



For

STERIMED

INFECTION CONTROL

performed by

ODOXA

PREVENTING NOSOCOMIAL INFECTIONS: French perception and practices

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SUMMARY

Clarifications about the margin of error p.4

Main lessons P.5

Chapter 1 : Knowledge of nosocomial infections and communication p.8-12

Chapter 2 : Perception of risks and practices at the hospital P.13-19

METHODOLOGY

Quantitative section

GATHERING DATA

- **The broader public:** A survey was filled out online by a cross section of the French public on September 1-2, 2016
- **Patients and the friends and family of patients:** A survey was filled out online by patients on September 1-2 and 8-9

SAMPLE

- **The broader public:** A sample of **1,024 PEOPLE** that is representative of the French population aged 18 and older.
- **Patients and the friends and family of patients (in the last two years):** A sample of **1,257 PATIENTS AND FRIENDS AND FAMILY**, including: 563 patients, 576 friends and family, and 118 people who had been both a patient and a friend or family member of a patient.

The representativeness of the sample was ensured by the method of applying quotas for the following variables: gender, age, and profession of the surveyed person after classification by region and type of town.

CLARIFICATIONS ABOUT THE MARGIN OF ERROR

Every poll displays some statistical uncertainty that is referred to as the margin of error.

This margin of error means that the result of a poll falls between one side and the other of the observed value, with a 95% level of confidence.

The margin of error **depends on the sample size as well as the observed percentage.**

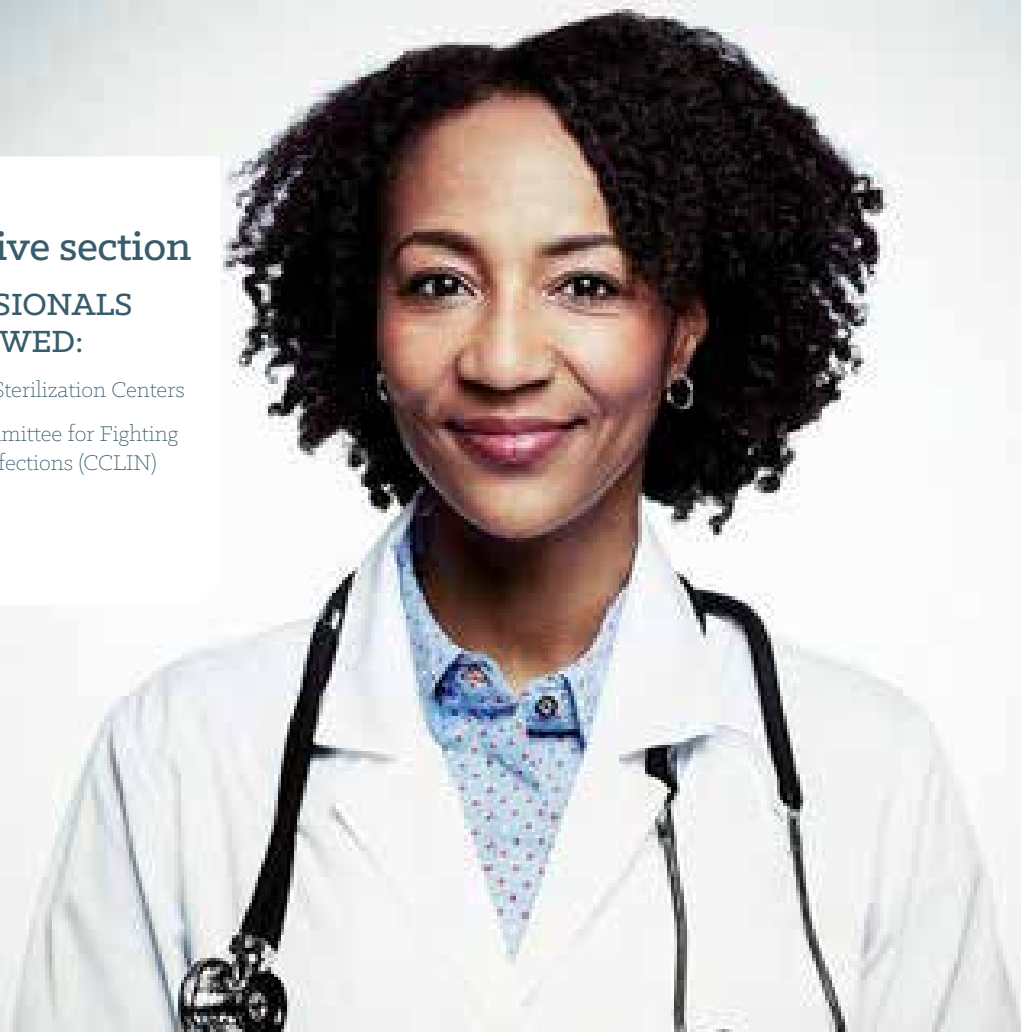
SAMPLE SIZE	IF THE OBSERVED PERCENTAGE IS...					
	5% or 95%	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
800	1.5	2.5	2.8	3.2	3.2	3.5
900	1.4	2.0	2.6	3.0	3.2	3.3
1,000	1.4	1.8	2.5	2.8	3.0	3.1
2,000	1.4	1.3	1.8	2.1	2.2	2.2

Reading the table: In a sample of 1,000 people, if the observed percentage is 20%, the margin of error is equal to 2.5%. The true percentage is thus comprised within the interval [17.5 ; 22.5].

