Healthcare-associated infections

SUCCESS FACTORS FOR PREVENTION
Comparative study of sixteen counties

Healthcare-associated infections (HAI) pose one of the greatest threats to patient safety in the Swedish system. Although the issue has been brought to the attention of policymakers for a number of years and counties are pursuing a preventive effort, the prevalence of HAI is not declining. The previous decrease has levelled off and HAI have stabilised at approximately 9% over the past four years.

Scientific evidence supports a number of preventive measures, including hand hygiene, as well as for inserting catheters and dressing wounds. Nevertheless, information is limited when it comes to the methods employed by counties and hospitals that succeed best in preventing HAI.

With the goal of examining the varying results and working methods as a basis for learning and improvement, 16 counties and regions collaborated with the Swedish Association of Local Authorities and Regions to conduct a comparative study of preventive measures.

The study looks at counties and hospitals that report both low and high prevalence of HAI in order to identify factors that may be correlated with success. The counties and hospitals were selected by means of analysing point prevalence surveys. The comparisons generally proceeded from interviews with approximately 100 key people – clinical professionals, day-to-day managers and top strategic managers – at various levels of healthcare organisations.

FIND OUT MORE

To find out more about the study, download the full version of the report entitled, Vårdrelaterade infektioner – framgångsfaktorer som förebygger (Healthcare-associated Infections – Success Factors for Prevention) from webbutik.skl.se
The study generated a description of eight success factors for preventing healthcare associated infections, HAI. (Figure 1) We hope that the findings will serve as a platform for counties, hospitals, clinics and units to draw up action plans that proceed from their individual circumstances in order to reduce the frequency of HAI.

**Figure 1. Success factors as they affect various parts of the organisation.**
*IPC = infection prevention and control*

**Organisational culture**
1. Awareness that HAI are unacceptable

**Patient**
- Viewed as a key participant

**Professionals**
- 2. Unhesitating compliance with hygiene regulations
- 3. Risk assessments enable proactive working methods

**Day-to-day management**
- 4. Creating favourable physical conditions
- 5. Consistent message and regular feedback
- 6. Cleaning services regarded as vital

**County-wide**
- 7. Hygiene services and the organisation collaborate closely
- 8. Focused management that uses effective channels of communication

**Micro**

**Meso**

**Macro**
Awareness that healthcare-associated infections (HAI) are unacceptable

The entire organisation – from individual professionals to top county management – has a widespread conviction that HAI are unacceptable and can and must be avoided. Caregivers see a clear relationship between their own behaviour, the risk of transmission and the development of HAI.

Counties and hospitals with less occurrence of HAI reveal:

- Extensive commitment and sense of responsibility for preventing HAI
- Understanding and focus on the role of proactive efforts to address the issues surrounding HAI

Highly evolved sense of responsibility for taking advantage of prevention opportunities

Counties and hospitals with a low prevalence of HAI say that there is an extensive sense of responsibility throughout the organisation. All HAI can and must be prevented by means of a proactive effort. Counties and hospitals with low prevalence of HAI largely view HAI as unavoidable that ideally should be prevented but that are highly dependent on the particular patients who are being treated.

Widespread commitment

Professionals and management in counties and hospitals with low prevalence of HAI are highly committed to preventive interventions. All interviewees stated spontaneously that caregiver commitment is a key component of the effort to prevent HAI.

Counties and hospitals with high prevalence of HAI, on the other hand, say that such commitment is generally limited to a few enthusiasts.
Paying attention to proactive efforts

 Counties and hospitals with low prevalence of HAI say that commitment to prevention has partly arisen as a result of death and other serious events, which have shaken the entire organisation, due to HAI. Other important factors include the inspiration of enthusiasts and role models among all types of professionals. A number of interviewees emphasised the importance of highly respected doctors having become involved in preventive interventions and served as role models.

 Counties and hospitals with high prevalence of HAI are less likely to report factors that encourage a focus on prevention. Serious outbreaks of HAI have occurred but not had the same impact on the organisation – nor are role models identified as important.

