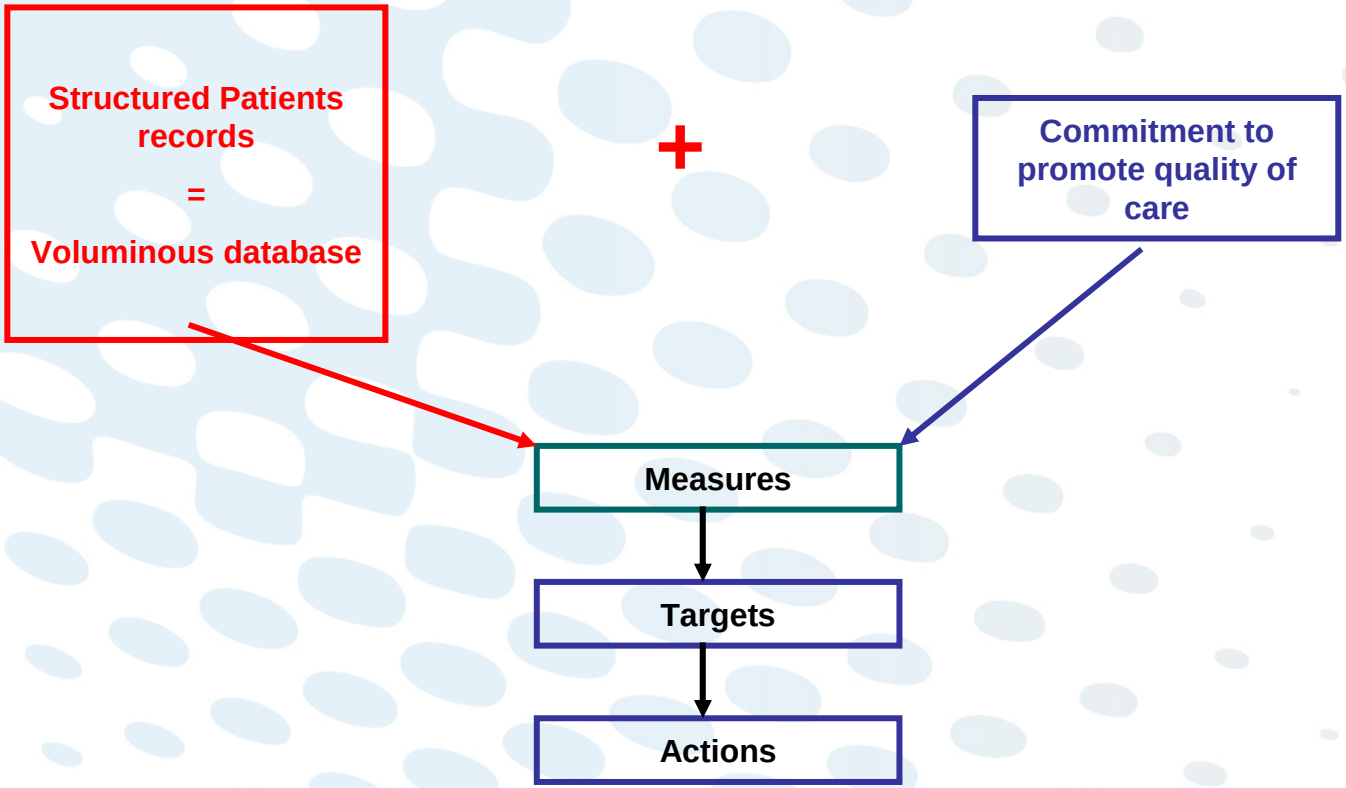
- Registration and Prevention of bedsores → **Quality unit**

Safety Patient

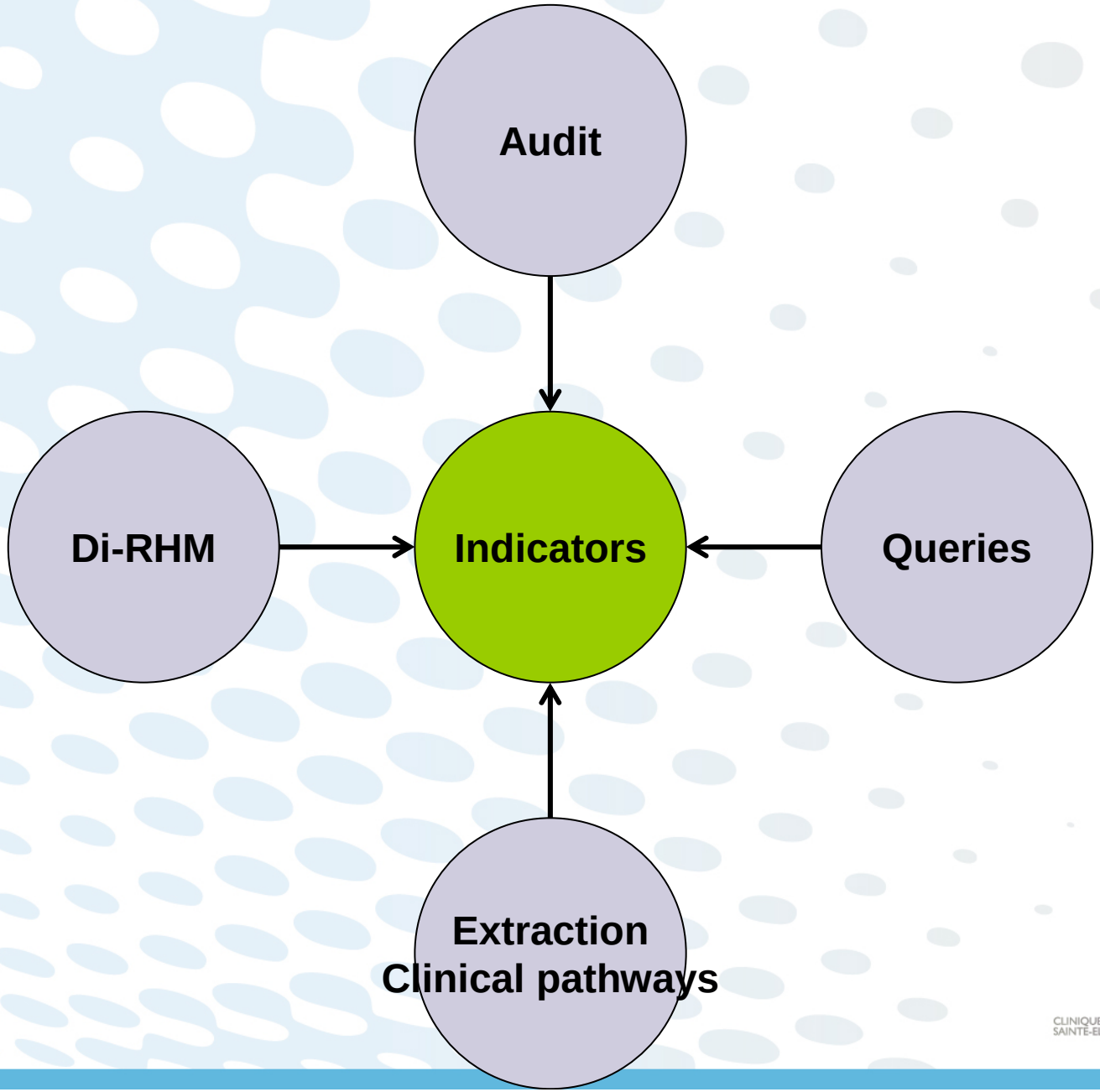
- Result indicators / Quality of cares → **Nursing Department**

- Indicators related to process monitor
  Performance indicators
  Targets → **Group bedsores**

Indicators and quality of care



How to obtain these indicators ?