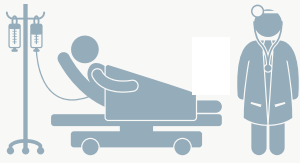
Qualitative section

9 PROFESSIONALS INTERVIEWED:

- 6 Directors of Sterilization Centers
- Head of a Committee for Fighting Nosocomial Infections (CCLIN)
- 2 nurses



EVERY DAY IN THE WORLD



At any moment, more than **1,4 million people** suffer from infections contracted at hospital.



In developed countries, **5 to 10%** of patients contract an infection during their stay



50 % Infections can appear once the patient has gone home, which can lead to numerous complications, even a new visit to hospital.



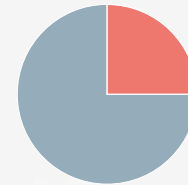
Every year, nosocomial infections are directly responsible for

37 000 deaths in Europe and 75 000 deaths in the US



In the United States and Europe combined, nosocomial infections create an extra cost of

9 billion Euros



In developing countries, the rate of patients that are infected can go over **25%**



MAIN LESSONS

3/4 of the French consider prevention to be a priority topic.

Sterimed wished to have opinion data on a subject that has gotten frequent media coverage, but rarely an in-depth look: nosocomial infections.

In order to provide the company with complete information, Odoxa questioned three target groups:

- the French public at large,
- Patients, their friends and family,
- healthcare professionals during quantitative interview: nurses, directors of sterilization centers, and directors of centers that fight nosocomial infections (CLIN) **.



I KNOWLEDGE OF NOSOCOMIAL INFECTIONS AND COMMUNICATION

1.1 - 9 out of 10 French people know what nosocomial infections are

Cases of nosocomial infections are regularly covered by the media. Again, very recently, the deaths of four extremely premature infants who were contaminated with staphylococcus aureus made headlines in the news. So it's a topic that is hard to miss and, in fact, 87% of the French public stated that they knew what these infections are (53% saying they knew "precisely"). This proportion rises to 91% of patients who had been hospitalized in the last two years or their friends and family (60% saying they knew "precisely").

However, this question varies widely by age. The youngest answerers were clearly less informed than their elders: 57% of French people under the age of 25 know about this kind of infection. This proportion progresses continually until it reaches 96% among those who are 65 and older.

Professionals from healthcare facilities confirm that awareness of this problem has taken root among patients and their relatives and attribute this interest both to greater media coverage of the problem (publication of rankings of hospitals according to infectious risks, front page articles about infectious incidents that have been widely discussed in recent years) as well as the fact that healthcare professionals themselves communicate about the subject (information from treating physicians, pre-operative information given equal importance as that relating to the risks of anesthesia, and so forth).

1.2 - ... however, communication about the subject is judged to be inadequate, particularly communication from public authorities.

Although they are aware of the subject, the French people obviously sense that they are lacking information. When we analyze information coming from hospitals, media sources, and public authorities, hospitals do indeed come out on top, but as many as two thirds of French people (65%) think that they do not communicate sufficiently about nosocomial infections. This proportion rises to 71% for the media and 81% for public authorities. This hierarchy is the same among patients and their friends and family and the levels are extremely close.

In greater detail, from this last "target", the lack of information about good practices for patients stands out the most (45% "well informed", 55% "poorly informed"). Communication about good practices for staff or about the very definition of nosocomial infections appears to be better, although there is plenty of room for improvement (53% "well informed" compared to 47% "poorly informed" for both subjects).

1.3 - A deficit of information for patients and their friends and family

In practice, 61% of patients and the friends and family of patients (65% of friends and family, 56% of patients) state that they were not informed by the medical staff about good practices to adopt for avoiding nosocomial infections during their last hospital stay or visit.

Healthcare professionals feel that the information really is given (mostly posted), but that it is often "lost" among other information, which may account for these opinions.





PERCEPTION OF RISKS AND PRACTICES AT THE HOSPITAL

2.1 - More than half of all French people think that the risk of contracting a nosocomial infection is high

Consequently, French people know what nosocomial infections are, but would like to know more about them. Whenever there is awareness about a topic, but it is poorly understood, it can generate fears, which are sometimes disproportionate. For instance, more than half of all French people (52%) and patients and the friends and family of patients (56%) think that the risk of contracting a nosocomial infection is high.

In fact, more than one third of patients (34%, 36% of their friends and family) are afraid of contracting a nosocomial infection during hospitalization.

In reality, 21% of French people have been confronted with a nosocomial infection, either having been victims themselves (5%), or because one of their friends or family contracted this kind of infection (16%).

2.2 - According to patients and their friends and family, hospital practices could be improved.

Actually, although three fourths of patients or their friends and family (75%) felt that good practices for avoiding nosocomial infections were followed at the hospital, there is nonetheless a significant minority of 24% who think that they were not. Furthermore, among the 75%, only 12% think that the practices were “completely followed”, while the better part felt that they were “somewhat” followed.

However, our qualitative interviews reveal a form of fragility in the prevention process: the professionals note that the level of training of care staff has experienced an upsurge in recent years and that incidents are systematically investigated in order to optimize the processes in place.

In spite of this, acting in consideration of this risk is extremely demanding for the staff (very frequent hand washing, changing gloves during surgical procedures, etc.), who also feel that they lack the time. This explains why there is still a gap between the recommendations and the actual practices. It is undoubtedly this disparity that leads patients to think that prevention still has much room for improvement.