“The deaths of the children were an enormous trauma for all of us.”

Doctor, hospital with low prevalence of HAI
Success factor 2

Unhesitating compliance with infection prevention and control regulations

"Everybody here – caregivers, ambulance drivers, families of the patients, etc. – comply with hand hygiene procedures and the dress code."

Nurse at a hospital with low prevalence of HAI

County and hospital with low prevalence of HAI:

- Compliance with procedures for minimising the risk of transmission are regarded as integral to everyone’s duties
- Caregivers are open and accepting of the need to remind each other of the procedures and call attention to any departures from them

Compliance with procedures

Counties and hospitals with low prevalence of HAI indicate that all staff members, including the cleaning staff and ambulance drivers, largely follow the guidelines. There is a high level of awareness concerning the risk of HAI, while guidelines and action plans to minimize it are regarded as meaningful and essential.

Counties and hospitals with high prevalence of HAI point to inadequate comprehension of how vital infection control guidelines and procedures are. Members of the staff, particularly doctors, are more prone to ignore infection control guidelines concerning hand hygiene procedures and the dress code.

Openness and acceptance of reminders

All counties and hospitals with low prevalence of HAI stress openness to constructively reminding all types of professionals who neglect to follow infection control guidelines.

Hospitals and clinics with high prevalence of HAI are often portrayed as not being sufficiently open to such reminders.

ACTION PLANS OF THE ASSOCIATION OF LOCAL AUTHORITIES AND REGIONS TO REDUCE HAI

The association has developed action plans and data banks to reduce the occurrence of HAI that are related to central venous devices, postoperative wounds and urinary tract infections.
Risk assessments enable proactive working methods

Caregivers identify situations in which the risk of HAI is high and adapt planning measures to minimise it.

Counties and hospitals with low prevalence of HAI:
› Caregivers identify risky situations and take the initiative to reduce the likelihood that they will occur

Caregivers identify risky situations
Caregivers at hospitals with low prevalence of HAI proactively identify both risky situations and risk factors of HAI and take preventive measures to minimise them. The interviewees described a number of such measures (see fact box below).

Hospitals and clinics with high prevalence of HAI also take initiatives to reduce risk. They have not, however, adopted the kinds of proactive working methods that focus on minimising risk, nor are they as likely to adopt preventive measures.

**TYPICAL PROACTIVE WORKING METHODS**

› Initiatives for mobilising patients to reduce the risk of pneumonia
› Priority during rounds based on a patient’s susceptibility and risk of developing HAI
› Rooms in which patients susceptible to HAI are staying are cleaned first.
› Proactive effort to minimise use of catheters, including a representative in charge of disseminating information about optimal procedures
› Initiatives to reduce prescription of broad spectrum antibiotics

"Beds are the most dangerous place to be at hospitals – all patients need to be mobilised.”

Doctor at a hospital with low prevalence of HAI

"We always visit the most susceptible patients first during our rounds.”

Doctor at a hospital with low prevalence of HAI
Creating favourable physical conditions

_Favourable physical conditions in the healthcare environment reduce the risk of developing HAI._

Counties and hospitals with less occurrence of HAI reveal:

- Concerted, long-term efforts to ensure favourable physical conditions in the healthcare environment for preventing HAI, such as a large proportion of single rooms with ensuite bathrooms, fewer fabrics, disinfectable furniture or instruments used for one patient only.

Concerted efforts to ensure favourable physical conditions

Physical conditions in the healthcare environment affect prospects for preventing HAI. Such conditions include the ability of caregivers to maintain favourable environment surrounding the patient, such as access to hand rub and gloves for single use, gowns and clean uniforms.

Many hospitals with low prevalence of HAI say that they actively promote a physical environment that is easy to clean. The furniture in a number of wards can be disinfected, while drapes, curtains and other fabrics have been wholly eliminated. A number of interviewees emphasised the importance of instruments that are restricted to one room or patient. They would prefer if stethoscopes and blood pressure cuffs were used for one room or patient, even at ordinary wards that are not limited to people who are particularly susceptible to HAI.

