



Just Clean Your Hands
Implementation Guide

Ontario's step-by-step guide to implementing a multifaceted hand hygiene program in your hospital

Contents

Definition of Terms	1
Overview	3
Establishing the Context	4
Purpose of this Guide	5
Using the Guide	6
Step 1: Facility preparedness	8
Step 2: Baseline evaluation	19
Step 3: Implementation	27
Step 4: Follow-up evaluation	31
Step 5: Developing ongoing action plan and review cycle	35

Definition of Terms

Hand hygiene

A general term referring to any action of hand cleaning (see hand hygiene practices).

Hand hygiene practices

Hand rubbing: Cleaning hands with an alcohol-based handrub to reduce the number of organisms on hands when hands are not visibly soiled (see “alcohol-based hand rub”).

Hand washing: The physical removal of microorganisms from the hands using soap (plain or antimicrobial) and running water.

Surgical hand antisepsis: The preparation of hands for surgery, using either antimicrobial soap and water or a waterless alcohol-based hand rub, preferably with residual activity. Note: Surgical hand antisepsis is beyond the scope of this program.

Hand care

Actions and products that reduce the risk of skin irritation (see “hand care program booklet”).

Hand hygiene products

Alcohol-based hand rub (ABHR): A liquid, gel or foam formulation of 60 per cent to 90 per cent alcohol (e.g., ethanol, isopropanol) which is used to reduce the number of organisms on hands when the hands are not visibly soiled. Hand rubs contain emollients to reduce skin irritation and are less time-consuming to use than washing with soap and water.

Plain Soap: Detergents that do not contain antimicrobial agents or that contain very low concentrations of antimicrobial agents that are present only as preservatives. Plain soaps are less irritating to skin than antimicrobial/antiseptic soap.

Antimicrobial/Antiseptic Soap: Soap (detergent) that contains an antimicrobial agent (e.g., chlorhexidine, hexachlorophene, iodine compounds, triclosan, chloroxylenol/PCMX) to reduce the number of microorganisms on the skin. Low concentrations of these chemical agents are often used as a preservative in liquid soap, but are not effective as an antimicrobial agent.

Associated terms

Visibly soiled hands: Hands on which dirt or body fluids can be seen.

Efficacy/efficacious: The (possible) effect of the application of hand hygiene formulation when tested in laboratory or in vivo situations.

Effectiveness/effective: The clinical conditions under which hand hygiene products have been tested, such as field trials, where the impact of a hand hygiene formulation is monitored on the rates of cross-transmission of infection or resistance.

Health care associated infections (HAIs): An infection that is acquired during the delivery of health care.

Key to Symbols

The following symbols are used throughout the Implementation Guide as a quick reference for users. The symbols highlight specific actions and general information. They also reference the tools and resources available to aid in implementation.

Action symbols	Resource and tool symbols
 Key activity – alerts the reader to an issue of importance for success	 Hand hygiene fact sheet for health care settings
 Group meeting/event	 All of the MOHLTC tools
 Data entry/analysis	 Denotes a section of the Guide which provides a quick, time-saving overview of a key issue

Overview

The strategy described in the Implementation Guide is designed for use by Ontario hospitals. To support hospitals in their planning and implementation of *Just Clean Your Hands*, the ministry will host regional train-the-trainer sessions. Ministry staff will also provide ongoing support to the field through a program website at: www.justcleanyourhands.ca

To get the most from this guide, hospitals are encouraged to implement the activities in the order they are presented. This step-by-step guide tells users which actions are required, when and by whom.

The approach focuses on improving hand hygiene compliance by health care providers who work with patients or in patient care settings. The goal is to reduce both the spread of infections and multi-resistant organisms as well as the number of patients acquiring a preventable health care associated infection (HAI) by improving hand hygiene compliance.



A rapid overview of the strategy can be found by turning to pages 17 and 18.

The Hospital Implementation Kit and details of the tools required to ensure successful implementation are listed within the diagrams on page 11.

Establishing the Context

Ontario is at the leading edge of a worldwide initiative to improve patient and health care provider safety through better hand hygiene.

Internationally – through *Clean Care is Safer Care*,¹ the first global patient safety challenge – the World Health Organization is encouraging all countries and health systems to take steps to improve hand hygiene and reduce health care associated infections.



The First Global Patient Safety Challenge, *Clean Care is Safer Care*, is seeking to secure global commitment and action to reduce HAI, through working with ministries of health and WHO offices at the country level.

Ontario has been invited to share evaluation data and program tools with the WHO Global Patient Safety Challenge team. As a complementary test site for the WHO program, the ministry has had the privilege of testing and adapting WHO tools and materials to enhance its provincial program.

Nationally, in October 2006, Canada formally pledged its commitment to the Global Patient Safety Challenge and a reduction of HAIs. The Canadian Patient Safety Institute is leading the national hand hygiene campaign, which will provide tools to support hand hygiene improvement across the health care continuum.

Provincially, the Ministry of Health and Long-Term Care developed *Just Clean Your Hands*: a hand hygiene program for Ontario hospitals. Between December 2006 and August 2007, the ministry tested the *Just Clean Your Hands* program in 10 hospitals across Ontario. Test findings were used to refine the program, tools and materials. *Just Clean Your Hands* includes strategies, tools and materials developed in Ontario for Ontario hospitals; it also takes advantage of materials developed by the UK *cleanyourhands*² campaign and the global *Clean Care is Safer Care* initiative, led by the World Health Organization. Ontario is pleased to contribute its observation tool and training program as a tool to support Canada's national hand hygiene campaign.



The evaluation of *Just Clean Your Hands* included surveys of patients and health care providers, focus groups with health care providers, key informant interviews, reviews of hospital records on product use and number of health care associated antibiotic resistant organisms, and three observational audits of health care providers' hand hygiene practices (at baseline, two months after launch, five months after launch), which were done by trained observers using a validated tool tested to ensure consistent, reliable scores.

A Quick Guide to *Just Clean Your Hands*, Ontario's Evidence-based Hand Hygiene Program for Hospitals.

¹ Home page of the First Global Patient Safety Challenge: Clean Care is Safer Care
www.who.int/gpsc/en/index.html

² Home page of the NPSA national cleanyourhands campaign
www.npsa.nhs.uk/cleanyourhands/campaign

Purpose of this Guide

The Implementation Guide is a step-by-step manual for local implementation of the *Just Clean Your Hands Program*.