2.3 - Three fourths of the French public think prevention of nosocomial infections must be a priority

Insufficient communication about this subject, fears of contracting an infection, and practices that are thought to be imperfect, these are just some of the reasons why the French, regardless of their socioeconomic background or age, think that prevention of nosocomial infections must be a priority. 76% of them say so, 80% of patients or their friends and family.

Healthcare professionals understand and share this goal, but seem somewhat at a loss as to how to inform patients without panicking them and what to do so that practices will be consistent with protocols.

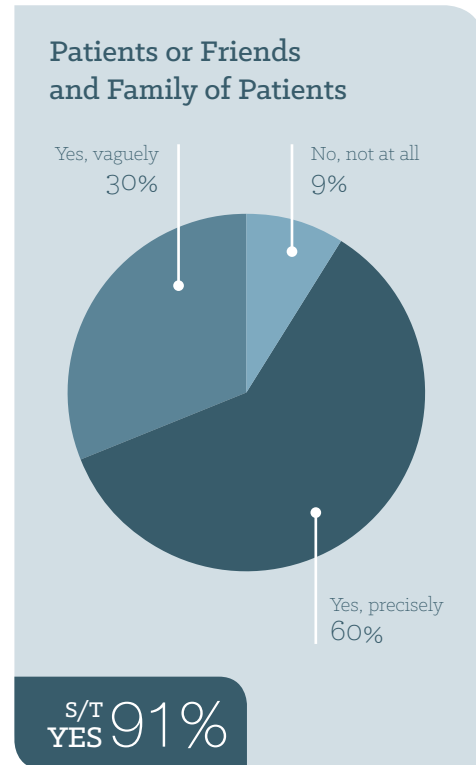
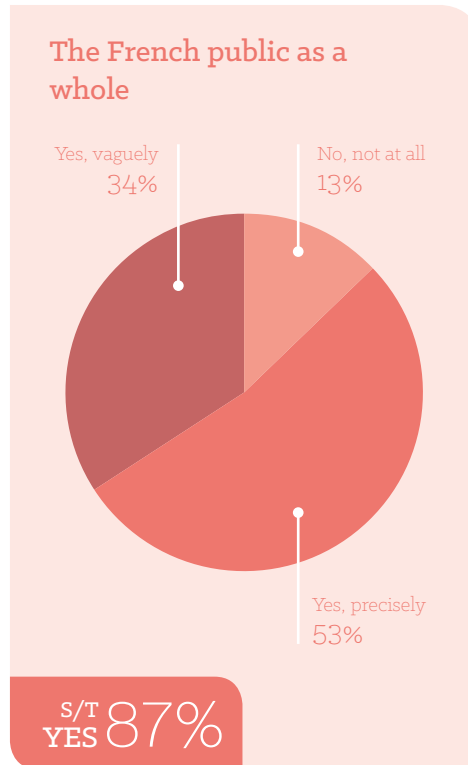
Céline Bracq
CEO of Odoxa

*A company specializing in the production of sterilization packaging.

** The CLIN is in charge of elaborating and directing action programs in hospital facilities that aim to prevent nosocomial infections and reduce their occurrence.

9 out of 10 French people know what nosocomial infections are...

Do you yourself know what nosocomial infections are?



A growing need for reassurance

Generally speaking, healthcare professionals themselves have also noted that **media coverage of the risks linked to nosocomial infections accentuates patient watchfulness** in relation to this issue.

“ So, it’s a bit of the same story everywhere: people are getting more and more information from media coverage, so they are in that mode of thinking. People don’t even hesitate. **I had to do research to prove that the equipment used for the patient was sterile.**” (Director of a Sterilization Center)

“ Yes, because some cases were heavily mediatized and word of mouth spreads quickly. So, it’s a fear for patients, yes.” (Director of a Sterilization Center)

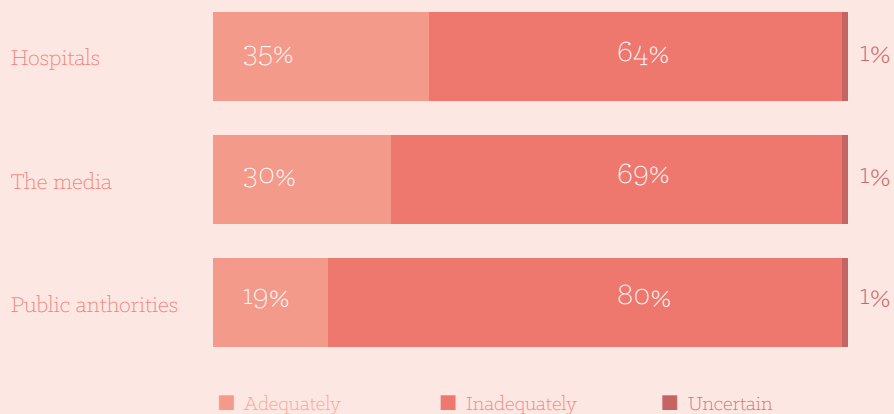
However, these requests for supplemental information still mostly occur after an infection has been contracted: Patients are more and more “connected” in advance of their hospitalization.