"The stethoscope does not belong to the doctor, but to the patient."

Ward administrator at a hospital with low prevalence of HAI

"We have made all furniture easy to clean and removed every drape."

Nurse at a hospital with low prevalence of HAI
Hospitals with high prevalence of HAI do not have the same kind of conscious focus on improving rooms and premises. Their rooms are more liable to have furniture and fabrics that are difficult to clean. Interviewees at hospitals in one of the counties mentioned that poor access to uniforms gets in the way of compliance with the dress code.
Consistent message and regular feedback

A clear, consistent message is conveyed to caregivers from time to time, stressing the importance of preventing HAI and providing regular feedback concerning the results.

Counties and hospitals with low prevalence of HAI:
› A consistent message that stresses the importance of preventing HAI
› Thorough training, skills development and readily available information
› Structured feedback concerning the results of the effort to prevent HAI, as well as compliance with hand hygiene and dress code linked to specific improvement requirements

Consistent message from a number of different sources
Caregivers at hospitals with low prevalence of HAI receive a coherent, coordinated message stressing the importance of infection control guidelines, procedures and preventive interventions from management at all levels of the organisation (ward, clinic, administration, etc.) and employees
whose leadership positions are less formal. Interviewees said it is essential that the message be communicated to all types of staff members.

Hospitals with high prevalence of HAI do not have a comprehensive approach to the issues involved or sufficient clarity of communication.

Training and readily available information

Hospitals with low prevalence of HAI offer illustrative examples of training in infection control procedures, readily available memos that simplify the prevention effort, and reminders by means of brochures, posters and signs that target patients and their families as well. We were not able to demonstrate systematic differences among the various hospitals with respect to the scope of training initiatives, but those with high prevalence of HAI did not indicate the same level of comprehensiveness or support activities that include memos, reminders and the like.

Structured feedback concerning results

Hospitals with low prevalence of HAI provide regular, structured feedback concerning results of point prevalence surveys (including compliance with hand hygiene procedures and the dress code) and management demands improvements if outcomes are unsatisfactory. Feedback concerning the results is communicated at the ward or clinic level to ensure clear understanding about the impact of individual efforts. Moreover, many hospital regularly analyse outcomes in terms of improvement initiatives, including reviews of patient charts after outbreaks of HAI in order to identify areas that need reinforcement and greater focus.

Hospitals with high prevalence of HAI are particularly delinquent in communicating feedback concerning results. They tend not to perform analyses or draw up action plans either.

"The focus of our training on multi-resistant bacteria has raised interest in infection control matters."

Hygiene services at a hospital with low prevalence of HAI

"HAI are at the top of the agenda for every manager in the organisation."

Director of Nursing, hospital with low prevalence of HAI
Cleaning the healthcare environment is regarded as vital

Management considers cleaning the healthcare environment to be an important strategic priority in the effort to prevent HAI, as reflected in the way they are structured and the frequency with which they are performed.

Counties and hospitals with low prevalence of HAI:
› Frequent professional cleaning of surfaces in the healthcare environment
› Thorough training for the cleaning staff in infection control procedures and HAI risks

Frequent professional cleaning services

Many hospitals with low prevalence of HAI describe cleaning of the healthcare environment as an important strategic tool in combatting HAI. There has been an active focus on cleaning for an extended period, cleaning is performed more frequently and measures to improve the quality have been taken. Some of the hospitals rely increasingly on professional contractors and caregivers turn over all responsibilities for cleaning and disinfecting frequently touched surfaces in the room after discharge to the cleaning staff, who are also available in the evening. Interviewees emphasised that whether the hospital or a contractor is in charge of cleaning is not decisive, but rather the requirements that are established and how the services are designed.

Hospitals and clinics with high prevalence of HAI do not regard cleaning as a priority – the staff often feels that the cleaning services are unsatisfactory and interviewees offered a number of examples that illustrate the inadequacies.

"Every patient deserves a clean environment."