Its primary target audience is:

- The hospital's implementation coordinator (referred to as the "coordinator")
- The hand hygiene implementation committee.

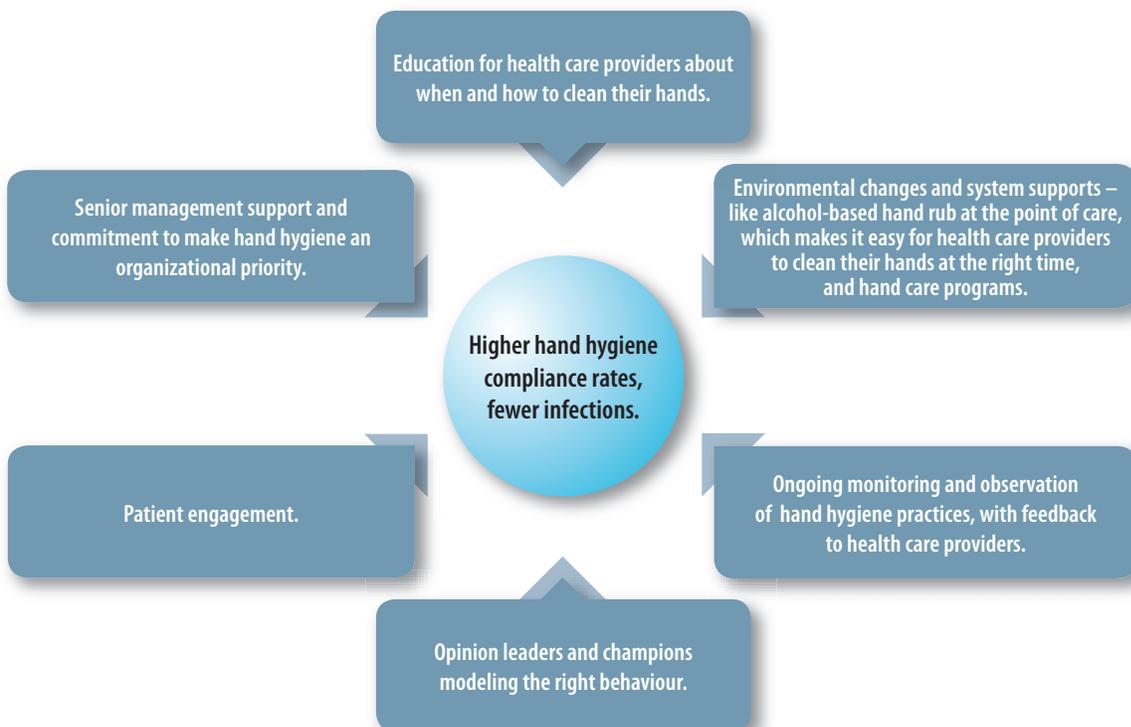
A multifaceted approach is the most effective way to achieve long-term improvements in hand hygiene

The Guide is intended to be of value to:

- Technical experts within the hospital, such as infection prevention and control professionals, patient safety managers, risk management, occupational health and safety, and communications
- Senior and middle managers.

Based on international research and experience in hospitals in the province, Ontario learned it takes more than a single intervention such as a poster campaign to change hand hygiene behaviour. *Just Clean Your Hands* is an evidence-based, multifaceted hand hygiene program that consists of six components.

Figure 1: The six components of a multifaceted hand hygiene improvement program



The Implementation Guide is intended to facilitate local implementation and evaluation of the *Just Clean Your Hands Program*.

Implementation of the program requires action in a number of areas. It is important to actively involve influential health care providers and decision-makers in the process of implementation from the outset.

Using the Guide

This Guide provides a broad outline of how a hand hygiene improvement strategy might be implemented. It is intended to be used as a guide for developing local implementation plans.

- The Guide is divided into five main sections, each section corresponding to a step in the process of implementation.
- Hand hygiene improvement is not a new concept within health care.
- Many hospitals already have well established policies and guidelines, and they undertake regular hand hygiene education/training.
- More hospitals are attempting to introduce alcohol-based hand rubs at the point of care.
- However, long-lasting improvements remain rare and many hospitals have not yet begun to address hand hygiene in a systematic way.
- The Guide is designed to help all hospitals achieve sustainable improvements in hand hygiene.

Step 1 Facility preparedness

Step 2 Baseline evaluation

Step 3 Implementation

Step 4 Follow-up evaluation

Step 5 Developing ongoing action plan and review cycle



The step-wise strategy described in this Implementation Guide follows a defined sequence (see figure 2).

The strategy, which should take approximately one year to plan and implement, is a model for hand hygiene practice assessment and improvement.

By around the fifth month, the hospital should be ready to implement. However, the timing will vary based on the facility's readiness.

Hand hygiene improvement is not a time-limited process: promoting and monitoring hand hygiene should continue and be ongoing.

Implementation, evaluation and feedback activities should be refreshed periodically and repeated, and become part of the quality improvement action to ensure sustainability.

Figure 2: Implementation Timeline and Sequence

Month															
1	2	3	4	5	6	7	8	9	10	11	12	13			
Step 1: Facility Preparedness			Step 2: Baseline Evaluation			Step 3: Implementation			Step 4: Follow-up Evaluation		Step 5: Developing Ongoing Action Plan and Review Cycle				
Activities															
Undertake facility situation assessment			Undertake baseline assessments: <ul style="list-style-type: none"> • Senior and middle managers perception survey • Health care provider perception survey • Unit structure survey • Health care provider knowledge survey • Hand hygiene observations 			Launch the strategy			Undertake follow-up assessments: <ul style="list-style-type: none"> • Senior and middle managers perception survey • Health care providers perception survey • Unit structure survey • Health care provider knowledge survey • Hand hygiene observations • Follow-up facility situation assessment 				Study all results carefully		
Identify coordinator							Feedback baseline data							Feedback follow-up data	
Identify key individuals/groups							Distribute poster, prompts and patient pamphlet							Plan and implement patient/visitor education strategies	
Develop communication plan							Educate health care providers							Develop a five-year action plan	
Complete Placement Tool for Hand Hygiene Products							Undertake practical training of health care providers							Continually reassess and refresh program	
Review hand care program			Complete data entry and analysis			Continue to install POC alcohol-based hand rub									
Develop process for data entry and analysis			Procure and install hand hygiene products			Install hand lotions			Complete data entry and analysis						
Collect data on costs			Plan education/training program for health care providers							Monitor use of products monthly					
Train observers and trainers															
Develop implementation plan															

