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Urinary Tract Infection (UTI) Program: Implementation Guide, Second Edition

Reducing Antibiotic Harms in Long-Term Care

1st Revision: November 2019

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Summary of Revisions

First published: June 2016

Summary of changes in 1st revision are summarized in the table below:

Date of Implementation	Description of Major Changes
Nov-2019	Signs and symptoms of UTI were updated to reflect current research. The reference to acute onset of delirium in residents with advanced dementia was removed.

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We would especially like to thank the staff from long-term care homes across Ontario who contributed by providing their perspectives and recommendations to make this a useful resource to guide program implementation in the long-term care sector.

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About this Guide

This Implementation Guide was developed to support long-term care homes (LTCHs) implement the Urinary Tract Infection (UTI) Program. It has been updated from the original version (June 2016) based on feedback from staff in Ontario long-term care homes (LTCHs) who participated in a pilot evaluation of the UTI Program. Changes include:

- updated language to describe the implementation strategies

- a new ordering for the implementation strategies

- the addition of "tips" for implementation, which capture guidance that has been shared by LTCHs that have implemented the Program

The UTI Program is designed for LTCHs that have noticed they are overprescribing antibiotics for presumed UTIs. Oftentimes, LTCHs also notice that they are sending a lot of urine specimens to the lab for testing. The UTI Program is designed to help LTCHs implement recommended practices for the assessment and management of UTI for non-catheterized residents in their LTCH. This Program uses a phased approach for implementing these practice changes.

Alignment with best practices in the assessment and management of UTIs is complex and addressing this issue requires both individual and organizational change. This phased approach is designed to allow for careful consideration of the many layers of support that may be needed in a LTCH.

LTCHs are implementing the UTI Program when they:

Complete the three implementation-planning phases (Assess, Plan, Implement) AND
are successful in putting the recommended implementation strategies into practice.

Why Use this Guide?

Good planning is key to success in implementing and sustaining the UTI Program. This guide recommends strategies and a process for developing a plan. Taking time to consider how to implement the UTI Program will save time in the long run and increase the success in implementation of the recommended strategies.

Many of the LTCHs we worked with want to get going right away and focus on distributing the educational resources to their staff. We learned from their feedback that this does not necessarily support sustainable practice change. It is important to take the time to consider how each of the implementation strategies and the planning process found within this guide will help promote success in your home.

Program resources are available within this guide, as well as on our UTI Program webpage at publichealthontario.ca/UTI.

Tips for implementation have been added to this guide and are based on feedback from LTCHs in Ontario that have implemented the UTI Program in their home.

The IPAC department is committed to continuing to improve this guide and the UTI Program to better meet the needs of LTCHs. Ongoing feedback from future evaluations will continue to strengthen the recommendations in this guide with additional examples of how LTCHs are innovating and championing improvements in this area.

Background

Inappropriate use and overuse of antibiotics have been found to contribute to adverse outcomes in long-term care homes (LTCHs), including antibiotic resistance and *Clostridioides* (previously *Clostridium*) *difficile* infection.[1-4]

Many LTCH stakeholders approached Public Health Ontario (PHO) with concerns about the misuse and overuse of antibiotics for presumed urinary tract infections (UTIs) in LTCHs and about the associated antibiotic-related harms.

These concerns are supported by the findings of a 2013 PHO survey. In it, 80% of health care workers in LTCHs said they would send a urine culture for non-urinary infection reasons and 50% of prescribers said they would treat a resident with a positive urine culture and no symptoms. This is called asymptomatic bacteriuria.

Asymptomatic bacteriuria is the presence of bacteria in the urine without symptoms of a urinary tract infection.

Best practices emphasize:

- obtaining urine cultures only when residents have been determined to have indicated clinical signs of a UTI

- prescribing antibiotics only when specified criteria have been met

- reassessing antibiotic treatment once urine culture and susceptibility results have been received

Clinical signs and symptoms of a UTI are: acute dysuria or two or more of fever, new flank pain or suprapubic pain or tenderness, new or increased urinary frequency/urgency, gross hematuria.

In response to these concerns, PHO worked closely with LTCHs to develop the Urinary Tract Infection (UTI) Program: Reducing Antibiotic Harms in Long-Term Care.