Director of Nursing, county with low prevalence of HAI
Training for the cleaning staff in infection control procedures and HAI risks

Hospitals with low prevalence of HAI emphasise the skills of the cleaning staff as an essential tool in combatting outbreaks of HAI. Cleaners are trained in HAI risks, hand hygiene and dress code, boosting their motivation and commitment to the effort to prevent HAI. One county that stands out for its particularly low prevalence of HAI sends all new members of the cleaning staff to two microbiology courses, including a field trip to the microbiology department.

Cleaning staff at hospitals with high prevalence of HAI also undergo training, but to a lesser extent and with poorer design - a number of interviewees felt that the cleaning staff was not sufficiently knowledgeable about infection control procedures.
Success factor 7

Infection prevention and control and the organisation collaborate closely

_The organisation collaborates actively and closely with infection prevention and control, IPC, which participate eagerly, claim ownership and focus on feasibility._

Counties and hospitals with low prevalence of HAI:
- The organisation perceives IPC as a full participant
- IPC come up with practical, applicable solutions
- IPC has a high status and is represented in networks and forums that strive to prevent HAI, as well as at the management level

Infection prevention and control participate

All staff members who were interviewed at counties and hospitals with low prevalence of HAI emphasised close collaboration between IPC and the organisation as a key success factor. They described the IPC as fast, very willing to participate, and easy for all employees - regardless of occupation or position - to get in touch with.
Interviewees at counties and hospitals with high prevalence of HAI portrayed IPC as playing a less prominent role and generally neglected to even mention them.

**Infection prevention and control create solutions**

All interviewees at hospitals with low prevalence of HAI stated that IPC was helpful and assumed a pragmatic attitude that generally rendered their advice practical and applicable. As a result, the organisation frequently invites IPC to support the preventive effort, and not only during acute outbreaks of HAI.

Interviewees at clinics and hospitals with high prevalence of HAI did not feel as though IPC always offered solutions that were both practical and applicable. Meanwhile, IPC often argues that the organisation has unrealistic expectations.

**Infection prevention and control have a high status**

Counties and hospitals with low prevalence of HAI stress the authority and high status of IPC as important factors in keeping the issue at the top of the agenda. Interviewees also stressed that IPC are represented in the central networks and teams that address cleanliness and HAI matters, both at the county and hospital level, and that county management takes active advantage of their skills.

Interviewees at counties and hospitals with high prevalence and HAI pointed to insufficient authority for IPC in the central organisation, while the IPC did not feel as though they were being consulted about important questions in their area of expertise.

”Hygiene services do not lecture us but provide support in our day-to-day activities.”

Quality and improvement coordinator, hospital with low prevalence of HAI
Success factor 8

Focused management that uses effective channels of communication

*Top management communicates actively through effective channels to reduce the occurrence of HAI.*

Counts and hospitals with low prevalence of HAI:
- Long-term, committed effort by top management, including comprehensive overview of the issues, as well feedback concerning results linked to strict demands for improvement
- Structures that permit dissemination of management priorities to the organisation, along with involvement by IPC

Focus and feedback

Top management of all counties and hospitals with low prevalence of HAI focus on prevention and the various issues involved. Top managers describe a committed effort by the county to reduce HAI, and members of the organisation state that the long-term, unwavering focus of management has been a major success factor. For example, HAI are a permanent item on the agenda at management team meetings. The outcomes of surveys concerning HAI, hand hygiene and dress codes are reviewed, and improvement is demanded whenever indicated. The county management team also collaborates closely with IPC.

Top management at counties and hospitals with high prevalence of HAI do not focus on the issue or do not communicate their concerns to the organisation. Nor do they monitor results on an ongoing basis.
Structures that help convey management priorities to the organisation

Counties and hospitals with low prevalence of HAI frequently have central teams at both levels that are broadly representative – including IPC, patient safety, the department of public health infectious disease control and organisational spokespeople – and regularly monitor compliance with infection control procedures, track the prevalence of HAI and draw up action plans. A number of the interviewees talked about the ways that the teams make major contributions to communicating the importance of preventing HAI throughout the organisation.