Step 1: Facility preparedness

Suggested duration: 3 months

Step **1** Facility preparedness

Step **2** Baseline evaluation

Step **3** Implementation

Step **4** Follow-up evaluation

Step **5** Developing ongoing action plan and review cycle



Planning and preparation

1. Planning for implementation is a critical part of a successful strategy. As a first step, senior management must agree on the scope and extent of program implementation.
2. The assessment tool helps identify information about the hospital's existing structures and resources, and the culture of the hospital related to patient safety and infection prevention and control. It also identifies the strengths and constraints that will help or hinder successful implementation.
3. The use of this tool is repeated in step 4 where it will provide information on progress following implementation of the strategy.
4. It is possible that some hospitals have already undertaken a hospital-wide audit or review of hand hygiene practices. The important thing is that hospitals have a baseline and a consistent approach to measure progress.
5. Based on the resources available, the hospital size and its complexity, senior management may decide to begin with a phased-in approach and then move towards hospital-wide implementation.
6. If hospitals are using a phased-in approach, the ministry recommends that they consider implementing initially in units where motivation and interest are high and health gain is likely to be substantial (e.g., units with high risk of HAIs). A phased-in approach also provides an opportunity to identify champions to act as role models and promote the program to other units within the hospital.

Action

Complete a facility-level situation assessment for each site



Facility-Level Situation Assessment tool

Action

Review champion CD and consider how your hospitals will identify and support champions



Champion poster CD and instructions



Identify an implementation coordinator

1. Hospitals should identify at least one person to oversee implementation.
2. The coordinator will have the support of the hospital CEO, middle and senior managers.
3. The coordinator will be well respected and able to access high-level administrative resources within the facility.
4. Ideally, the coordinator will have a clinical background or broader experience in quality and safety within the hospital.



Tools available to hospitals

1. The *Just Clean Your Hands* Implementation Kit contains the tools necessary to implement the multifaceted improvement strategy. In some cases, the hospital will need to provide resources for implementation (e.g., purchasing additional alcohol-based hand rub to ensure product is available at point of care).
2. The Implementation Guide is the main tool. The Guide itself acts as a signpost to all the other tools and when to use them.
3. The tools can be organized into the following four sub-categories:
 - a. Informational/Technical
 - b. Educational
 - c. Promotional (marketing/reminder)
 - d. Evaluation



List of all available tools includes:

Information/Technical

- The Implementation Guide
- Placement Tool for Hand Hygiene products
- Hand Care Program
- PIDAC Hand Hygiene Fact Sheet for Health Care Settings

Educational

- Education presentation
- Hand Hygiene education module
- Training presentations and materials
- Your 4 Moments for Hand Hygiene pocket card
- On-the-spot feedback tool
- Certificate of training completion

Promotional (marketing/reminder)

- A Quick Guide to *Just Clean Your Hands*
- Sample letter to introduce program to senior level administrators
- Sample media kit
- How to handrub mini poster
- How to handwash mini poster
- Your 4 Moments for Hand Hygiene Poster
- Lapel pins
- Point of care prompt clings
- Champion posters CD
- Patient brochure

Evaluation

- Facility-Level Situation Assessment
- Senior and middle managers perception survey
- Health care provider perception survey
- Unit structure survey
- Health care provider knowledge survey
- Hand hygiene Observation Tool
- Hand hygiene Assessment Tool for Health Care Provider Hands



Hospital Implementation Kit



Senior management support and commitment to make hand hygiene an organizational priority.

A Quick Guide to *Just Clean Your Hands* *Just Clean Your Hands* Implementation Guide Facility Level Situation Assessment Evaluation tools

Environmental changes and system supports – like alcohol-based hand rub at the point of care, which makes it easy for health care providers to clean their hands at the right time, and hand care programs.

Placement tool for hand hygiene products Hand Care Program Assessment Tool for Health Care Providers' Hands ABHR Point of Care prompts

Education for health care providers about when and how to clean their hands.

4 Moments poster How to handrub mini poster How to handwash mini poster Hand hygiene education module

Certificate of completion for HCP training Education presentation: The Science Behind *Just Clean Your Hands* Your 4 Moments for Hand Hygiene Training Presentation and Training Scenarios DVD

Ongoing monitoring and observation of hand hygiene practices, with feedback to health care providers.

Observation Tool Instructions for Observation Analysis Tool On-the-spot feedback card Observer Scenarios DVD

Your 4 Moments for Hand Hygiene pocket card Scenarios Answer Key Observation Tool and Analysis Training Presentation

Opinion leaders and champions modeling the right behaviour.

Champion poster instructions CD Role model description

Patient engagement.

Patient Brochure – phase 1 Materials to engage and educate patients/visitors on personal hand hygiene and HCP hand hygiene – phase 2 release



Identify and secure support from key individuals or groups

1. It is important to engage decision-makers and influential health care providers in the planning process at the earliest stage possible and maintain this engagement during implementation and beyond.
2. Visible support from influential health care providers is key in successfully implementing an effective hand hygiene program.
3. Identify at least one influential health care provider on each unit who will be fully informed about each step of the hand hygiene improvement strategy and, if possible, trained in program components.
4. Technical and information tools are available to assist with formulating key messages for health care providers. Materials within the documents and tools can be used to form the basis of letters/memos and e-mails as part of the preparatory work for implementation.

Hand hygiene compliance is influenced by the leadership and culture of the organization

Action

Senior and middle managers should be encouraged to offer their visible support for the improvement



Media kit to support program launch

Review champion CD and consider how your hospitals will identify and support champions



Champion poster CD and instructions



Set up a working group or committee to champion the hand hygiene program within the hospital

1. Establish a formal group within the hospital to support the hand hygiene program implementation. This could be an existing committee, such as the Infection Prevention and Control Committee, Patient Safety Committee, or a specific, stand-alone Hand Hygiene Implementation Committee.
2. Committee membership should be multidisciplinary and include representatives from middle and senior management. The human resources and support required for the program will vary depending on the hospital, but will likely include active involvement of people from occupational health and safety, risk management/quality and patient safety, housekeeping, environmental services, purchasing, communications, and infection prevention and control as well as unit-based health care providers, such as nurses, physicians, allied health professionals, personal care assistants, management and patient transporters.
3. Agree to a regular meeting schedule (e.g., once a month) to oversee program implementation, review emerging data and identify any issues or concerns.