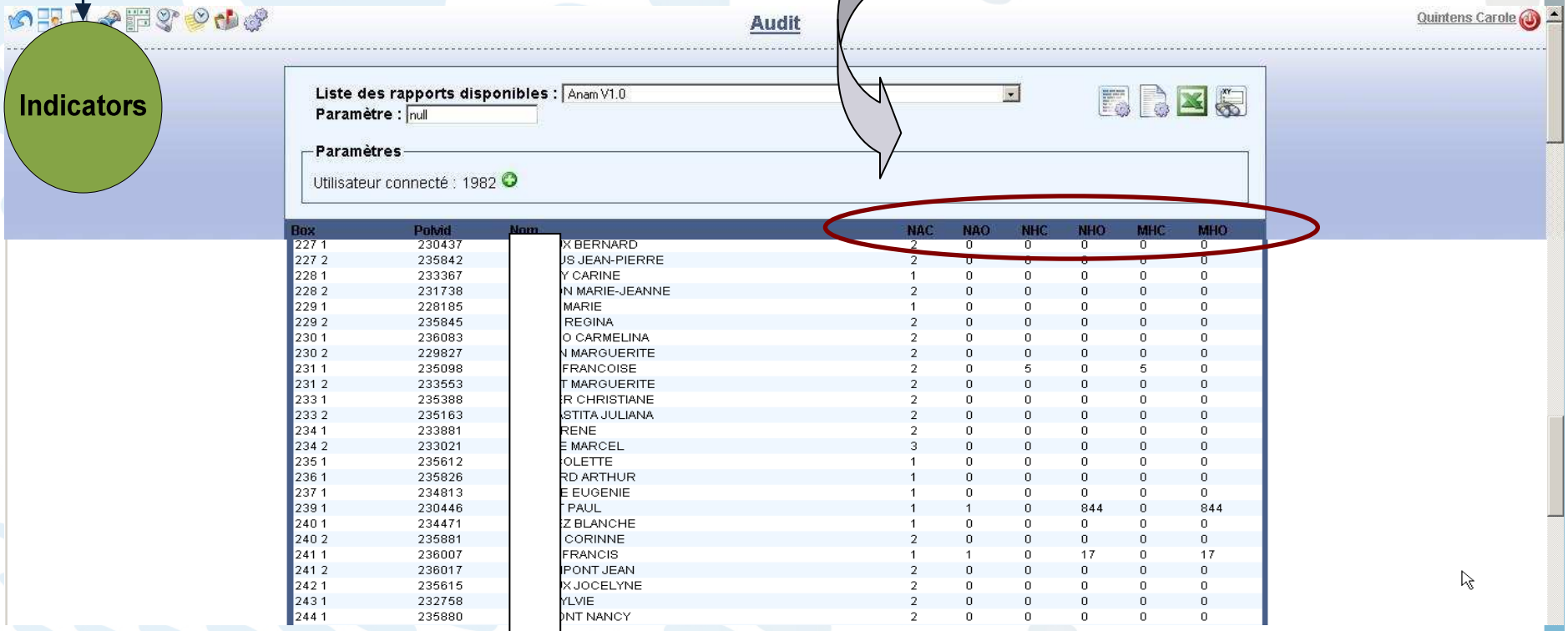
How to obtain these indicators ?

Audit

Opening balance sheet for all hospitalized patients

Indicators

NAC = Nbr of histories fenced
NAO = Nbr of open histories
NHC = nbr of hours fenced
NHO = Nbr of hours open
MHC = Mean of hours fenced
MHO = Mean of hours open



Box	Polyid	Nom	NAC	NAO	NHC	NHO	MHC	MHO
227 1	230437	X BERNARD	2	0	0	0	0	0
227 2	235842	US JEAN-PIERRE	2	0	0	0	0	0
228 1	233367	Y CARINE	1	0	0	0	0	0
228 2	231738	N MARIE-JEANNE	2	0	0	0	0	0
229 1	228185	MARIE	1	0	0	0	0	0
229 2	235845	REGINA	2	0	0	0	0	0
230 1	236083	O CARMELINA	2	0	0	0	0	0
230 2	229827	N MARGUERITE	2	0	0	0	0	0
231 1	235098	FRANCOISE	2	0	5	0	5	0
231 2	233553	T MARGUERITE	2	0	0	0	0	0
233 1	235388	R CHRISTIANE	2	0	0	0	0	0
233 2	235163	STITA JULIANA	2	0	0	0	0	0
234 1	233881	RENE	2	0	0	0	0	0
234 2	233021	E MARCEL	3	0	0	0	0	0
235 1	235612	OLETTE	1	0	0	0	0	0
236 1	235826	RD ARTHUR	1	0	0	0	0	0
237 1	234813	E EUGENIE	1	0	0	0	0	0
239 1	230446	T PAUL	1	1	0	844	0	844
240 1	234471	Z BLANCHE	1	0	0	0	0	0
240 2	235881	CORINNE	2	0	0	0	0	0
241 1	236007	FRANCIS	1	1	0	17	0	17
241 2	236017	PONT JEAN	2	0	0	0	0	0
242 1	235615	X JOCELYNE	2	0	0	0	0	0
243 1	232758	YLVIE	2	0	0	0	0	0
244 1	235880	ONT NANCY	2	0	0	0	0	0

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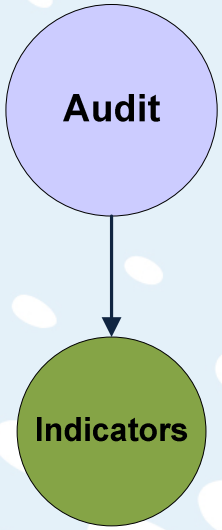

Who ? Nursing Direction, Head of service,
… manager rights in the application

How ? In the application in 3 clicks

When ? At every moment

Creation of audits is currently managed by the company

⇒ CMSE has to describe the request.