Hospitals with high prevalence of HAI have less effective structures for combatting HAI: either there are no clear lines of authority at the central level, or the teams have trouble disseminating information to either the organisation or individual employees.
Model for preventive interventions

The success factors that have been identified can serve as a platform for discussions at counties, hospitals, clinics and wards that want to proceed from their own individual needs and capabilities to put together action plans for reducing HAI. The factors vary from one county or hospital to another. While some of them are universal, others are less relevant for particular counties or hospitals.

None of the factors can be realised in practice unless everyone has the opportunity and responsibility to contribute. All employees can proceed from their particular positions in the organisation to help reduce the number of patients who develop HAI.

Some considerations for involving patients in the effort

HAI may be difficult to avoid. A serious illness and the existence of multiple risk factors can generate a high risk of HAI. Caregivers are responsible for ensuring that the likelihood of acquiring a HAI is as low as possible. As in all safety efforts, however, the participation of patients is vital – following are some specific areas in which they and their families have a particularly important role to play:

- Following hand hygiene guidelines
- Avoiding being bedridden to the extent possible and advisable
- Questioning or reminding caregivers about infection control procedures
Micro-level

What questions should I ask myself as a clinician?

Every type of healthcare professional is responsible for contributing to the effort to reduce HAI. There are several specific questions that can shed light on the areas in which change may be required:

- How do my co-workers and I look at opportunities for preventing HAI? Do I feel a sense of responsibility, and are there ways for me to make a difference?
- Does my attitude affect the effort to prevent HAI? Would my working methods change in any respect if I regarded HAI as less acceptable?
- What approach does my ward or clinic take to infection control guidelines?
- What do my co-workers and I think about compliance with hand hygiene, dress codes and routines for specific situations? Do we consider the infection control procedures and rules to be important? Is everyone compliant?
- Are we able to remind each other if someone forgets? Do we actually do so in practice?
- Have procedures been established for identifying patients at risk and dangerous situations, as well as adapting care to them? Are the procedures being followed?
- How proactive are my co-workers and I when it comes to finding risks and attempting to prevent them from manifesting?
Meso-level

What questions should I ask as a member of the day-to-day management team?

Day-to-day management at the ward, clinic and hospital level alike must assume responsibility for creating the conditions that help minimise the risk of HAI. A few targeted questions will again benefit improvement efforts:

Questions to ask myself

 › How do the organisation and I regard HAI – do we accept them as inherent to hospitalisation or do we perceive them as avoidable?
 › What is our organisational culture like with respect to infection control guidelines? Is everyone compliant? Is there a general belief that it is okay to remind each other of them?
 › How well do cleaning services work? How often are they performed? What kind of training does the cleaning staff receive concerning infection control guidelines and the risk of HAI?
 › Do physical conditions promote proper infection control? How many single rooms with ensuite bathrooms are there? How are the rooms furnished? Is it easy to clean furniture, etc? What types of instruments are specific to individual patients and what types are used universally?
 › Am I familiar with the results generated by my ward, clinic or hospital in terms of the frequency of HAI, as well as compliance with hand hygiene and dress codes?
 › Are we taking full advantage of the skills possessed by ICP, not only in emergencies but for prevention purposes as well?
How well do I communicate with others about HAI? What message do I convey, how often and what channels do I use? How frequently and in what way do I provide feedback to the staff based on the results of point prevalence surveys? Do I demand that action be taken if outcomes are unsatisfactory?

What messages about HAI does the strategic management team communicate to me? Do I perceive that my superiors are clearly focused on HAI?

Questions to ask clinics and wards

What is your view of HAI? Do you accept them as inherent to hospitalisation or do you regard them as avoidable?

What is our organisational culture with respect to infection control guidelines? Is everyone compliant? Is their a general belief that it is okay to remind each other of them?

Are you familiar with the results generated the ward, clinic or hospital in terms of the frequency of HAI, as well as compliance with hand hygiene and dress codes?