Develop plan to communicate/publicize the hand hygiene program across the hospital and to the community

1. Discuss how information about the hand hygiene program will be communicated and to whom (e.g., health care providers, patients, the public).
2. Agree on which communication methods to use, such as:
 - word of mouth
 - electronic (e-mail)
 - newsletters or bulletins
 - formal and informal training
 - use of posters, brochures and prompts

Action

Senior and middle managers should be involved in communication activities



Media kit to support program launch



Plan for installation of hand hygiene product at the point of care

1. Hand hygiene best practices depends on health care providers having easy access to the right products at the right time as close as possible (e.g., within arm's reach) to where care is being provided.
2. Having alcohol-based hand rub at point of care allows the health care provider to clean their hands at the key moments in providing care (see the *4 Key Moments* presentation and poster).
3. Easy access to hand hygiene product at point of care can be achieved by affixing hand rub containers to the patient's bed or bedside table or a wall close to the bed, or through personal carry hand rubs (pocket bottles). Hand rub containers can also be attached to carts.
4. Determining the "right place" for placement of alcohol-based hand rub will differ by unit, patient population group and hospital design.

Involving users in product selection contributes to increased compliance

Point of care is where three elements are present at the same time;

- the patient,
- the health care provider and
- care involving contact is taking place.

Action

Form a point of care team



Placement Tool for Hand Hygiene Products

Your 4 Moments for Hand Hygiene Training Presentations

Hand Care Program



Plan hand care program

1. Skin irritation is one of the primary reasons health care providers do not comply with best practices in hand hygiene.
2. A proactive hand care program can significantly reduce skin problems and is a key component of an effective hand hygiene program.
3. Protecting health care providers' hands is a 24 hour/7 day a week commitment. In addition to providing the right products at work, the program should encourage health care providers to take the right steps to protect their hands at home.
4. The hand assessment tool can be used to identify skin integrity issues.

It is important to educate health care providers to use lotions frequently

Action

Educate health care providers on how to care for their hands



Hand care program



Collect information on program costs and the cost of HAIs

1. The hand hygiene program will be competing with other hospital priorities for resources and support. To make the case for investing in a long-term, sustainable hand hygiene program, it is helpful to know the budget impact.
2. Maintain data on rates of health care associated infections such as MRSA, VRE and *C.difficile* and work with the finance department to gather information on the average cost of treating these infections (e.g., include increased cost of treatment, increased length of stay, impact of wait times).
3. Use these data to demonstrate the number and types of infections that need to be prevented to be budget neutral, and the number that will lead to cost savings.
4. Either measure or estimate consumption of alcohol-based hand rub and the cost of a hand hygiene program (i.e., alcohol-based hand rub, education, visual reminders, data collection).



Develop a process to conduct observational audits, manage the data entry process and report results to hospital board, senior managers and health care providers

1. Hospitals should routinely gather data on hand hygiene compliance rates and feedback results to front-line providers and senior management.
2. The program includes a standard tool for measuring compliance, a training program and an Excel workbook for data analysis.
3. A resource should be identified for managing the data collection process and completing data entry.
4. Observers should follow a similar schedule during step 2 and step 4 to ensure observations take place in the same settings.

Action

Develop a plan for two periods of observational auditing: one during facility preparedness and one post-implementation to measure impact



Observation tool and training program

- The hand hygiene committee should develop effective ways to communicate the results to senior management and to health care providers.
- For immediate feedback, an optional On-the-spot feedback tool is included. During formal observations, or just for feedback, this tool can be used to provide confidential immediate feedback to providers.



Developing an implementation plan

- A good implementation plan will be flexible enough to be adapted during the implementation process.
- Major activities that should occur throughout the sequence of implementation are addressed through the implementation plan.
- The implementation plan offers a systematic method of ensuring responsibilities for specific actions are assigned to individuals.
- Work with the hand hygiene committee to develop an implementation plan.
- The plan should be signed off by a senior member of the hospitals management team.

Action

A model implementation plan is provided



Model Implementation Plan



Conduct training for observers and trainers

- The Ministry of Health and Long-Term Care is providing train-the-trainer sessions for all hospitals. Up to three people from each hospital are invited to participate. These individuals should cover the roles of trainer, observer and implementation coordinator. While infection prevention and control expertise is an important support to the program, it is strongly recommended that a multidisciplinary group attend the ministry training sessions.
- Coordinator: The coordinator will work with management/committee to identify individuals/human resources within the hospital to be trained as in-house trainers and observers.
- Trainer: the hospital trainer should have experience delivering care at the bedside as well as experience in education. Ideally, trainers should be influential leaders who already have basic knowledge of infection prevention and control and patient safety. The same person may be both the trainer and the observer.
- Observer: the observer should be a health care provider with experience delivering care at the bedside.
- Both observers and trainers should attend practical training sessions to learn when and how to perform hand hygiene, based around *Your 4 Moments for Hand Hygiene* concept.
- Basic training for both observers and trainers will include the importance of preventing health care associated infections, how hand transmission can occur, hand hygiene indications, techniques and how to use the hand hygiene observation tool.
- Additional training will be provided for observers on use of the observation tool.

Action

Standard presentations on these topics are available within the implementation kit



PowerPoint training presentations, videos and practical demonstration sessions

The instructions on the observation tool, PowerPoint presentation and DVD will support observers to competently use the hand hygiene observation tools (described in step 2)



Observation Tool Presentation

Step 1 is now complete

Much of the groundwork undertaken during step 1 links with activities in future steps. In light of this, it is important to note that there may appear to be some overlap between step 1 and step 2.