The Program was formally piloted in 12 LTCHs in 2016-2017. The participating LTCHs followed the implementation planning process outlined in this guide and across these LTCHs (n=10)

- **urine culturing rates declined by 29%**

- **urinary antibiotic prescription rates dropped by 41%**

- **total antibiotic prescription rates declined by 27%**

From this evaluation, we learned that the UTI Program has the potential to impact rates of urine culturing and urinary antibiotic use within a LTCH setting.

The UTI Program: Core Components

The UTI Program is designed around five core components referred to in this guide as practice changes—a defined list of practices for the assessment and management of UTIs in **non-catheterized** residents in LTCHs.

The UTI Program: Five Practice Changes
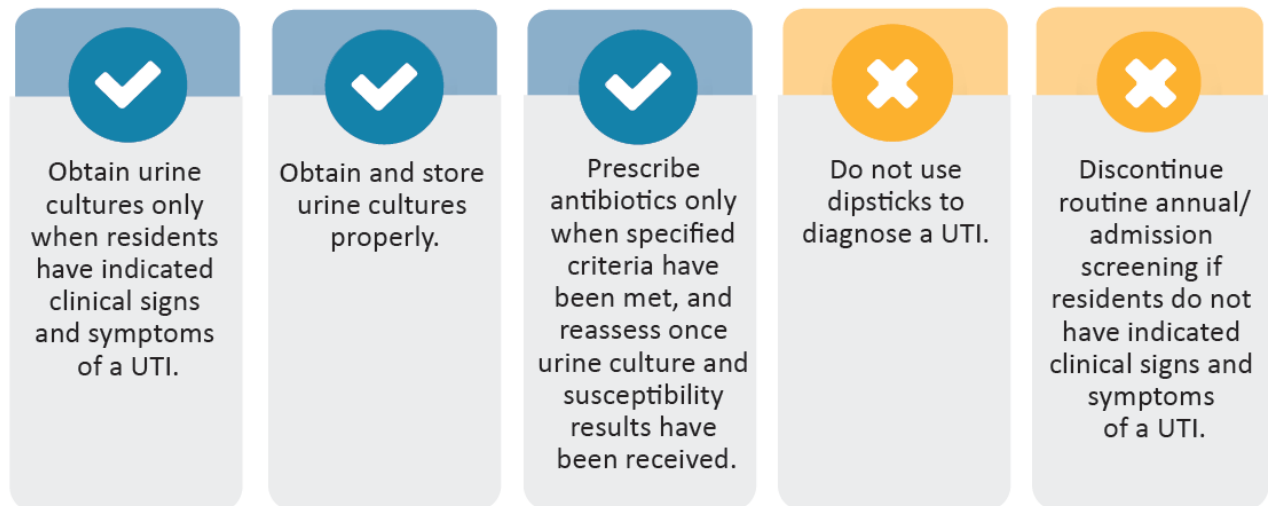
✓	✓	✓	✕	✕
Obtain urine cultures only when residents have indicated clinical signs and symptoms of a UTI.	Obtain and store urine cultures properly.	Prescribe antibiotics only when specified criteria have been met, and reassess once urine culture and susceptibility results have been received.	Do not use dipsticks to diagnose a UTI.	Discontinue routine annual/ admission screening if residents do not have indicated clinical signs and symptoms of a UTI.

These recommended practice changes were informed by a literature review and a provincial needs assessment conducted by PHO. For more information on the evidence related to these recommendations, see:

- Summary of UTI Program Practice Recommendations (Appendix A)

- Literature Summary: Evidence to Support Discontinuing the Use of Dipsticks to Diagnose a Urinary Tract Infection (UTI) in Residents of Long-Term Care Homes

Implementing the UTI Program

Approaching Implementation

Implementation Lead

Each LTCH will have an implementation lead who will set up a series of meetings with an implementation team - a core group of staff who will help execute the Program in the LTCH. These teams will work through the activities outlined in this guide in order to successfully assess and plan for implementation of the Program in their LTCH. (See page 9 for more information about getting the implementation team together.)

> **Tip: Identifying a co-lead can be helpful if staff move on to new roles or need additional support during implementation.**

Tailoring to the Size of Your LTCH

The implementation of the UTI Program can be tailored to the size of the LTCH. If working with a larger home or multiple units, LTCHs may want to first implement in one or two trial units, assess for success and then spread the Program to other units in the LTCH; whereas smaller LTCHs may find that they can implement the Program in the entire home at the same time. This is a decision the implementation team can make together, based on the demographics and other needs of the LTCH.