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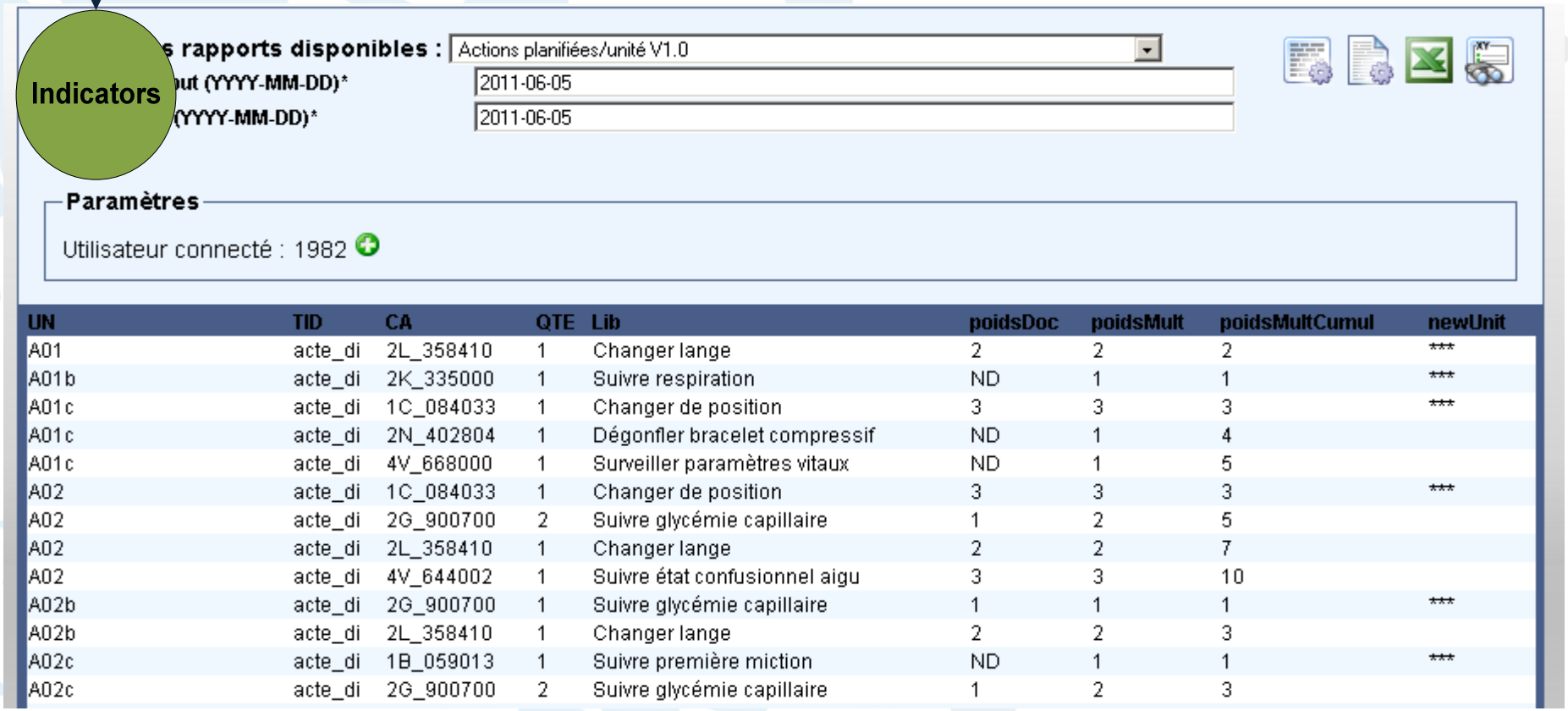
How to obtain these indicators ?

Audit

Indicators

The activity is weigthted following the choices of the institution
An audit of the planned activity offers a glimpse of the workload per day, per week, ...



s rapports disponibles : Actions planifiées/unité V1.0

ut (YYYY-MM-DD)* 2011-06-05

(YYYY-MM-DD)* 2011-06-05

Paramètres

Utilisateur connecté : 1982

UN	TID	CA	QTE	Lib	poidsDoc	poidsMult	poidsMultCumul	newUnit
A01	acte_di	2L_358410	1	Changer lange	2	2	2	***
A01b	acte_di	2K_335000	1	Suivre respiration	ND	1	1	***
A01c	acte_di	1C_084033	1	Changer de position	3	3	3	***
A01c	acte_di	2N_402804	1	Dégonfler bracelet compressif	ND	1	4	
A01c	acte_di	4V_668000	1	Surveiller paramètres vitaux	ND	1	5	
A02	acte_di	1C_084033	1	Changer de position	3	3	3	***
A02	acte_di	2G_900700	2	Suivre glycémie capillaire	1	2	5	
A02	acte_di	2L_358410	1	Changer lange	2	2	7	
A02	acte_di	4V_644002	1	Suivre état confusionnel aigu	3	3	10	
A02b	acte_di	2G_900700	1	Suivre glycémie capillaire	1	1	1	***
A02b	acte_di	2L_358410	1	Changer lange	2	2	3	
A02c	acte_di	1B_059013	1	Suivre première miction	ND	1	1	***
A02c	acte_di	2G_900700	2	Suivre glycémie capillaire	1	2	3	