Are you taking full advantage of the skills possessed by IPC, not only in emergencies but for prevention purposes as well?

What can our management team do to facilitate your prevention efforts?

Are HAI a permanent item on the agenda at management meanings, and do you regularly review outcomes and make demands for improvement as needed?
Macro-level

What questions should I ask as a member of the top strategic management team?

The team has ultimate responsibility for shaping the focus and direction of the organisation and, as presented in the discussion of success factors, plays a key role in the effort to minimise the occurrence of HAI. Following are some relevant questions for the management team:

Questions to ask myself

› What is my view of HAI? Do I accept them as inherent to hospitalisation or do I regard them as avoidable?
› Do I know how well cleaning services are working at the hospitals? How often are they performed? What kind of training does the cleaning staff receive concerning infection control guidelines and the risk of HAI?
› Do I know what the physical conditions are for ensuring proper infection control at the hospitals? How many single rooms with ensuite bathrooms are there? How are the rooms furnished – is it easy to clean furniture, etc? What types of instruments are specific to individual patients and what types are used universally?
› Am I familiar with the results generated by the hospitals in terms of the occurrence of HAI, as well as compliance with hand hygiene and dress codes? Do I know how well the other infection control guidelines are being followed?
› What kind of communication about HAI do I initiate? What messages do I convey, how often and what channels do I use? How frequently and in what way do I discuss the results of point prevalence surveys with appropriate supervisors, and what approaches do I take to demanding improvement?
› What structures are available to address issues surrounding HAI and transmit management priorities to the organisation?
Questions to ask the hospitals in the county

› Are you familiar with the results generated by the ward, clinic or hospital in terms of the frequency of HAI, as well as compliance with hand hygiene and dress codes? What are the factors that determine the outcomes?
› What is your view of HAI? Do you accept them as inherent to hospitalisation or do you regard them as avoidable?
› What are you doing to reduce HAI? What else could you be doing?
› What can our management team do to facilitate your prevention efforts?

Next steps in the strategic patient safety effort

Potential approaches to reducing HAI may also be placed in the context of the national framework for strategic patient safety that the Swedish Association of Local Authorities and Regions (SALAR) has put together in collaboration with its members.

The purpose of the framework is to generate an overview of patient safety concerns and a structure for dealing with them.

The framework proceeds from three key perspectives: healthcare must be patient-centred, evidence-based and structured to lay the foundation for safe services.

The first pillar on which the national framework rests is the need to focus on patients, as well as relevance for healthcare professionals, day-to-day management and the top strategic team regardless of whether the provider is public or private.

The second pillar is the imperative of identifying ways for the healthcare system to make substantive strides towards zero tolerance of HAI - i.e., initiatives that proceed from the three perspectives at the micro, meso and macro levels.

Table 1 describes conceivable next steps in the effort to reduce HAI based on the national patient safety framework.
### Patient level

What are the implications for me as a patient or family member?

- I can help make the healthcare system safer by:
  - I feel safe and secure in healthcare settings and am able to demand that caregivers follow infection control guidelines.
  - I am knowledgeable about the importance of proper hand hygiene for both my visitors and me.
  - I have been notified of the risks associated with my treatment and care.

- I know that my experience, points of view and suggestions are helping prevent HAI.

### Micro-level

What are the implications for healthcare professionals?

- Inform patients about their treatment and care, as well as associated risks, on the basis of their particular needs, including infection control and mobilisation.
- Involve patients and their families in the effort to improve processes and procedures.
- Identify and prevent risky situations and HAI on the basis of a patient’s needs, capabilities, experience and opinions.

### Evidence-based

Evidence-based clinical practice – systematic learning that weighs and takes advantage of knowledge possessed by patients, professionals and the research community. Decisionmaking is based on the best available information.


- I know that the healthcare system is working on preventing and eliminating the risk of HAI.
- I know that my experience, points of view and suggestions are helping prevent HAI.
- Proceed from evidence-based data, action plans and guidelines to achieve the best possible results from the patient’s perspective.
- Maintain a high level of awareness concerning the risks of HAI and initiate proactive efforts to identify dangerous situations.
- Monitor, evaluate and improve processes and procedures.