Implementation Phases

There are three phases in the implementation of the UTI Program: Assess, Plan and Implement.

- **Assess – What do we need to change and are we ready to make those changes**
  During this phase, LTCHs look at the practice changes and assess both their need for the Program and what they should focus on in addition to making sure they are ready to get started. At the end of this phase, LTCHs will have a good understanding of whether they are ready to move forward with implementing the Program.

- **Plan – develop a plan to support the changes**
  LTCHs review recommended strategies to support practice changes, confirm available resources, and anticipate barriers that may be encountered. The work in this phase will result in a detailed plan for implementation.

- **Implement – putting the strategies in place and checking how things are going**
  LTCHs focus on roll out of the practice changes and implementation strategies, and work on plans to sustain them.

The remainder of this guide is designed to walk you through the three phases for implementing the UTI Program in your LTCH.

Implementation Team

Timelines for Implementation

Assess and Plan

PHO recommends that LTCHs set aside three months to work through the assessment and planning processes.

This allows for one planning meeting per month, with time in between to complete tasks as required. This may vary by LTCH and more time may be required to complete the initial planning process.

Implement

LTCHs have needed about two months to execute their implementation plans and to roll out strategies within their LTCHs. Some strategies, such as updating policies and procedures, may take longer than the two month period.

It is important to make a plan for sustainability, which will require on-going support after the initial two month roll-out. See page 25 for more details.

Assess

The Assess phase has three steps:

- ☐ Assess whether there is a need for the Program
- ☐ Assess readiness to get started
- ☐ Assemble an implementation team

Assess for Need and Fit of the Program

Assessing need and fit for the Program involves looking at data and the practice changes recommended by the Program.

Review Data for Urine Culture Rates and Antibiotic Rates

The UTI Program is designed for LTCHs that have noticed they are overprescribing antibiotics for presumed UTIs. Oftentimes, LTCHs also notice that they are sending a lot of urine specimens to the lab for testing. This type of data is really helpful in assessing the need for the Program and for tracking improvements once the Program is implemented.

We recommend that homes look at how many urine cultures are typically sent to the lab each month. LTCHs that have implemented this Program have typically used reports provided by their lab to obtain this data.

It is also valuable to look at the number of antibiotics prescribed for UTIs. LTCHs that have implemented this Program have typically had access to reports that list their antibiotic use, which are provided by their pharmacy.

While having both of these counts is helpful, you may be able to assess need and progress with only one of the above data sources.

Review these numbers and document your rates. What is your impression of these numbers? Are they high for your LTCH? If yes, then the UTI Program may be an appropriate intervention for your LTCH.

Note that two implementation strategies have been designed to also support this work:

- Reviewing how symptoms are documented (Strategy D)

- Monitoring practice and giving feedback to staff (Strategy H).

This will help to provide information on how the changes are being implemented and is discussed later in this Guide. By monitoring your data, you will have a sense of how you are progressing with the Program. Please see pages 18 and page 23 for more details on these strategies.

Complete the Practice Change Questionnaire

Another step in assessing the need and fit is to look at the UTI Program practice changes. The following questionnaire (also in Appendix B) describes the activities recommended as practice changes. LTCHs use this questionnaire to review which of the practices they are already doing, what may need to be discontinued and which ones they will need to implement.

This questionnaire contains five questions. The first three address activities that should be implemented; the last two address activities that should be stopped.

Activities recommended in the practice change	Your answer
In our LTCH, we obtain urine cultures only when residents have the indicated clinical signs and symptoms of a UTI	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH
In our LTCH, we obtain and store urine cultures properly	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH
In our LTCH, we ensure that antibiotics are prescribed only when specified criteria have been met and that residents are reassessed once urine culture and susceptibility results have been received	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH

These activities are *not* recommended. LTCHs should discuss this list and determine whether they are doing either of them.

Activities *not* recommended in the practice change	Your answer
In our LTCH, we use dipsticks to diagnose a UTI	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH
In our LTCH, we obtain routine annual urine screening and screening at admission if residents do not have indicated clinical signs and symptoms of a UTI	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH

> **Tip: When working through the practice change questionnaire, refer to Summary of Practice Recommendations, which highlights the evidence behind the five practice changes.**

Assess for Readiness

Timing can be very important for successful implementation, as is ensuring key influencers are consulted prior to getting started. Here are a few considerations for getting ready for the Program (Appendix C):

- It is important to time the planning and roll-out of the Program so it does not conflict with other significant changes underway (e.g., significant staff changes, another program being rolled out).