“ From the moment that they are hospitalized, **they are getting more information off the internet about their pathology than about the risk of nosocomial infections at the hospital.**I don’t think they read up on that.” (Director of a Sterilization Center)

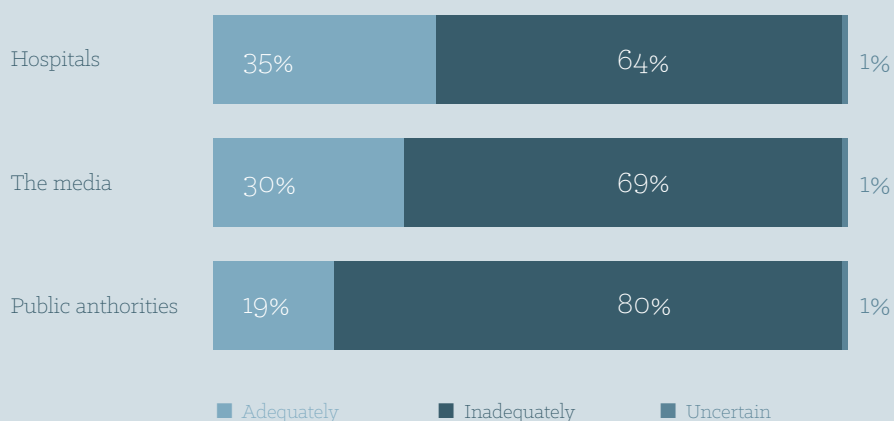
Communication about the subject is judged to be inadequate.

For each of the following players, would you say that they communicate adequately or inadequately about nosocomial infections.

The French public as a whole



Patients or Friends and Family of Patients



Professionals who are fairly favorable towards the publication of hospital “rankings”.

For the professionals who were questioned, the distribution in the press of rankings of **hospitals according to nosocomial infections** is not necessarily felt to be a source of “stigma”

“ I think that the journalists do a good job (...) These indicators are good, but they only reflect part of the risk, which varies from day to day and from one organization to another. But it creates **positive momentum in the healthcare facilities**. **As for the users, the goal is to ease their minds, to reassure them. They can see that the risks are rather on the decline, that things are improving.**” (CCLIN)

Above and beyond the principle of the thing, questions are being asked about the pertinence of the **chosen criteria**, which might give a false image of the situation to the greater public who are simply browsing the information.

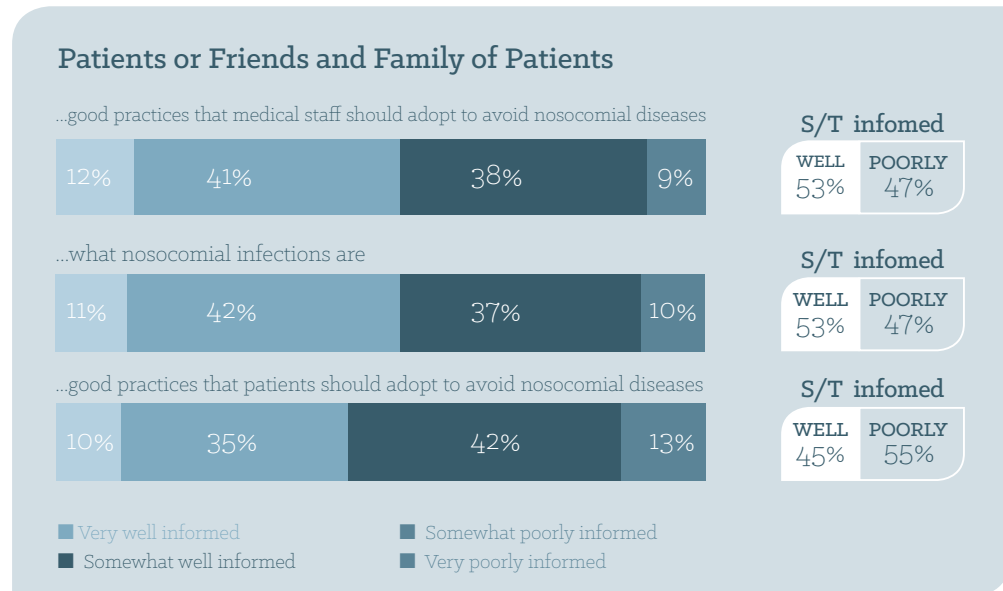
“ But **the indicators used are not necessarily the best**. For example, the number of liters of hydroalcoholic gel used: **does that really prove that, behind the scenes, protocols are being followed?** If the departments put the bottles in the trash bin, they will have consumed many liters.” (Director of a Sterilization Center)

Top 20 hospitals and clinics in France (2016)

1 ^{er}	CHU, Bordeaux (Gironde)
2 ^e	CHU, Lille (Nord)
3 ^e	CHU, Toulouse (Haute-Garonne)
4 ^e	Hôpitaux universitaires, Strasbourg (Bas-Rhin)
5 ^e	Hôpital de la Pitié-Salpêtrière, Paris
6 ^e	CHU, Nantes (Loire-Atlantique)
7 ^e	CHU, Grenoble (Isère)
8 ^e	CHU, Montpellier (Hérault)
9 ^e	CHU, Rouen (Seine-Maritime)
10 ^e	CHU, Rennes (Ille-et-Vilaine)
11 ^e	CHU, Tours (Indre-et-Loire)
12 ^e	CHU, Dijon (Côte-d'Or)
13 ^e	CHU, Nancy (Meurthe-et-Moselle)
14 ^e	CHU, Nice (Alpes-Maritimes)
15 ^e	CHU, Clermont-Ferrand (Puy-de-Dôme)
16 ^e	CHU, Amiens (Somme)
17 ^e	CH Lyon-Sud, Pierre-Bénite (Rhône)
18 ^e	CHU, Saint-Etienne (Loire)
19 ^e	CHU, Angers (Maine-et-Loire)
20 ^e	CHU, Poitiers (Vienne)