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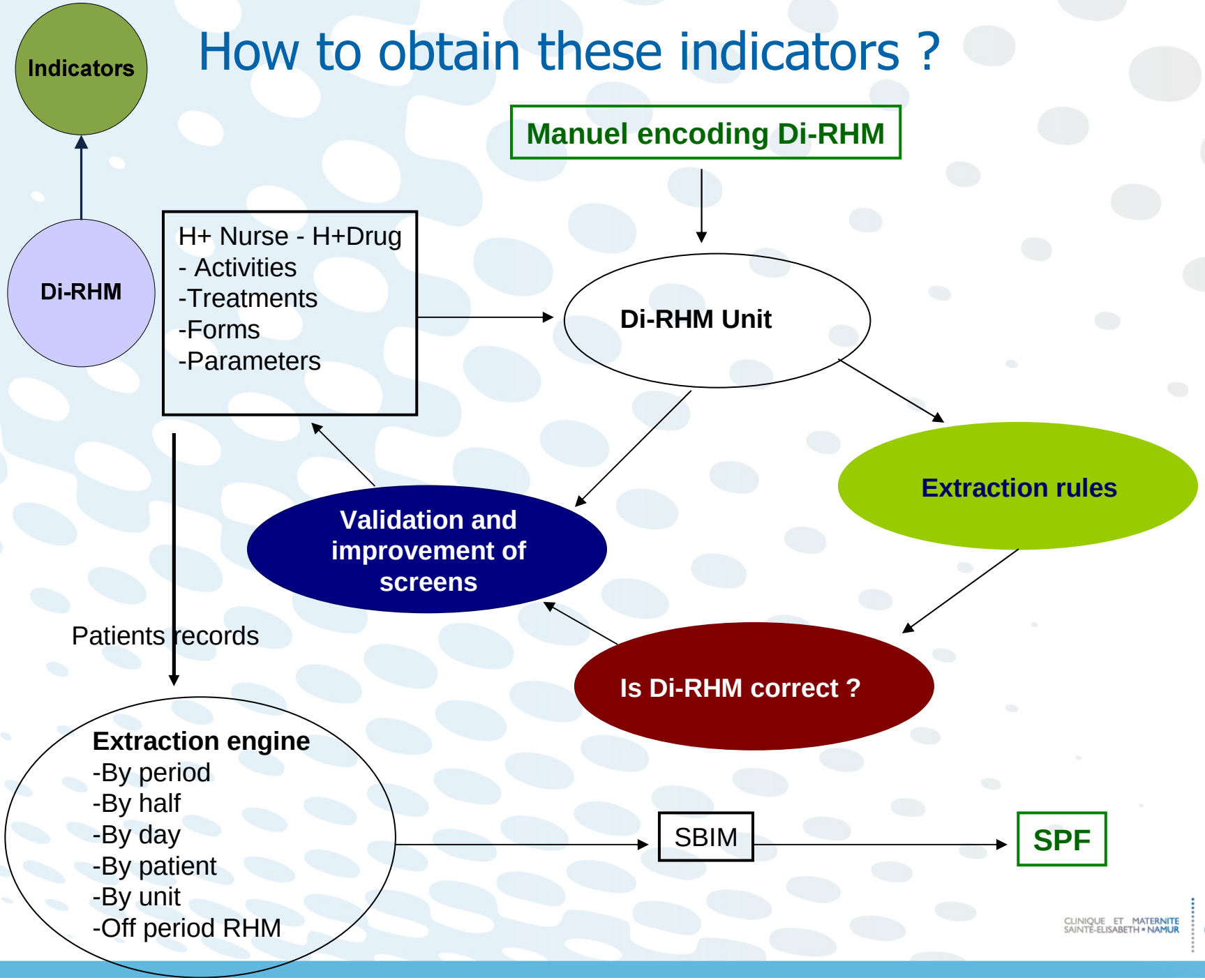
How to obtain these indicators ?



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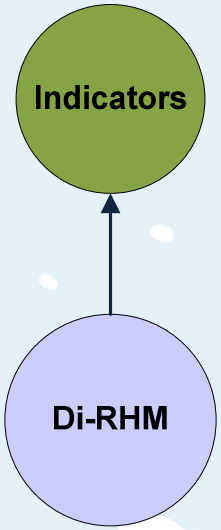

How to obtain these indicators ?

Statistic Docmodel :

- generates reports on the extraction of Di-RHM

Stat. d'activités [11]

Requête [11] 2008-12-01-2008-12-16
Items
Activités
Etats d'observation
Paramètres
Etats variables

Statistiques globales

		#activité	#action classées	#action non classées	#action
Total		73	3166	4250	7416
Aucune action classée	Avec module	10		504	504
	sans module	29		3116	3116
Actions partiellement classées		22	2700	630	3330
Toutes les actions classées		12	466		466

Activités classées

Code	Libellé	Détail	Total		Actions classées		A. non classées		Modules	Action par Item		
			#action	#épisode	#action	#épisode	#action	#épisode		Item	#action	#épisode
1A_020018	Lever au fauteuil	Détail	48	48	38	38	10	10	140229 !!	C110		
										C120	36	36
										C200	34	34
										S100	27	27
1A_020019	Suivre premier lever	Détail	35	35	4	4	30	30	140301	C120	3	3
										C200	3	3
										S100		
1A_020020	Remise au lit	Détail	27	24								
1B_043000	Suivre selles	Détail	129	94	96	66	33	32	140249 !!	B100		
										B410	86	61
										B600	35	25
1B_059000	Suivre urines	Détail	106	80	82	62	24	23	140315 !!	B100		
										B210	79	59
										B600	18	18
1B_059016	Suivre diurèse	Détail	285	159	234	140	49	43	140114	B100		