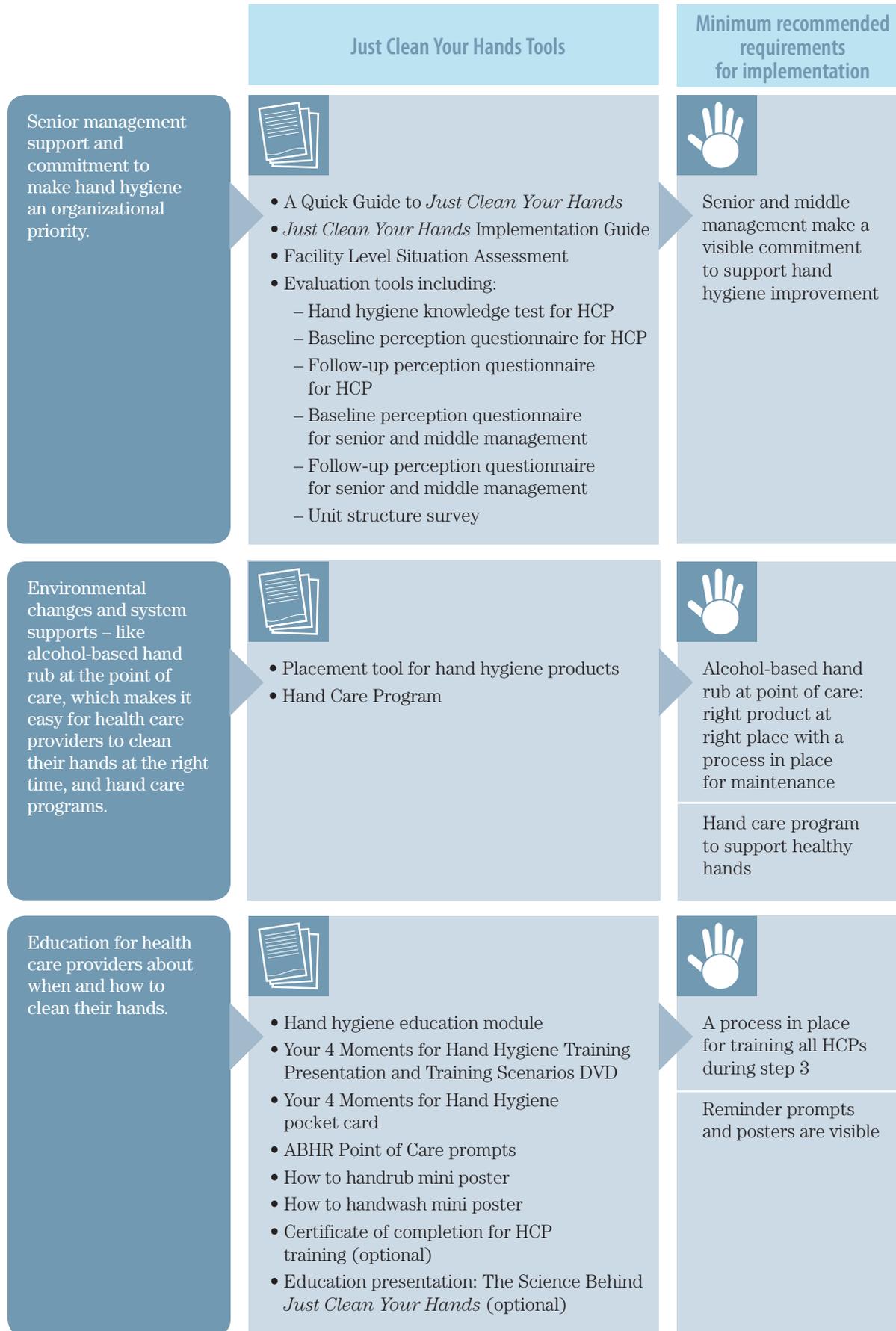
Before moving on to step 2, complete the Step 1 Checklist below:

Step 1 Checklist

Have the following actions occurred?	Yes	No
Facility Level Situation Assessment completed?		
Coordinator appointed?		
Key individuals and groups – champions – identified?		
Hand hygiene committee established?		
Communications plan developed?		
Agreement reached on hospital-wide versus phased unit-based implementation?		
Product Placement Tool completed?		
Alcohol-based hand rub products selected?		
Hand care protection program being planned?		
Process for collecting and analyzing observational data established?		
Trainers and observers identified and trained?		
Data on costs collected?		
Implementation plan completed and signed off?		
Roles and responsibilities clearly understood?		



Rapid overview of strategy





Rapid overview of strategy (continued)

	Just Clean Your Hands Tools	Minimum recommended requirements for implementation
Ongoing monitoring and observation of hand hygiene practices, with feedback to health care providers.	 <ul style="list-style-type: none">• Observation Tool Training Presentation• Observation Tool• Observer scenarios DVD• Scenarios answer key• On-the-spot feedback (optional)• Observation analysis tool for calculating compliance rates	 <p>Two periods of observational monitoring during step 1 and step 4</p> <hr/> <p>Plan developed for ongoing observational audits and feedback</p>
Opinion leaders and champions modeling the right behaviour.	 <ul style="list-style-type: none">• Champion poster instructions CD• Role model description	 <p>A process in place for identifying and supporting champions</p>
Patient engagement.	 <p>Phase 1: Patient Brochure Phase 2: Materials to engage and educate patients/visitors on personal hand hygiene and HCP hand hygiene</p>	 <p>Phase 1: Patient and visitor awareness of program</p> <hr/> <p>Phase 2: A process in place to educate and obtain feedback from patient/visitor</p>

Step 2: Baseline evaluation

Suggested duration: 2 to 3 months

Step 1 Facility preparedness

Step 2 **Baseline evaluation**

Step 3 Implementation

Step 4 Follow-up evaluation

Step 5 Developing ongoing action plan and review cycle



Introduction

1. The baseline evaluation step is important.
2. During this time information will be collected that should reflect current hand hygiene practices and infrastructure available on site. This will enable the hospital to track progress as the multifaceted strategy is being implemented.
3. During this step, hospitals undertake specific actions to prepare for the implementation phase (e.g., training, planning, procurement of alcohol-based hand rub).
4. Baseline evaluation includes the use of the evaluation tools described below. The tools are listed in the recommended order of use.

Tool/Data collection	When during Step 2 to use it		
Senior and middle management perception survey (baseline)	Week 1		
Health care provider perception survey (baseline)	Week 1		
Unit structure survey (baseline)		Week 2	
Soap/hand rub consumption monitoring for costing only, not compliance measurement (baseline)			At end of step 2
Hand hygiene observation tool (baseline)			At end of step 2
Health care provider knowledge survey (baseline)			Last week of step 2 or immediately before education session (step 3)

5. The timeline shown in figure 2 illustrates at what stage in the sequence the tools are to be used.



Minimum Feedback Parameters

In an ideal scenario, all of the baseline evaluation methods outlined in the following section would be undertaken and repeated during step 4.