### Structured for patient safety

Clear structures, lines of responsibility and allocation of roles to ensure care that prioritises patient safety.

- I feel as though everyone involved in the care I receive has access to the kinds of data about me that are necessary and sufficient to prevent my developing an HAI.
- I know who is in charge of my care and whom to contact when I have questions, opinions or complaints about hygiene procedures or the risk of HAI.
- Standardised processes and procedures for preventing and minimising HAI.
- Follow hygiene and other relevant guidelines, foster a climate in which people can remind each other about them.
- Create procedures for effective communication among various parts of the organisation and transition levels while marshalling the skills of ICP staff to prevent HAI and limit contagion.

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**TABLE 1. Preventive interventions in accordance with the patient safety framework**
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<tr>
<th><strong>Meso-level</strong></th>
<th><strong>Macro-level</strong></th>
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<td>What are the implications for day-to-day management in various parts of the organisation?</td>
<td>What are the implications for top strategic management?</td>
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| - Create the conditions that enable the experience and views of patients and their families to be systematically identified and incorporated at various levels.  
- Display openness to addressing the risks and issues associated with HAI.  
- Develop procedures for **structured attention to patients and family members** when an HAI develops. | - Cultivate trust among employees and members of the general public when it comes to preventing HAI.  
- Work up approaches to dialoguing with the public.  
- Notify the public about ways of submitting complaints and viewpoints about infection control, lack of patient mobilisation, etc.  
- Continually monitor results for HAI and compliance with hand hygiene with clinic directors – demand action plans and other activities if outcomes are unsatisfactory.  
- Provide feedback to all employees concerning such results and engage in a dialogue about what they mean, as well as potential for improvement.  
- Make sure that all employees, including the cleaning staff and others, are adequate trained in infection control and risk management.  
- Systematically monitor results for HAI and compliance with hand hygiene with the hospitals – demand action plans and other activities if outcomes are unsatisfactory.  
- Build bridges between the effort to prevent HAI and skills development initiatives, work environment concerns, finances, IT resources, electronic health services and technical systems. |
| - Convey consistent messages about the importance of combatting HAI.  
- Get employees involved by pointing to role models and successful initiatives.  
- Build a suitable structure for the effort to prevent HAI and establish a broadly representative forum to discuss associated issues.  
- Accord priority to cleaning services as a strategic component of the effort to prevent HAI.  
- Evaluate ways of improving the physical conditions that facilitate proper hygiene.  
- Clearly communicate that HAI constitute a high-priority strategic issue.  
- Compile and communicate overall goals, strategies and values that support a systematic effort to prevent HAI.  
- Document organisational responsibility for promoting the minimisation of HAI.  
- Create structures for the effort to prevent HAI and establish a broadly representative forum and clearly delineated responsibilities for discussing associated issues.  
- Include hygiene and contagion matters in evaluating the various options considered when building new facilities. |  
| Access to IT services, communication, tools, networks, etc. |  
| **Healthcare-associated infections. Success factors for prevention** |
"We have come to understand that contagion and HAI are a problem – and that we are in a position to help resolve it."

Doctor, hospital with low prevalence of HAI
Healthcare-associated infections (HAI) lead to major suffering and high social costs. Despite a nationwide focus on the problem, however, the prevalence of HAI is not decreasing as much as we would like. Surveys suggest that some counties and hospitals are doing better than others. In collaboration with the Swedish Association of Local Authorities and Regions, 16 counties and regions conducted a comparative study in spring 2014 to identify variables that may be linked to low prevalence of HAI.

A total of eight success factors were found. The factors can provide a springboard for counties, hospitals, clinics and wards that are looking to develop action plans that will minimise the prevalence of HAI.

This is a summary of a report entitled *Healthcare-associated Infections - Success Factors for Prevention*. The full report is available in Swedish at webbutik.skl.se

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