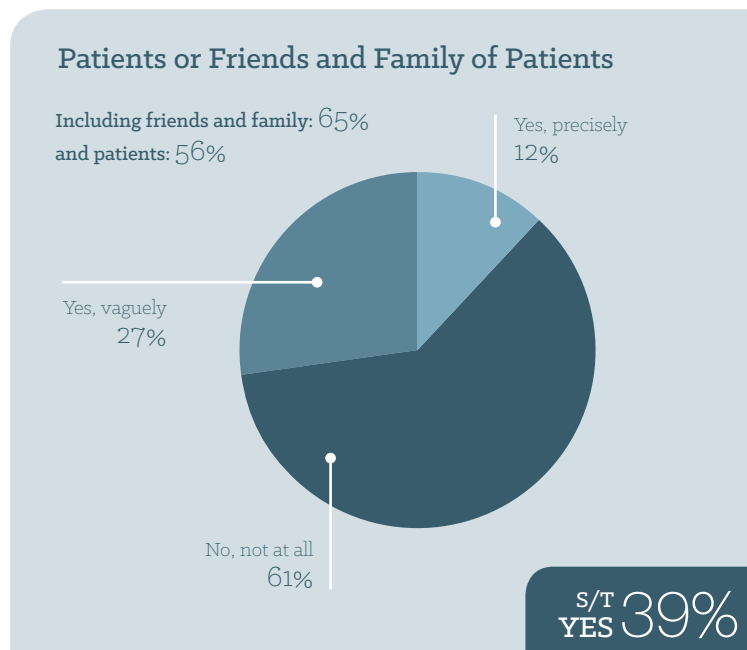
Information about nosocomial infections: progress to be made

Do you feel very well, somewhat well, somewhat poorly, or very poorly informed about...



Patients or friends and family of patients lack information from the care staff

Where you were hospitalized or your friend or family member was hospitalized, were you afraid of contracting/that he or she would contract a nosocomial infection?



Ad hoc information that is often “lost” in the documentation given to patients

- A subject that is covered in the documentation provided in advance of a hospitalization, but integrated into **broader information**, particularly covering the risks linked to anesthesia, for example.
- **Dense, technical documentation** that is not read in sufficient detail, which reinforces the feeling of **inadequate education** about the risks of nosocomial infections within healthcare facilities.



*Before each procedure, there are **documents to sign that express the risks, and infection is one of these risks. And among these risks, the notion of infection is restated (...)** it's not dedicated to infection but it's one of the things that are clearly expressed in the documents.*

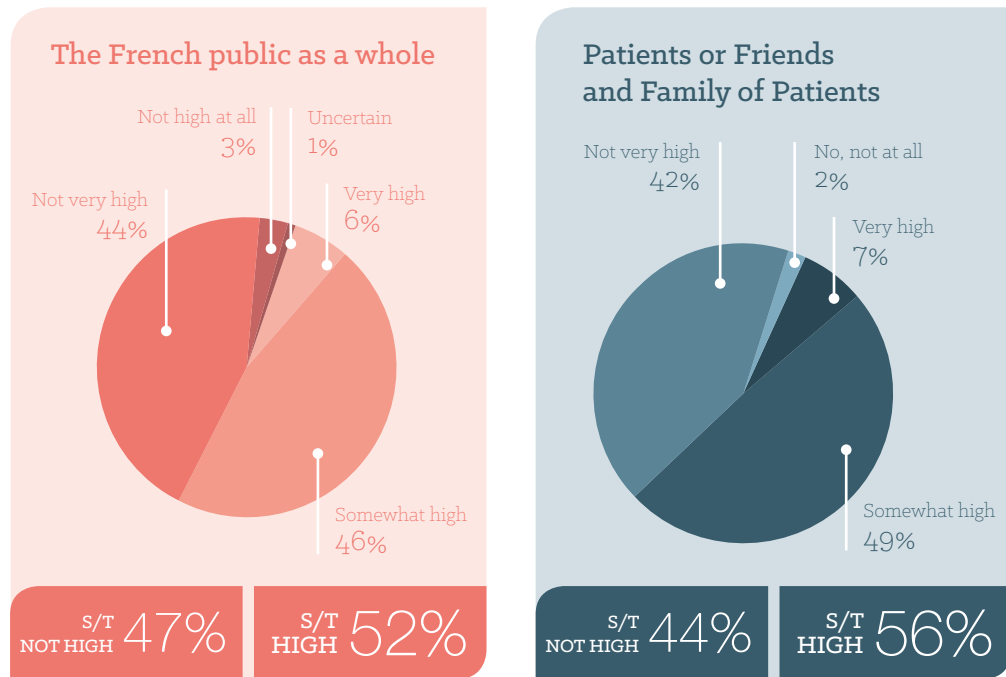
*On the other hand, **there are three pages of documents, so I'm sure that they read them.*** (Director of a Sterilization Center)

The nurses (upon seeing the results of our study concerning the lack of information from care staff) deem that **the information exists** (postings in hospital rooms about recommendations and prevention), **but that it is often lost** among other information formats, which limits patients from becoming effectively aware of it.