If, due to resource constraints, your hospital is not able to implement all information gathering activities, at a minimum, hand hygiene compliance observations should be conducted to measure progress. Evaluation tools to measure knowledge and perception are also recommended.



The tools listed below are available to download at www.justcleanyourhands.ca



Senior and middle management perception survey

1. **Why:** Senior and middle management awareness and commitment substantially contribute to the creation of a facility-wide safety climate. Their support is a crucial component of the multifaceted program for hand hygiene improvement. For this reason, it is important to measure their perception about the importance of hand hygiene in health care.
2. **What:** A survey has been developed to measure senior and middle managers' perception about the impact of health care associated infections, the importance of hand hygiene as a preventative measure, the different elements of a multifaceted strategy and their vital role in promoting hand hygiene in a facility safety climate.
3. **When:** This tool should be used during steps 2 and 4. In step 2, it serves to assess the baseline perception of HAIs and hand hygiene among managers. It should be distributed during the first week of the baseline evaluation phase, before implementing any improvement intervention. The completed questionnaires should be collected four to five days later.
4. **Who:** To the senior and middle managers of the hospitals.
5. **How:** Through the anonymous distribution of the survey.



Testing health care provider perception of hand hygiene

Hand hygiene is a very simple and effective measure to prevent health care associated infections. For this reason it is important to measure health care providers' perception about the importance of hand hygiene in health care, their awareness of the factors influencing their compliance and the possibility and means of improvement.



Health care providers perception survey

1. **Why:** It is important to measure health care providers' perception about the importance of hand hygiene in health care as this has been shown to influence willingness to embrace improvements.
2. **What:** A perception survey about the impact of HAIs, the importance of hand hygiene as a preventative measure and the effectiveness of the different elements of a multifaceted strategy.
3. **Where:** Wherever the hand hygiene improvement strategy is going to be implemented. It could be phased in a few units at a time or implemented across the entire hospital. The survey should be distributed to health care providers in all participating units.
4. **When:** During steps 2 and 4. In step 2, it serves to assess the baseline perception of HAIs and hand hygiene among health care providers. It should be distributed during the first week of the baseline evaluation phase, before implementing any improvement intervention.
5. **Who:** Health care providers who have direct contact with patients or who work within the patient environment.
6. **How:** Anonymous distribution of the survey. The survey should be distributed to all health care providers within a one-week period and the completed surveys should be collected four to five days later.



Unit structure survey

1. **Why:** It is important to determine information about existing structures and resources in place in each unit as a baseline. This will help identify potential system changes needed for implementation.
2. **What:** A survey to collect data about structures and resources in place at unit level.
3. **Where:** In all units where the hand hygiene improvement strategy will be implemented.
4. **When:** This tool must be used during steps 2 and 4. In step 2, it acts as a baseline assessment of the number of health care providers and beds, and the existing structures and equipment for hand hygiene in each unit. This survey should be distributed during the second week of step 2 and collected three days later.
5. **Who:** The survey should be completed by the unit manager by walking round the unit to obtain the relevant information and answering questions.



The unit survey

Finding out details about the unit structure is useful in terms of explaining current hand hygiene compliance.

The unit structure will help guide the ongoing revision and preparation of action plans.

Lack of access to sinks, running water and alcohol-based hand rub at point of care is likely to be reflected in lower rates of compliance.



Soap/hand rub consumption

1. **Why:** In order to understand the baseline usage of hand hygiene products, it is important to capture the baseline product costs. To demonstrate the process of changing demands for hand hygiene products, it is important to track usage monthly. This information is also essential to help the purchasing department estimate the amount of alcohol-based hand rub and other products to order.
2. **What:** Set up a monitoring system that captures the usage of soap and hand rub.
3. **When:** Initially during step 2 as baseline data with once-monthly repetition throughout the intervention (step 3).
4. **Who:** Central purchasing or stores department.
5. **How:** Through a monitoring sheet filled in by designated person.



Hand hygiene observations

1. **Why:** Observing hand hygiene compliance is the most reliable indicator of health care providers' hand hygiene behaviour. It is, therefore, the most important success indicator for the hand hygiene improvement strategy.
2. **What:** This program includes a hand hygiene observation tool, Excel workbook for data analysis and reports to calculate compliance rates.
3. **When:** This tool must be used during steps 2 and 4. In step 2, it serves to establish baseline hand hygiene compliance. It is important that observations in step 4 take place in the same settings and use the same method as in step 2.
4. **Who:** The user of this tool is a trained observer. The observer should ideally be a health care provider who has experience delivering health care at the bedside. Before starting the hand hygiene observation, the observer must be trained to identify the *4 Moments for Hand Hygiene* and how to use the tool. To be trained, the observer must complete the observation tool and training program.
5. **How:** The instructions on reverse side of the observation tool clearly explain how to use this tool. Additional information and practical training is provided as part of the train-the-trainer sessions. The number of opportunities observed will depend on the size of the unit and hospital.



The core observation tools explained:

Observation Tool: a tool to collect data on hand hygiene performance while observing health care providers.

Analysis tool: a practical Excel workbook to calculate compliance rates easily, based on the data collected in the observation tool.

4 Moments and observer presentations: a comprehensive training approach to help those performing observations do so in an efficient and consistent manner.

DVD and answer key: provides visual examples of essential moments for hand hygiene.



Health care providers knowledge survey

1. **Why:** Hand hygiene improvement is based on the understanding of how transmission of organisms occurs in the hospital setting.
2. **What:** A survey with technical questions to assess actual knowledge on the essential aspects of hand hygiene. Knowledge to correctly answer these questions will be acquired by completing the hand hygiene education module and undergoing training related to *Your 4 Moments for Hand Hygiene*. The survey is a specific tool to assess learning outcomes following the education and training activities.
3. **When:** This tool must be used at the end of step 2. In step 2, it serves to assess baseline knowledge among health care providers. The survey should be distributed immediately before starting implementation. If too difficult to do from an organizational point of view, it could be distributed at the beginning of the training sessions (in this case it will apply to step 3 and not step 2).



Why test knowledge:

Health care providers require an understanding of the level of risk of specific tasks and the essential indications for hand hygiene. It is important to assess baseline knowledge about these issues before undertaking any educational activity.

Analysis of the answers can be useful in identifying areas needing improvement.

Such an assessment can also act as an instrument for self-evaluation for health care providers.