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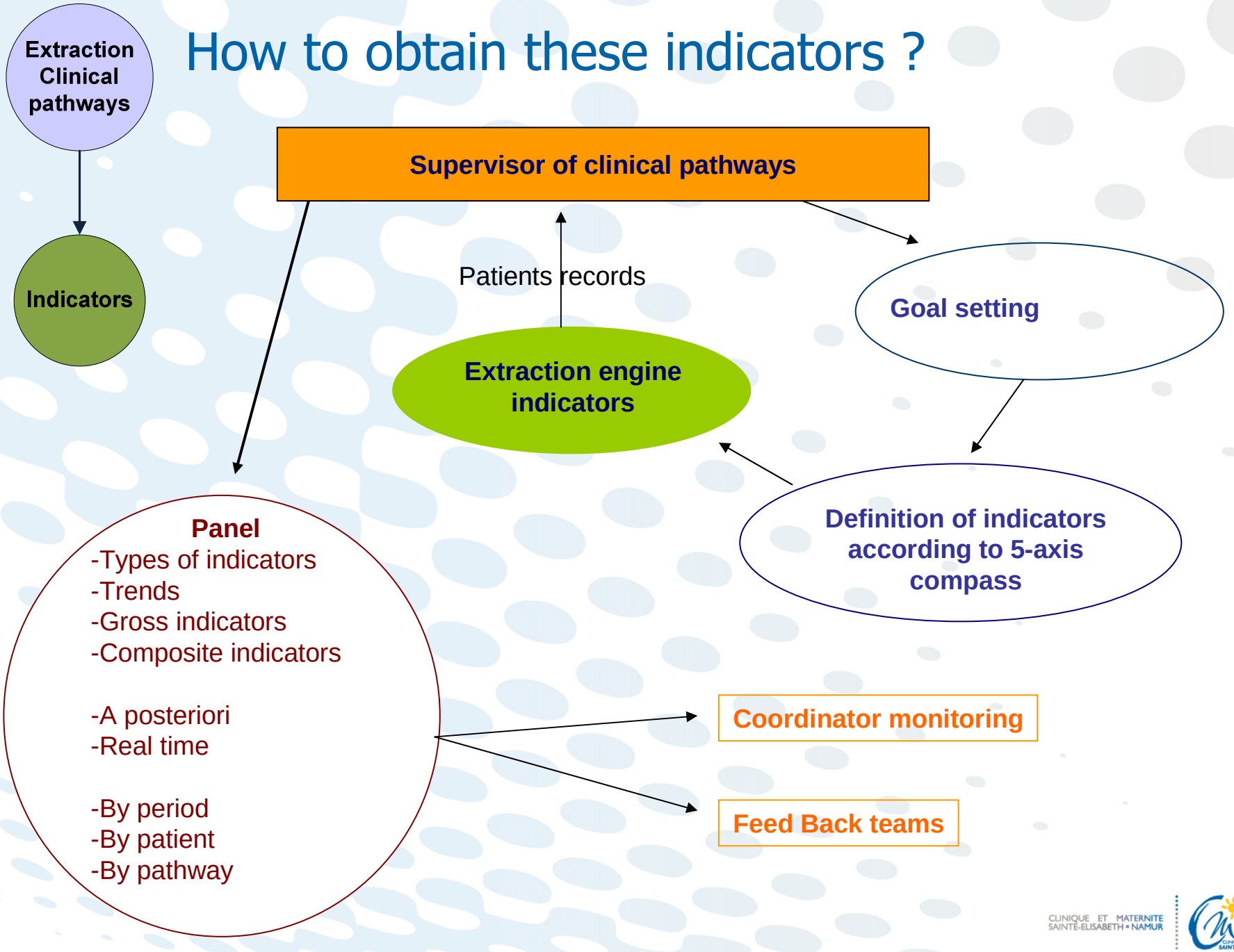
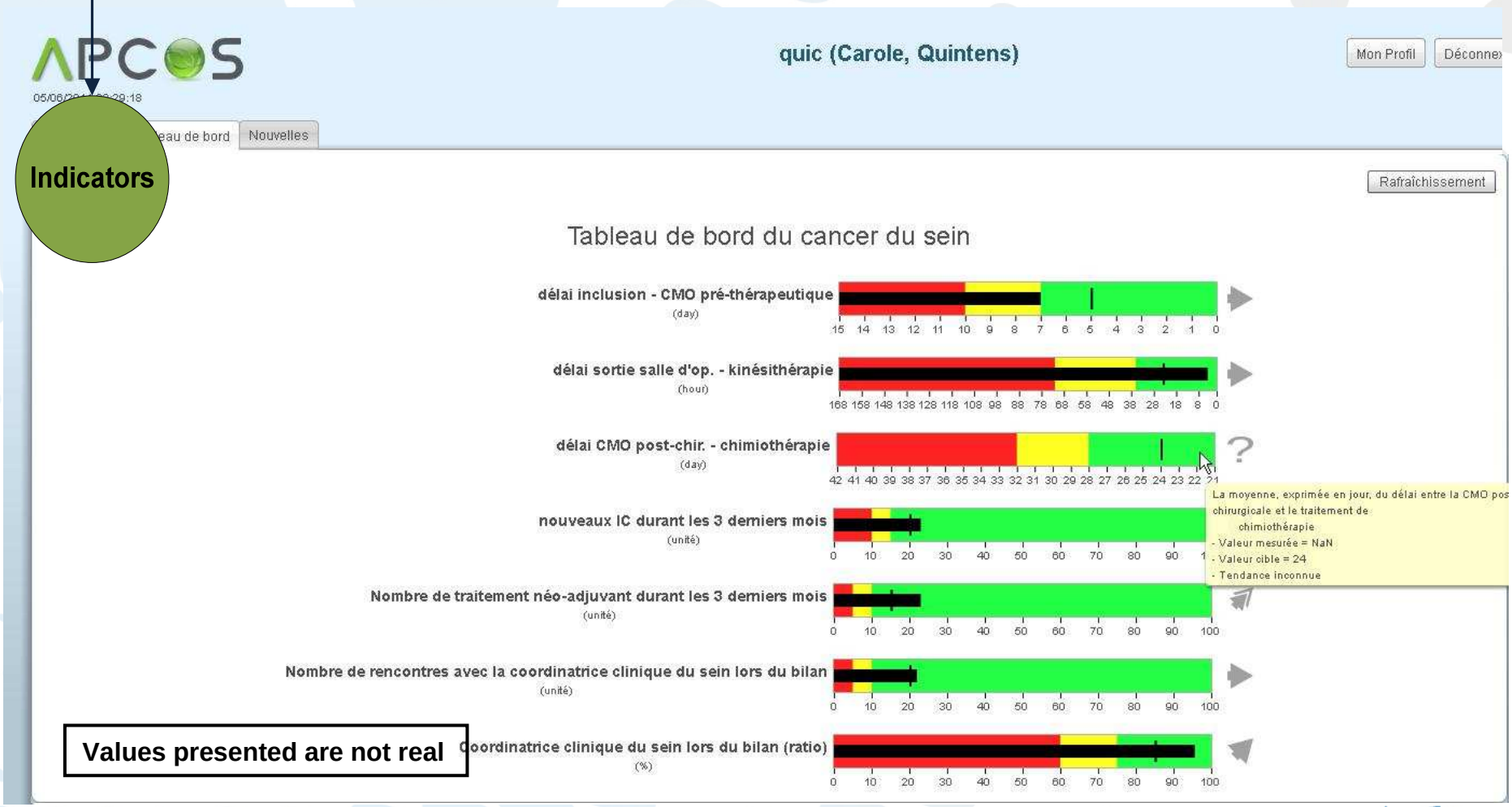
How to obtain these indicators ?



How to obtain these indicators ?

Extraction Clinical pathways

Indicators



Values presented are not real

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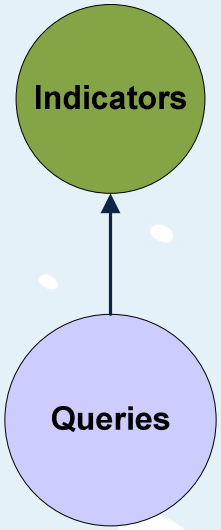
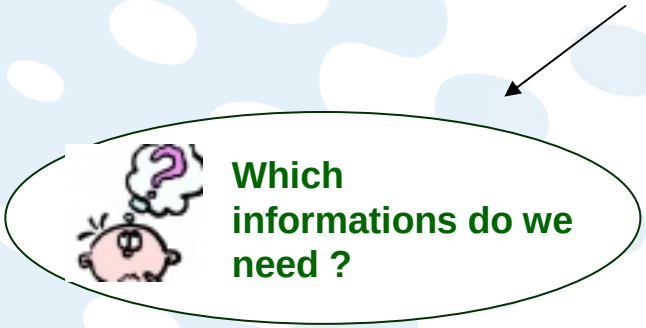


How to obtain these indicators ?

Indicators need as part - of a study - of an internal process



Application on pain : how do we measure the pain feeling at the CMSE

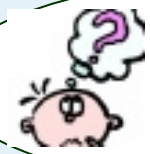
- Number of survey activities related to administered analgesic drugs
- Use of the verbal scale of pain (N= ?)