- Consider who else should be consulted for support in moving forward with this Program. Having senior management and medical directors on-board can help to move the initiative forward.

- Ensure there is a designated lead for the initiative and to confirm that time can be committed to this project.

- Identify all staff that are directly involved in clinical decision making and orient them to this opportunity (i.e., Registered Nurses, Nurse Practitioners and Physicians). See "getting buy-in" on page 17 for more information about this step.

> **Tip: For corporate homes, LTCHs have included a corporate representative in their plans for implementing this Program. This individual should be consulted or could be included as a member of the implementation team.**

Not all LTCHs will be ready to implement the Program. You may have identified UTIs as a concern and have the support to move forward. Others will find that there are too many conflicting priorities to start implementing this Program right away. LTCHs that are not ready can plan to revisit the Program in the future to determine whether their readiness has changed. Some LTCHs will find that they need to do some additional work before moving forward (e.g., further discussion with senior management).

When a LTCH has determined that they are ready to implement the UTI Program, they can formalize their implementation team and continue on to the Plan and Implement Phases.

Get the Implementation Team Together

An essential part of the UTI Program involves the creation of an implementation team (Appendix D). This team is responsible for moving the UTI Program forward and developing a plan to ensure the Program is sustained.

When choosing and setting up the implementation team, consider the following:

- Look for action people—individuals who enthusiastically participate in challenges and opportunities.

- Try to ensure representation from as many key groups as possible. This could include registered nurses, front-line staff, director of care, infection prevention and control leads, personal support workers, resident assessment instrument coordinators, lead physicians, nurse practitioners, pharmacists, corporate infection control consultants; however, it is not necessary to include all groups on the team, since getting buy-in from key groups/roles is a strategy addressed in the Plan phase.

- Implementation team membership and size will vary depending on facility size and resources.

- Outline the roles and responsibilities of the implementation team (e.g., the team will review this Implementation Guide, the team will complete an initial assessment phase, the team will outline the plan for how strategies will support staff, the team will continue to meet to assess how things are going).

- Outline the roles, process and responsibilities for implementation team members. Consider who can act as champions, who could coach front-line staff. This will be explored more during the Plan phase.

> **Tip: Not all staff need to be at all assessing and planning meetings. It may be more useful to have a larger group at the beginning (i.e., prescribers, such as medical directors or nurse practitioners and pharmacists) to discuss practice changes and barriers and then bring together a smaller group of team members to discuss logistics and make the implementation plan.**

Champions

Implementation teams will want to identify "champions" to participate on the team in the planning process. Champions are staff members who are willing to dedicate themselves to supporting the UTI Program, including its implementation.[5] This includes overcoming indifference or resistance that may influence the implementation process.[6] Champions should engage other staff during the implementation process to strengthen the buy-in for the Program. Champions are different from opinion leaders, in that they are specifically involved in the implementation-planning process.

Natural champions can be identified early in the planning process and given opportunities to move the project forward.[7]

The UTI Program checklist (Appendix H) can help implementation teams monitor their progress and ensure that each step in the Implementation Guide has been addressed.

After LTCHs have addressed their readiness, decided to move forward with the UTI Program and have formed their implementation team, they can move on to the Plan phase.

Plan

The Plan phase consists of:

☐ examining potential barriers to implementing the practice changes at your LTCH

☐ reviewing implementation strategies

☐ completing your action plan

> **Tip: Good planning is key to success in implementing and sustaining the UTI Program. Taking time at the beginning to consider how to implement the UTI Program will save time in the long run. LTCHs will be able to identify barriers and the resources they require to address them. Being proactive is better than being reactive, as success is often challenged because of lack of implementation planning.**

The purpose of first reviewing and identifying potential barriers to practice change is to help the implementation team to identify the best strategies to target those barriers.

Examine Barriers to Practice Changes

Through talking with staff in LTCHs across Ontario, PHO learned about barriers that prevent adherence to best practices for UTI assessment and management, including:

- lack of knowledge and skills for UTI assessment and proper urine specimen collection

- pressure from families to treat residents

- concerns that if staff do not treat, then harm could come to the resident

- organizational barriers, such as policies and procedures that do not reflect current recommendations or lack of buy-in from leadership

The tool below (also in Appendix E) lists some common barriers to practice change that have been identified in LTCHs. The program strategies, found in the following section (also in Appendix F), are designed to support staff in addressing these common barriers.