4. **Who:** Health care providers who provide direct patient care or work in the patient care area in the units where the program will be implemented and who will receive education and training.
5. **How:** Through the distribution of the surveys during one specific session. If the results are intended to remain anonymous, instructions to create an identity (ID) code should be given to each health care provider to allow for self-assessment after training has taken place. The ID code can be known either to the user only or both to the user and the trainer, according to locally established privacy requirements.



Data entry and analysis

1. Data entry and analysis are an important part of the overall evaluation.
2. This will require some training and time.
3. The coordinator will work with management/committee to advise on who will be assigned to this role.
4. The appointed person should be able to use basic computer programs (e.g., Microsoft Excel, Word and PowerPoint).
5. Data will be collected on hard copies from each participant (e.g., surveys, forms).
6. An Excel workbook has been provided to enter compliance observation data and analyze compliance rates based on the data collected in the observation tool.
7. Hospitals can set up a simple Excel spreadsheet to input and analyze survey data.
8. The best strategy for data entry is to start this process as soon as each tool has been used and completed surveys are available.
9. Use the results to establish the hospital's baseline measures of perception, knowledge and compliance with hand hygiene practices and develop feedback materials for health care providers for use at the beginning of step 3.



Preparation for training of health care providers

1. By this stage, educators/trainers who will be overseeing the training of health care providers scheduled to occur during step 3 will have been educated on basic principles of hand hygiene.
2. Trainers were trained together with observers during step 1.
3. Trainers should review the materials available for training and where necessary adapt it according to local needs.



Training: Issues to Consider

By the end of step 2 all those who underwent training (the trainers) should meet to discuss how to organize and schedule the training of staff that should occur during step 3.

4. The target of the education and training activities are health care providers, both clinical and non clinical, who provide direct patient care or work within the patient care environment in those units and departments implementing the program. The decision about whether to conduct sessions for health care providers by discipline, as well as the number of sessions, will be made on the basis of local needs, habits and cultural issues.
5. The hand hygiene education module: this web-based tool can be used individually or in group sessions.
6. Education sessions (optional): one or more sessions using the *Science Behind the Just Clean Your Hand Program* presentation will be led by the trainers. The objective will be to provide basic knowledge on the importance of HAIs and the evidence-based concepts of hand hygiene.
7. Practical training sessions: these sessions will include a practical demonstration of how and when to perform hand hygiene according to the concept of *Your 4 Moments for Hand Hygiene*.
8. During these sessions, the 4 Moments pocket card, On-the-spot feedback tool, lapel pins and a handout of the presentations will be distributed to staff. A certificate of completion of training may be provided at the end of training.



Procure and install hand hygiene supplies

1. During step 2, the hospital should make sure that the alcohol-based hand rub and related dispensers are available in time for the start of step 3.
2. Hand hygiene products should be purchased in large enough quantities for the full program implementation.
3. Well functioning dispensers should be constantly available at the point of care. Installation in the patient environment provides easy access when care is being provided.
4. Individual carry bottles should be considered when alcohol ingestion by patients is a potential risk. A local risk analysis should be conducted in each setting.
5. Establish a dedicated storage space for hand hygiene supplies.



Supervision of the process

1. Robust evaluation is a critical component of the baseline step.
2. The coordinator is advised to check on progress periodically with health care providers who are undertaking the observations and collecting the survey forms.

Step 2 is now complete

At this stage a thorough review of the initial implementation plan should be undertaken.

Amendments can be made to the plan in light of recent activities and learning during step 2.

The hospital is now ready to implement the improvement strategy.

Before moving on to step 3, complete the Step 2 Checklist below:

Step 2 Checklist

Have the following actions occurred?	Yes	No
Senior and middle management perception survey completed?		
Health care providers perception survey completed?		
Unit structure survey completed?		
Soap and hand rub consumption data collected?		
Hand hygiene observations completed?		
Health care providers knowledge survey completed?		
Data entered and analyzed?		
Report written?		
Planning for health care provider education and training completed?		
Hand hygiene products and equipment procured and installed?		

Step 3: Implementation

Suggested duration: 3 to 4 months

Step 1 Facility preparedness

Step 2 Baseline evaluation

Step 3 Implementation

Step 4 Follow-up evaluation

Step 5 Developing ongoing action plan and review cycle



Reminder

1. Step 1 clearly established a plan for implementation.
2. Step 3 is concerned with implementing the implementation plan.



Putting the plan into action

1. Once the preparation and baseline testing period (steps 1 and 2) have been completed, the hospital will be ready to start implementing a multifaceted hand hygiene program.
2. A proposed schedule for implementing the activities included in step 3 is set out in the project sequence (see figure 2). The coordinator should refer to this schedule and adapt it to local needs. In summary, the following activities should occur:
 - Feedback baseline data
 - Distribute posters, prompts and patient pamphlets
 - Ensure alcohol-based hand rub is installed at point of care
 - Install hand lotion
 - Educate health care providers
 - Undertake practical training of health care providers
 - Complete monthly monitoring of use of products.
3. To coincide with the official start of implementation, hospitals may choose to hold a high profile launch event, where a range of activities would occur involving health care providers from across the hospitals. The implementation plan lists these activities.

Action

Senior and middle managers should be encouraged to offer their visible support for the improvement



Media kit to support program launch



Regular meetings

1. As outlined in the implementation plan, weekly, bi-weekly, or monthly review meetings are recommended during the implementation phase.



Baseline data provided to health care providers

1. Feeding baseline results back to health care providers in a timely manner is key to the program's success.
2. Actual compliance rates are usually significantly lower than health care providers' perceptions of their practice.
3. The results from the observations raise awareness and provide an opportunity to educate and engage health care providers in the program.



Distribute posters and other visual reminders

1. Visual reminders reinforce hand hygiene practices.
2. Encourage health care providers to come up with ideas for champion posters.

Action

Display *Your 4 Moments for Hand Hygiene* posters near patient care areas

Display point of care vinyl prompts at point of care

Display technique mini posters



Just Clean Your Hands prompts

Step 3 is now complete

The timeline in figure 3 suggests that the implementation period last for about four months.

The implementation plan devised in step 1 has guided the implementation phase and is critical for success.

Regular review and communication between health care providers should have occurred during step 3.