Indicators

Queries

How to obtain these indicators ?

Indicators need as part - of a study - of an internal process



Which informations do we need ?

Application on pain : how do we measure the pain feeling at the CMSE

- Number of survey activities related to administered analgesic drugs
- Use of the verbal scale of pain (N= ?)

- **Nutrition**
  - Pilot Project Teams Nutritional SPF Groupe 1
  - Institutional follow-up
- **Bedsores**
  - Currently conducting a query to demand
- **Education in Diabetes**
  - Conducting a query to demand
- **Baby-friendly hospital institution**
  - Conducting a query to demand

How to obtain these indicators ?

Indicators

Queries

Indicators need as part - of a study - of an internal process

Which informations do we need ?

Definition of indicators accurately :

- Used data
- Any mathematical function
- Query : automatic or not
- Extraction date

- Activity with the code140043 and the state « administered » in all hospital records :
  - from 1 to March 31,2008
  - from 1 to March 31,2009
  - from 1 to March 31,2010
  - from 1 to March 31,2011
- Given number of "simple verbal scale" in the display code 303333 code 301492, and if a value is validated in the dictionary

- On the number of activities whose condition is « administered » in all hospital records
  - from 1 to March 31,2010
  - from 1 to March 31,2011

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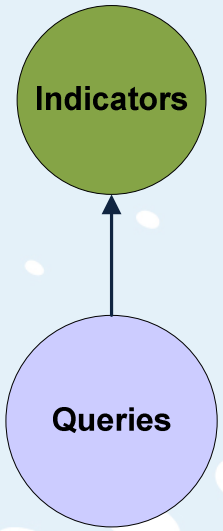

How to obtain these indicators ?

Structuration
Codification
Archiving of informations

- Average use of the verbal scale by patient or patient category
- Relationship between a value of the verbal scale and specific actions
- Analysis of the pain management by pathology
- Analysis of the evolution stage of bedsores
- **....**

How to obtain these indicators

Indicators

Queries

Indicators need as part - of a study - of an internal process

Which informations do we need ?

Definition of indicators accurately :

- Used data
- Any mathematical function
- Query : automatic or not
- Extraction date

Query sent to the informatic service

Query performed on the database

Treatment of flat files by the management unit

Results sent to applicants

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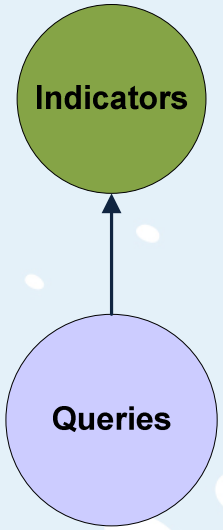


How to obtain these indicators ?

Indicators need as part - of a study - of an internal process

Comparable indicators between hospitals :

Total prevalence of bedsores.

Prevalence of bedsores emerged during hospitalization.

Prevalence of bedsores emerged in certain care units.

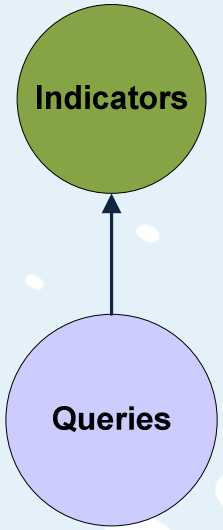
Total incidence of bedsores on admission.

Total emergence of bedsores during hospitalization.

Emergence of bedsores according to their location during hospitalization.

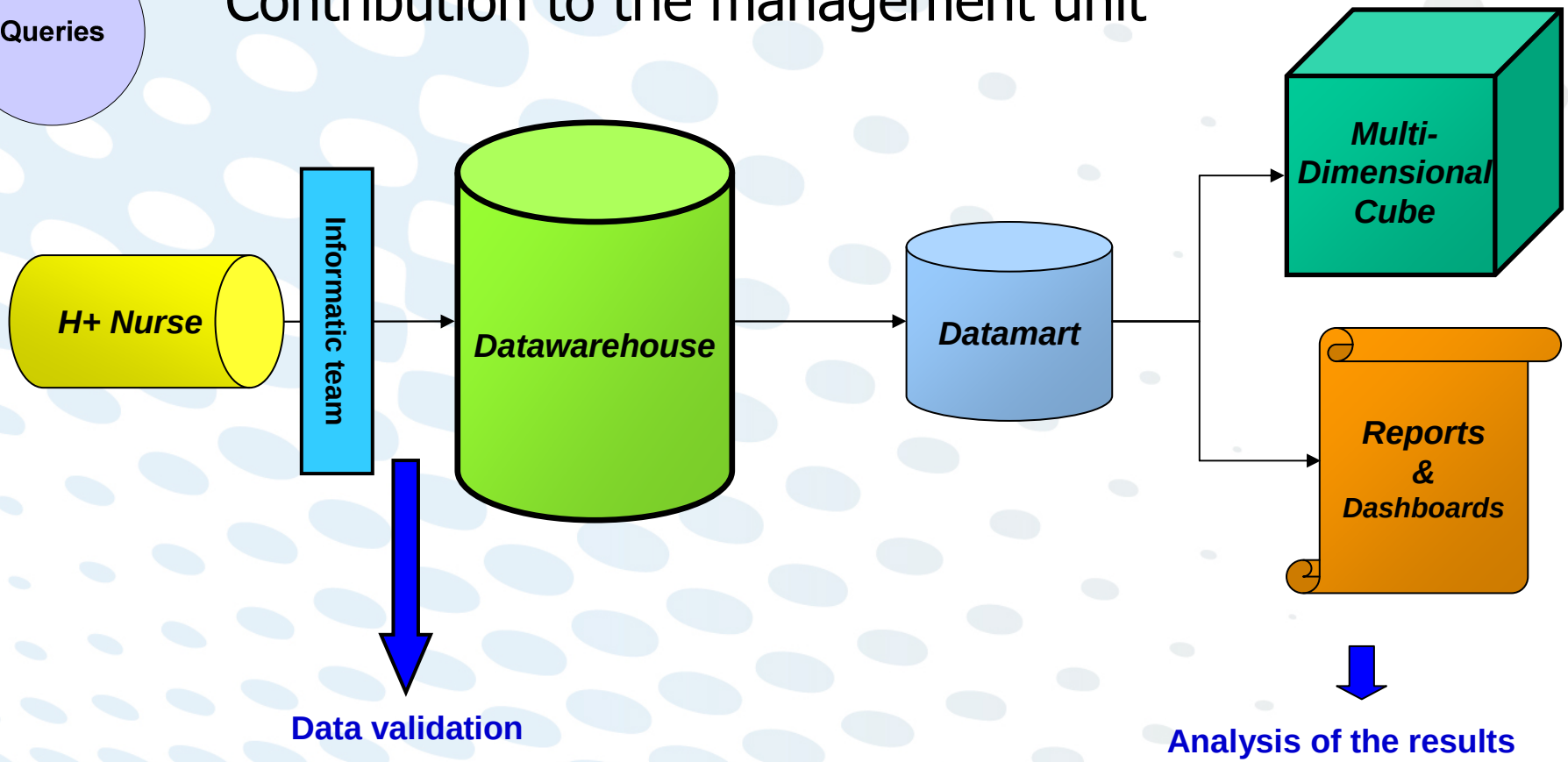
Number of patients at risk, continuously (24h/24h) receive adequate preventive measures.