CHAPTER 2 : PERCEPTION OF RISKS AND PRACTICES AT THE HOSPITAL

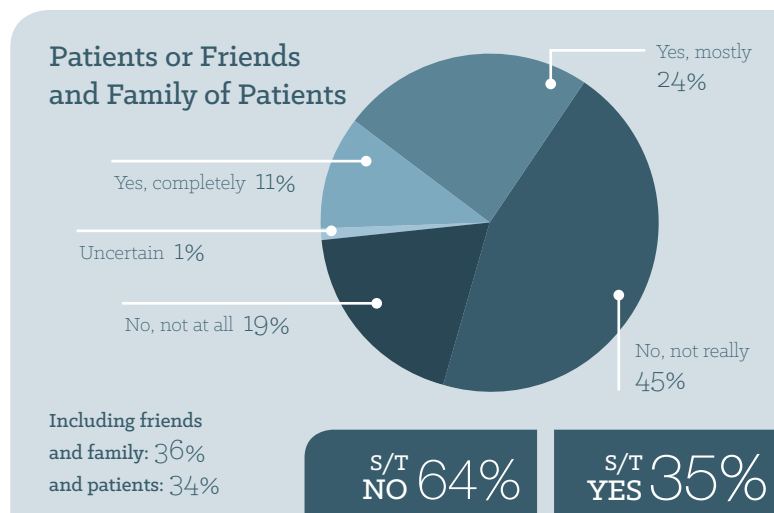
More than half of all French people think that the risk of contracting a nosocomial infection is high

According to you, in France, are the risks of contracting a nosocomial infection very high, somewhat high, not very high, or not high at all?



One third of patients were afraid of contracting a nosocomial infection

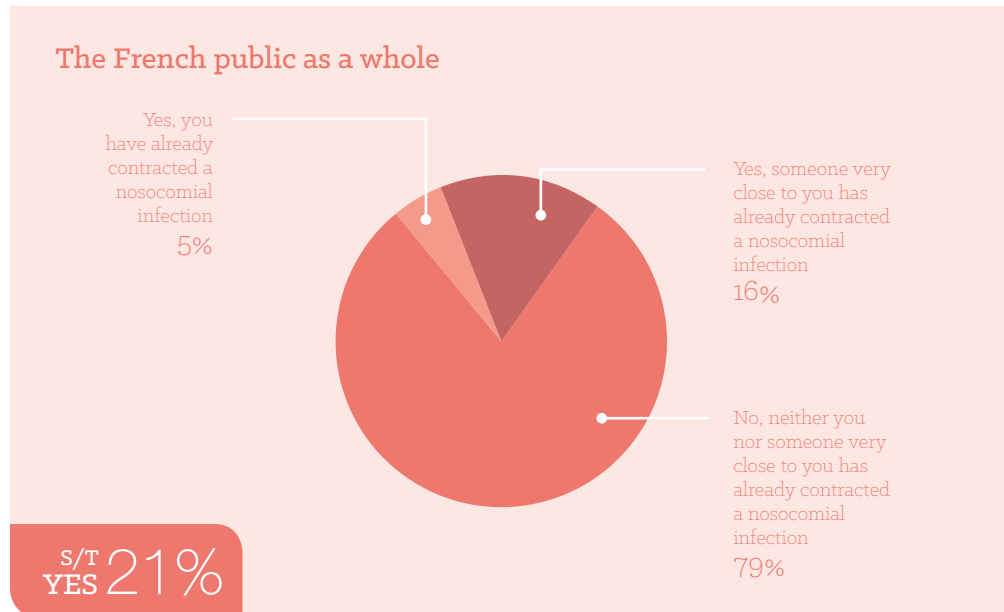
Where you were hospitalized or your friend or family member was hospitalized, were you afraid of contracting/that he or she would contract a nosocomial infection?



1 French person out of 5 “confronted with” nosocomial infections

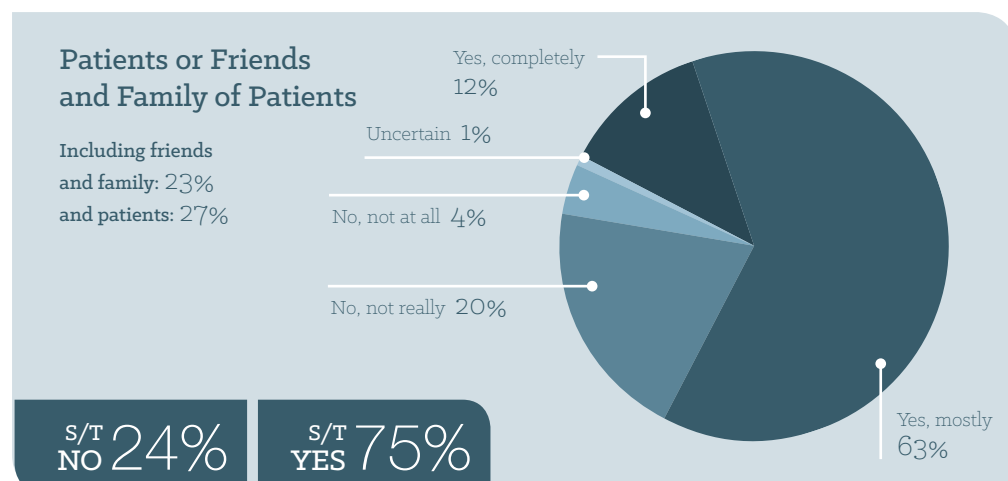
Nosocomial infections are infections that patients contract during care or procedures, at the hospital or outside the hospital, such as at a dentist’s office or in a tattoo parlor.