The implementation team should have a discussion about the barriers that do and do not exist in their LTCH. To encourage dialogue, LTCHs may wish to provide each member of the team with a copy of the tool and have them work through it on their own prior to meeting.

The implementation team may also seek additional input through informal conversations with small groups of front-line staff about their perceived barriers to practice change. Engaging front-line staff can provide important insights and allow the implementation team to emphasize the need for the UTI Program.

Examining Barriers to Practice Changes

Barriers to the practice changes	Is this a barrier in our LTCH?

Staff are not knowledgeable about the following:
 	
• Asymptomatic bacteriuria
    • What it is
    • How often it occurs
    • What it means to have it
• Recognition that antibiotics are being overused
• Consequences of unnecessary use/overuse of antibiotics
• True signs and symptoms of a UTI
• Uncertainty around how to diagnose residents with communication difficulties and nonspecific symptoms
• When to collect a urine specimen
• Urine specimens left at room temperature, which can result in false positives
	☐ Yes
	
	☐ No

Families are not knowledgeable about the following:
 	
• Asymptomatic bacteriuria
    • What it is
    • How often it occurs
    • What it means to have it
• Recognition that antibiotics are being overused
• Consequences of unnecessary use/overuse of antibiotics
• True signs and symptoms of a UTI
	☐ Yes
	
	☐ No

Staff lack skill on how to collect urine specimens for culture and interpret lab results, including the following: • Obtaining a mid-stream sample • Using an in/out catheter • Interpreting lab results • Knowing what contributes to a contaminated result and what the significance of this is	☐ Yes ☐ No

Barriers to the practice changes	Is this a barrier in our LTCH?
Staff lack the skill to support a UTI surveillance system, including data collection, management and analysis: • Do not have tools for UTI surveillance • Do not know how to develop tools for UTI surveillance • Do not know how to do surveillance (e.g., daily rounds; questions to ask; process vs. outcome surveillance) • Do not know how to compile and analyze data	☐ Yes ☐ No
Due to staff turnover, new staff are not educated on the UTI Program.	☐ Yes ☐ No
There is poor communication among the care team (verbal and/or documented) as to why a culture is sent for testing.	☐ Yes ☐ No
There is poor communication (verbal and/or documented) between staff and families about why a culture is sent for testing.	☐ Yes ☐ No
Our organizational culture has supported nursing staff in sending urine cultures for testing even when a resident does not have the clinical signs and symptoms of a UTI.	☐ Yes ☐ No
Our organization does not have policies and procedures with sufficient detail on UTI assessment and management practices or policies and procedures that are aligned with current best practices.	☐ Yes ☐ No
Urine specimens are left at room temperature, which can result in false positives.	☐ Yes ☐ No
There is a lack of support from the director/administrator/leadership/corporation for making a change.	☐ Yes ☐ No
"UTIs" are reported to physicians (e.g., "resident has a bladder infection") without providing any details on signs, symptoms or culture and susceptibility report.	☐ Yes ☐ No
There is a lack of clarity about the roles and responsibilities of the care team; there seems to be a reliance on reports of a resident's symptoms from other parties (e.g., family and personal support workers).	☐ Yes ☐ No

Barriers to the practice changes	Is this a barrier in our LTCH?
We do not know to what extent we are following recommended practices and are not equipped to evaluate our progress because we are not collecting data routinely.	☐ Yes ☐ No
Our staff does not have access to adequate supports to provide education to residents/families.	☐ Yes ☐ No
We lack local diagnostic/treatment tools/algorithms; they are out of date or not evidence-based.	☐ Yes ☐ No
Our staff/nurse practitioners/physicians/families are concerned about the consequences of not providing antibiotics to residents with nonspecific symptoms or asymptomatic bacteriuria; nursing/nurse practitioners/ physicians/family are afraid an infection will develop or be missed, resulting in a poor outcome.	☐ Yes ☐ No
Nurse practitioners/physicians agree with recommendations, but still feel pressure from nursing or the family to prescribe an antibiotic; the pressure stems from fears that an infection may develop or be missed, resulting in a poor outcome for the resident.	☐ Yes ☐ No
Front-line staff or physicians will not accept the new recommendations.	☐ Yes ☐ No
Some residents are labelled as having "recurrent UTIs:" every time they have a change in behaviour or their urine becomes smelly, it is assumed they have a UTI based on this label; this label can be driven by staff or family.	☐ Yes ☐ No
Urine is sometimes sent for culture without specific symptoms and then comes back positive; this reinforces poor practice.	☐ Yes ☐ No

Once implementation teams have identified the barriers in their LTCH, they will then review the UTI Program strategies that will best assist them in addressing these barriers and complete their action plan.