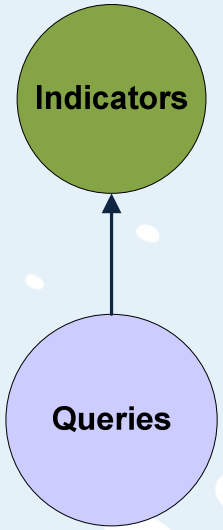
How to obtain these indicators ?



Indicators need as part - of a study - of an internal process

Contribution to the management unit



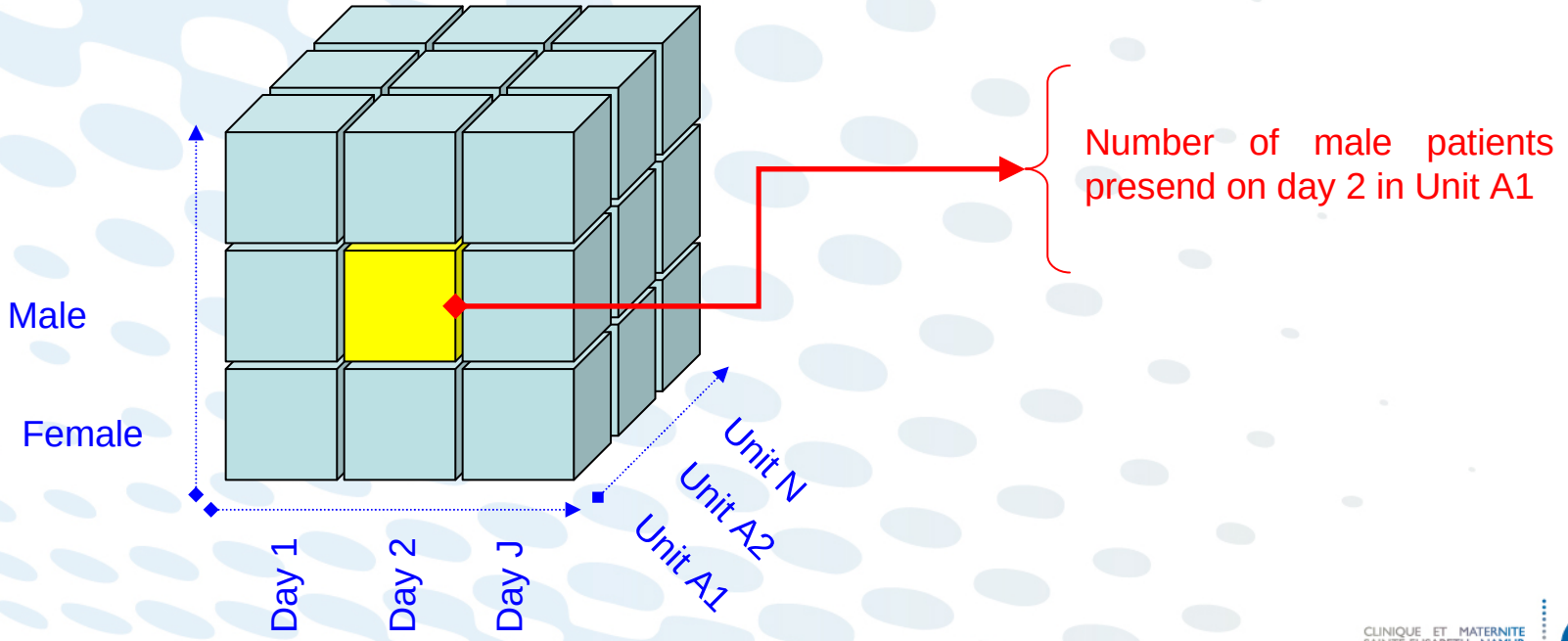


How to obtain these indicators ?

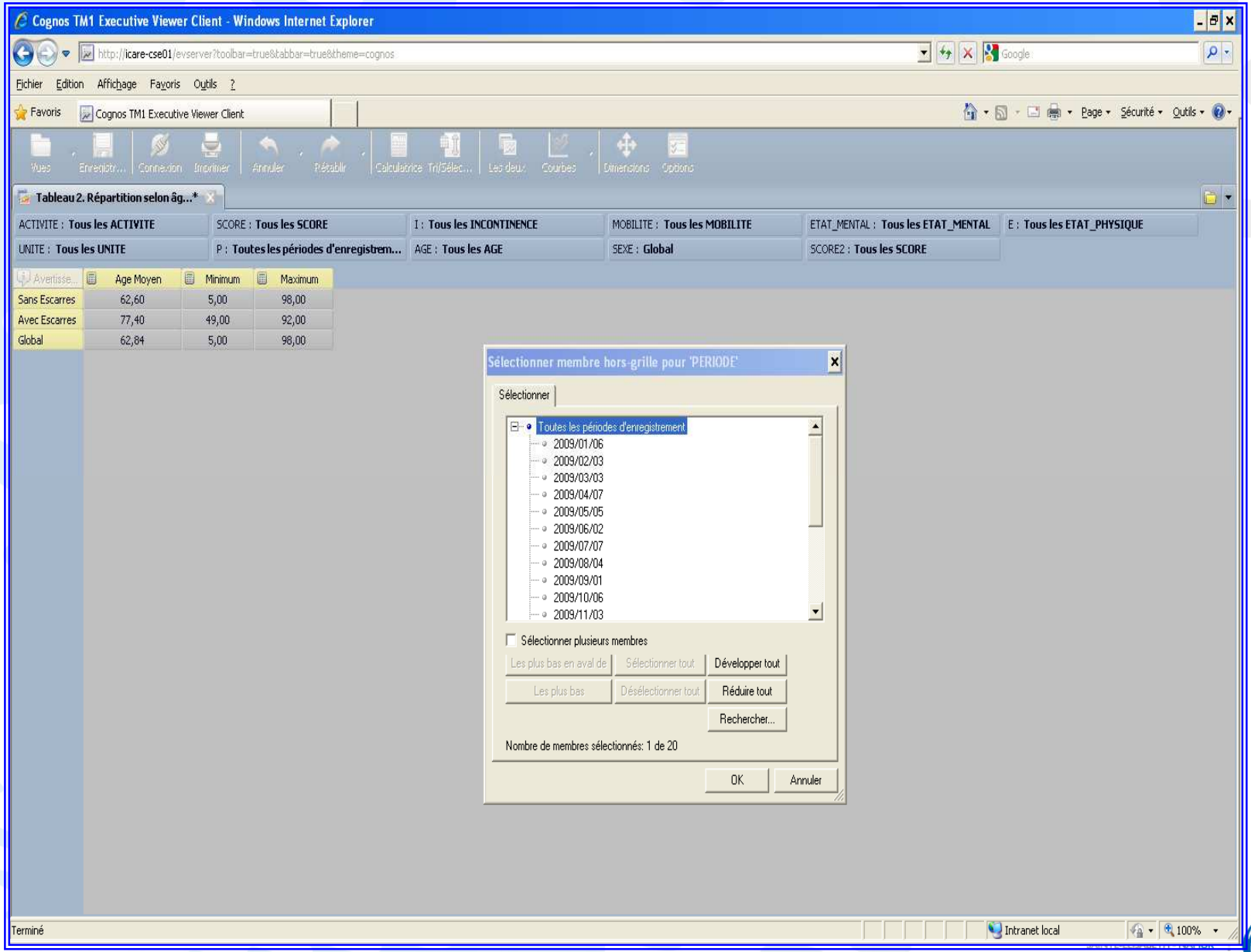
Indicators need as part - of a study - of an internal process