In your life, have you already been confronted with nosocomial infections?



According to patients and their friends and family, practices could be improved.

During your last hospital visit, did you feel that the good practices put in place to avoid nosocomial infections were being followed?



Prevention processes are very present, but operational teams still struggle to apply them

According to the opinion of all the professionals who were questioned, **prevention protocols are well-indicated within healthcare facilities.**

This prevention is anchored to significant awareness-raising campaigns for staff that include very frequent internal trainings, specialized staff (public health nurses), various internal communications, as well as very structured prevention protocols.

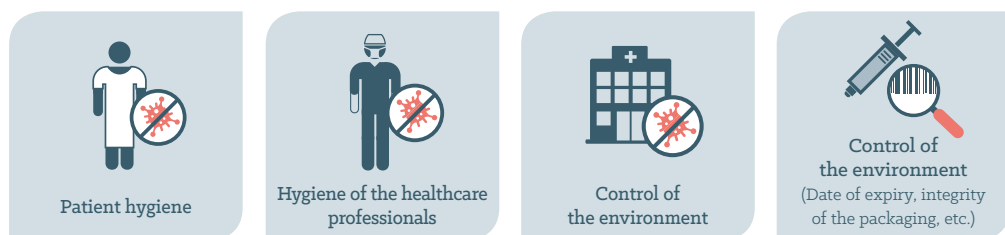
Nevertheless, **these recommendations sometimes fail to be completely applied** inasmuch as their implementation is often felt to be **demanding by staff** who are in contact with the patients.

“ It is indeed demanding to wash one’s hands all the time, take off jewelry before a procedure, change gloves every two hours [...] **Yes, hygiene is demanding.**” (Director of a Sterilization Center)

“ Yes, at every level, and the doctors are not the most exemplary in this arena. I participate in training the staff of my sterilization line and I really understand that **in the day to day, it’s complicated** [...] I know that they do it when we’re there, but **when we’re not there, they don’t always do it...**” (Director of a Sterilization Center)

Despite these limitations, **the professionals are unanimous in saying that consideration for this issue is improving.** They have observed fairly good results in this area over the past years, with a decrease in “undesirable incidents” at this level.

“ **Yes, it’s received acceptance, but it’s a relentless battle.**” (Director of a Sterilization Center)



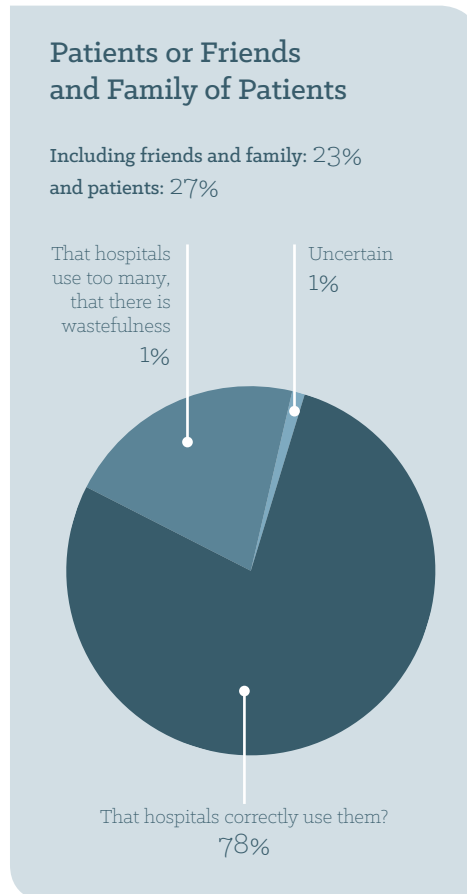
But the nurses who were questioned recognized **certain flaws... in practice.**

- Although they brought up the existence of prevention protocols and the availability of hydroalcoholic gel in all areas, they still felt that **day to day application of these recommendation remained demanding when trying to follow them systematically.**
- The nurses alluded to a **situational reality in which certain “liberties” are sometimes taken** compared to what should be applied.

“ 24% yes... **it’s not always followed by the nurses, we see that, they sometimes change an IV without a compress, and do they wash their hands? I don’t know... they may be in a hurry as well, and above all, they are fed up with it.**” (Nurse)

Three fourths of French people think that hospitals correctly use “single use” medical devices.

Concerning “single use” medical devices, which are immediately thrown away in order to limit the risks of nosocomial infections in hospitals, would you say...



Professionals observe that single use consumable supplies hold a real attraction.

The sterilization policies in healthcare facilities mentioned by the professionals show that the overall trend is to **value single use consumable supplies more than in the past**.

The directors of Sterilization centers support this solution for “non-invasive” equipment (endoscopes, catheters, etc.).



*After that, we got rid of everything, **the little care trays in the departments were switched to single use**. And financially speaking, **everyone is better off**.”
(Director of a Sterilization Center)*

Decision makers are favoring single use consumable supplies, and are particularly basing their preference on:

- **The practicality/the quality of the offer** available from industrial manufacturers in this sector,
- **The availability of products** (Sterilization centers do not always operate 24/7),
- **The purchasing price, which is often more competitive in the end than on-site sterilization** (staff time, equipment, etc.)