Look at the Implementation Strategies

The UTI Program includes nine implementation strategies organized under three categories, along with associated tools (Appendix F).

At the end of this step, implementation teams will have an action plan in place and can move into the Implement phase.

Based on the nature of the barriers to practice change, education and tools alone may not lead to sustainable change. The UTI Program has been designed to include strategies that support the five practice changes. Using multiple strategies to address barriers to practice change may increase the chances that the UTI Program will make a difference at your LTCH. The goal of this multi-strategy approach is to ensure sustainability in the practice changes – i.e., increase the opportunities for practices changes to be sustained over time.

UTI Program implementation strategies
Increase buy-in and support
☐ Strategy A: Involve local influencers
☐ Strategy B: Generate buy-in
☐ Strategy C: Align policy and procedures to reflect practice changes
☐ Strategy D: Review how resident symptoms are documented and communicated
Increase knowledge and develop skills
☐ Strategy E: Deliver education to staff
☐ Strategy F: Provide information and education to residents and families
☐ Strategy G: Use coaching to reinforce practices and support staff
Monitor practice and give feedback to staff
☐ Strategy H: Keep track of how your home is doing and provide feedback to staff
☐ Strategy I: Continue to remind staff of key practice changes

> **Tip: LTCHs are encouraged to consider how they can do all nine strategies in their homes to achieve success. It could be expected that some strategies may take longer than others to implement. A good place to start is with the "easy wins" – identifying strategies that will integrate easily can be a helpful way to get the program running, while working away at some of the strategies that may be more challenging or take a bit longer to implement.**

Local Influencers: An organizational influencer can also be considered a "local opinion leader." This is a colleague who is perceived to be influential in helping promote evidence-based practice.[8] Such individuals are perceived to be trustworthy, credible and knowledgeable. They can help by circulating information to colleagues and participate in the delivery of implementation strategies (e.g., classroom education). Influencers and opinion leaders may also be external to the facility.

As you review the program strategies and accompanying resources, complete the Implementation Action Plan (Appendix G) to document decisions and assign tasks in preparation for the implementation phase.

Increase Buy-in and Support

There are four strategies to help increase buy-in and support for the adoption of the UTI Program. Implementation teams should consider each strategy, review the associated resources and complete the action plan.

Strategy A: Involve Local Influencers

Having local leadership support the Program plans is instrumental to setting up for success and can be helpful when building buy-in for the UTI Program. In addition to formal leadership positions, there may be peers and other staff members who are seen as influencers. Seeking out local influencers is another way to support implementation. These individuals may also have been identified as potential champions for the Program.

See the Action Plan (Appendix G) and consider:

- Who are our local opinion leaders and influencers?

- How will they be involved?

- If they are not yet involved, who is responsible for including them? How will they reach out to them and when will they reach out?

Strategy B: Generate Buy-in

Practice change can be hard to achieve unless staff in the LTCH is working together and aligned with a common purpose. There is a need to ensure that staff agrees on the need for changing practices and what those practices are. This strategy specifically involves looking for opportunities to involve staff in discussions about:

1. the problem of antibiotic-related harms

2. the decision to focus on best practices around UTI assessment and management

3. the proposed approaches for managing the problem

LTCHs want to confirm that the issue the UTI Program is addressing is one that is important and relevant to staff, leadership, residents and families.

The purpose of this strategy is to ensure that the team agrees that the chosen clinical issue and the approach are appropriate and timely for the LTCH. This strategy addresses the belief that people feel more engaged and likely to adopt new ways of work when they feel they have a choice, instead of being told what to do or having a decision imposed on them.

When implementation teams encounter resistance from staff about the UTI Program, they need to be prepared to address it. Frequent meetings with key groups during huddles or rounds will allow for dialogue about resistance. This is a great task for the implementation team and the program champions to undertake and be prepared to support staff as they work through their questions about the Program.