What's a multidimensional cube ?

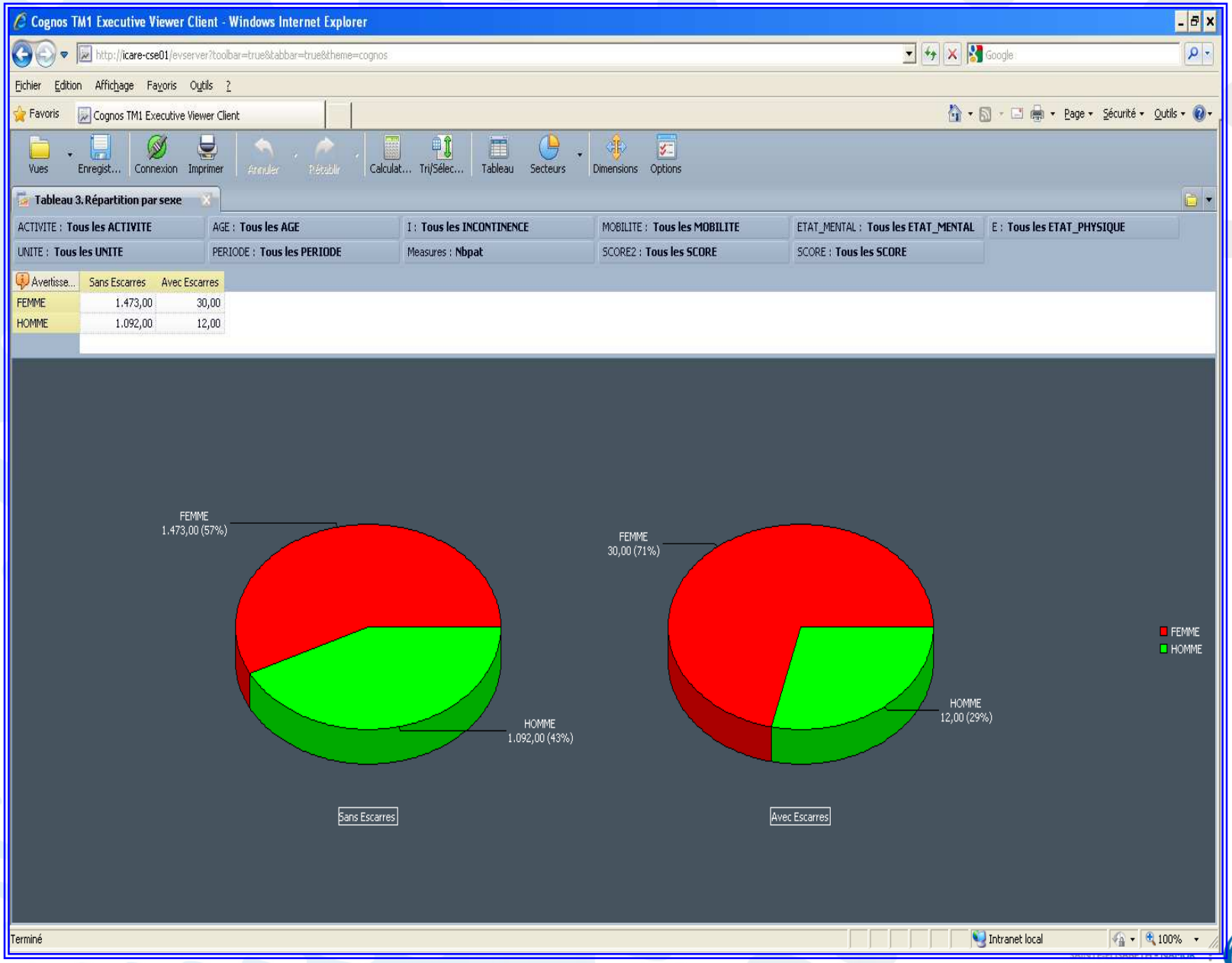
A multi-dimensional cube is used to analyze numerical ***indicators*** (number of patients, number of bedsores, etc.) in a context described by the intersection of several dimensions of analysis (time, care units, sex, etc.).



Bedsores indicators



Bedsores indicators



Remarks

Benefits of the extraction systems of indicators

- Structures data / Common language
  (ex: definition of hypotension arterial)
- Systematization
- Saving time and resources
- Centralization of data
- Data sharing
- Data linking
- Data linking clinical data with human resources (number of persons present, qualifications of the persons present in the unit …)
- Comparison with the costs per stay

Remarks

Difficulties

- Path of extraction : stakeholders (IT, management unit)
- Query formulation: what do we wish ?
- Adaptation of the structure of the data
- Choice of appropriate indicators.

Conclusions

- Production of indicators and quality management are inseparable
- Excess is harmful : « Cave » too many indicators
- Control by a procedure extracting indicators
- Skill for ever: Training at different levels of the institution (indicators, query formulation ...)
- Institutional structuring of a multidisciplinary management unit (organizing the data warehouse, making the information readable ...)
- Choosing data structures (within acceptable limits)
- Create TBE for all institutional levels

Thank you for your mercy !

Dank u voor uw aandacht !

Merci de votre attention.