At first, when we switched to single use, the laboratory supplier sold it at a high cost. But later, when competitors also began making single use supplies, prices went down. And given the order volumes, the prices are going down very rapidly.” (Director of a Sterilization Center)

A predilection for single use consumable supplies that nevertheless carries certain limitations

Although professionals generally agree with the “single use” concept, they still point out **a number of limitations**.

Difficulties in storing consumable supplies:

- Some healthcare facilities keep these products in “stock rooms” that may be far from the places of final use.
- Since there is a heightened risk of damaging the packaging during transportation, it might be necessary to have more durable packaging.

Another lesser shortcoming is linked to the handling of consumable supplies after use and questions about the quantity of “waste”.



*We might go back to **the ecology side of things** too and talk about **how much waste a hospital can generate!** For the time being in the care wards, there are **practically no reused materials**. Now **all the small consumable supplies are single use and they all get thrown away.**”* (Director of a Sterilization Center)

A desire to be better informed about innovative solutions that are on the market

Many professionals note that **there is not enough dialogue with industrial manufacturers** to be able to **inform them of possible emerging needs** or to **have better knowledge of innovations** on the market.

This situation is particularly attributable to:

- **Consumable supplies bought from intermediaries** who act as distributors,
- **Limited direct contact with “sales reps”,** who might share **knowledge about innovations in the market,**
- **An imperfect vision of the competitive landscape** of this sector.

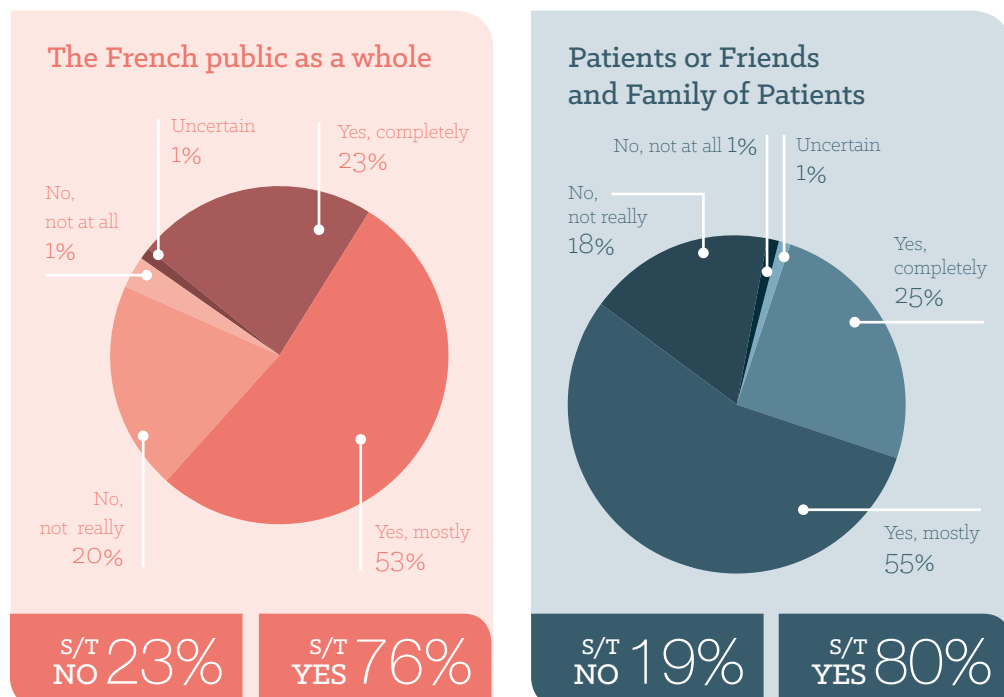


*It's not a field that is prone to extreme changes (...) **there aren't many industrial manufacturers who come present their sterilization packaging to us.** It would surely be interesting. But **the packaging manufacturers aren't present.**" (CCLIN)*

For those who maintain stronger direct contact with certain industrial manufacturers, **this relationship appears profitable to them,** not only because they have a more thorough knowledge of products offers, but also because **these actors can also shed light with their own expert knowledge of risks related to nosocomial infections.**

Prevention of nosocomial infections must be a priority according to three fourths of the French public

Do you personally believe that, in France, preventing nosocomial infections must be a priority subject:



Care staff agree with these priorities as stated by the French public.

To a greater degree than the gauges published in the press, cases of infection affecting celebrities these past years have heightened **the need, among the broadest public, to feel that this subject is being intensively dealt with** by healthcare facilities.

- The media fall-out had the effect of strongly underscoring the risk, **along with very significant relaying by word of mouth and even social networks when a case of infection** has occurred in one facility or another.
- For that matter, care staff have noted that **some patients are willing to stay in a hospital very far from home out of fear of their closest facility** if an incident occurred several weeks before their operation.

“ *It was striking, what happened with Guillaume Depardieu, there was a lot of media coverage.*” (Nurse)

“ *People talk amongst themselves and also on Facebook. Perhaps there is the same level of risk, but people are more concerned about it.*” (Nurses)

There is a **degree of paranoia** when approaching these infectious issues.

“ *Nowadays I see that they are very frightened, they are very concerned about cases they've heard about and will even go so far as to choose hospitals according to that, even if it means travelling 100 km!*” (Nurse)





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