Before moving on to step 4, work through the Step 3 Checklist below:

Step 3 Checklist

Have the following actions occurred?	Yes	No
Plan developed in step 1 is used to guide implementation?		
Program is launched and communications plan implemented?		
Baseline data and analysis is fed back to health care providers, senior management and hospital board?		
Posters and promotional materials are distributed?		
Process in place for distribution of patient pamphlets?		
Health care providers are educated and receive practical training?		
Alcohol-based hand rub is distributed and usage is monitored?		
Lotion installed?		
Regular review meetings held?		

Step 4: Follow-up evaluation

Suggested duration: 2 to 3 months

Step 1 Facility preparedness

Step 2 Baseline evaluation

Step 3 Implementation

Step 4 Follow-up evaluation

Step 5 Developing ongoing action plan and review cycle



Evaluation

1. To determine the immediate impact of the strategy, further evaluation information is required.
2. The aim of this step is to measure the short-term impact of the various actions implemented in step 3 and to monitor the ongoing process of improving hand hygiene.
3. This will provide the hospitals with information to inform future decisions and actions.
4. The main indicator is compliance with hand hygiene practices among health care providers, which reflects the effect of a range of interventions aimed at improving hand hygiene.
5. It is important to acknowledge that, during step 4, hand hygiene improvement activities should continue according to the local implementation plan.
6. The evaluation tools in step 2 will be repeated. The table below illustrates this:

Tool/Data collection	When during Step 4 to use it		
Senior and middle management perception survey (follow-up)		Week 2	
Health care provider perception survey (follow-up)		Week 3	
Unit structure survey (follow-up)		Week 2	
Soap/hand rub consumption monitoring (follow-up)	Ongoing (monthly)		
Hand hygiene observation tool (follow-up)			Week 4
Health care provider knowledge survey (follow-up)	Week 1		Last week of step 4
Facility situation analysis (follow-up)		Week 2	
Costing information			Week 4

7. Repeating the tools/surveys undertaken in step 2 will ensure consistency and comparability of results.
8. In addition, the Facility Situation Assessment (used in step 1) will be undertaken to evaluate the system change/evolution following implementation.

9. The Health Care Providers' Perception Survey is slightly modified from baseline and includes questions relating to:

- The impact of some interventions, such as the introduction or change of alcohol-based hand rub product
- The posters and prompts
- The education and training materials.

10. The target and details relating to the distribution of tools is the same as in step 2.



Collect data on health care associated infections

1. Hospitals are strongly advised to monitor and document specific health care associated infections.
2. This will provide valuable information to help measure trends and specific rates before and after implementation of the hand hygiene improvement strategy.
3. Rates of HAIs are an important indicator to assess the effectiveness of the strategy over a multi-year commitment.
4. Use this information (over time) to assess the impact of the program on patient safety and infection rates.
5. Use this information along with data on usage of hand hygiene products to analyze the cost of the program.



Essential success indicators

A successful strategy at this stage would see improvements across all measured activities, behaviours and also health care provider perceptions. The success indicators are listed below:

- Increase in hand hygiene compliance
- Improvement in environmental supports
- Increase in usage of hand hygiene products
- Improved perception of hand hygiene
- Improved knowledge of hand hygiene.



Enter and analyze data

The user should refer to the general information and to the detailed instructions for data entry and analysis that are reported in step 2.

Step 4 is now complete

The data collected in step 4 will be used during step 5. This is important for long-term sustainability and planning.

Before moving on to step 5, work through the Step 4 Checklist below:

Step 4 Checklist

Have the following actions occurred?	Yes	No
Senior and middle managers perception survey completed?		
Health care providers perception survey and campaign evaluation completed?		
Unit structure survey completed?		
Soap/hand rub consumption data collected?		
Hand hygiene observations completed?		
Health care providers knowledge survey completed?		
Facility Situation Analysis completed?		
Health care associated infections and other cost-benefit information collected?		
Data entered and analyzed?		

Step 5 – Developing ongoing action plan and review cycle

Suggested duration: 2 to 3 months

Step 1 Facility preparedness

Step 2 Baseline evaluation

Step 3 Implementation

Step 4 Follow-up evaluation

Step 5 Developing ongoing action plan and review cycle



Discussion and interpretation of results

1. Data collected after implementation will help hospitals decide what action to take next.
2. Results must be reviewed carefully.
3. In particular, consideration should be given to what the results reveal in terms of the impact of hand hygiene improvement.
4. The evaluation data will help determine the usefulness and impact of the training that has occurred.
5. The purpose of the evaluation data is to assist in formulating a report and action plan for sustainability.



Feedback and dissemination of findings to units

1. On completion of step 4, the hospital will decide on the next steps for sustaining the improvements.
2. It is crucial that the enthusiasm, motivation and achievements demonstrated during the implementation are consolidated into a long-term commitment for improve hand hygiene.
3. Each hospital should decide how best to communicate the results of the data analysis.
4. The groups or other forums for discussion and decision-making established during steps 1 through 4 may be best placed to inform what happens next. Feedback of the results can occur directly to these groups.
5. The group/meeting should be comprised of senior and middle management and health care providers.
6. It is important to communicate results to health care providers in a timely manner to keep them motivated and engaged in the strategy, and to use their enthusiasm to build long-term commitment to improve hand hygiene.
7. It is suggested that a report of the program be provided to the board of directors.



For a sustained improvement, a minimum five-year cycle of review and action planning is recommended

A hand hygiene improvement strategy cannot remain static and must be rejuvenated at intervals



Develop a five-year action plan

1. To achieve and sustain improvements in hand hygiene, hospitals should consider a minimum five-year plan and review cycle.

Sharing Lessons Learned with Ministry of Health and Long-Term Care and Peers

1. The ministry is interested in receiving feedback from hospitals on the process of implementation and usefulness of tools provided. Please e-mail comments to **handhygiene@ontario.ca**
2. The ministry encourages hospitals to share their experiences on the discussion forum of **www.justcleanyourhands.ca**

Step 5 is now complete

A review of the entire process from step 1 to step 5 will help formulate plans for sustainability, document the findings, and guide discussions with hospital management about how to ensure continued improvement over the long term.

Step 5 Checklist

Have the following actions occurred?	Yes	No
All results are reviewed?		
Report of the findings is prepared?		
Findings are presented to senior and middle management?		
Findings are presented to health care providers?		
Findings are presented to board of directors?		
An action plan for the next five years is developed?		
Education of patients/visitors is implemented?		
Feedback to ministry on implementation process and materials		