See the Action Plan (Appendix G) and consider:

- What existing meetings/events can we use to address the problem of antibiotic-related harms?

- Who should be involved?

- Who will lead this initiative?

- Who will identify the groups that need to be involved in creating buy-in?

- How will we address resistance to the UTI Program from these groups?

Strategy C: Align Policy and Procedures to Reflect Practice Changes

This strategy ensures that LTCHs have policies and procedures that support the practice changes.

Existing organizational policies and procedures should be reviewed to identify any inconsistencies with current practice recommendations for UTI assessment and management.

Why do this? While it does take time to revise policies and procedures, this is the easiest way to ensure some of the improvements are engrained into the organization – especially with staff transitions or turn-

over. We have also heard that front-line staff feels more comfortable supporting the practice changes when they are backed by written policies and procedures.

PHO has developed a resource, Guidance for the Development of a Policy and Procedure for the Management of Urinary Tract Infections (UTIs) in Non-catheterized Residents, to support LTCHs in the development or revision of policies and procedures so that they align with evidence-based practice around UTI assessment and management.

A policy and procedure sample is also available for LTCHs to use as a template when developing a policy and procedure document for the assessment and management of urinary tract infections in non-catheterized residents.

See the Action Plan (Appendix G) and consider:

- Who will lead the review of policies and procedures?

- With whom do we need to consult?

- When do we hope this process will be complete?

- How will we notify staff about these changes?

Strategy D: Review How Resident Symptoms are Documented and Communicated

The purpose of this strategy is to help LTCHs monitor compliance to the new practice changes after they are introduced. It will help LTCHs understand how the LTCH is doing as the Program is implemented. By tracking information and monitoring for changes, LTCHs may identify areas that require further education/reminders or supports and create an action plan to improve practice.[9]

LTCHs may want to conduct ongoing evaluation to examine UTI assessment and management in LTCHs or they may want to do periodic surveillance.

LTCHS should determine what information should be collected to monitor compliance. Here are a few types of data you might review:

- presenting signs and symptoms

- urine cultures taken

- any antibiotics prescribed

This information can be collected by using the process surveillance form provided in this Program; integrating it into current processes for collection or integrating it into your electronic health record documentation.

Use the Process Surveillance Form: To assist LTCHs in monitoring compliance to the practice changes, the UTI Program has created a Process Surveillance Form. This form involves noting the names of residents, their presenting signs and symptoms, whether or not a urine sample was sent to the lab and whether antibiotics were prescribed. This provides an opportunity to look at the number of inappropriate urine samples (those sent without indicated signs and symptoms) and the number of cases in which antibiotics were prescribed without indicated signs and symptoms. The goal is to decrease the number of both over time. Surveillance provides feedback to LTCHs about whether or not the UTI Program is making a difference at their home.

Integrate into current processes: LTCHs may already be collecting surveillance data that overlaps with this form. In that case, LTCHs can add in the categories from the Process Surveillance Form that they are not yet tracking and add this into their current processes. For example, a LTCH may already be tracking urines that are sent, but are not documenting the symptoms from the UTI algorithm that inform decision making. These can be added to current documentation processes.

Integrate into Electronic Health Records: LTCHs may choose to integrate the process surveillance form into their current electronic health record keeping. For example, some LTCHs in the pilot project created their own "User defined assessment (UDA)" in their charting software, which incorporated the steps in the process surveillance form for a suspected UTI and for reviewing urine results.

During the first few months of documenting this information, implementation team members can review the following types of data that are available: list of urine cultures from lab reports, antibiotics prescribed or reviewing a few specific cases where antibiotics were prescribed. Discussion can then focus on whether or not changes are occurring, where there may be opportunities to improve and what strategies can be shared to continue to support staff.

See Action Plan (Appendix G) and consider:

- What information do you want to collect? For example, presenting signs and symptoms, urine cultures taken, antibiotics prescribed?

- How will you collect the information?

- Who will be responsible for completing the documentation?

- What supports will they need?

- Who will be responsible for tallying the monthly results?

- Who will share this information back with the UTI Implementation Team for further discussion?

Increase Knowledge and Develop Skills

LTCHs need to educate front-line staff, as well as families and residents about the practice changes. LTCHs also need to support staff in the development of any new skills that might be required to adopt the practice changes. This can be done using coaching strategies (see for more details).

Strategy E: Deliver Education to Staff

Education can bring together staff to learn and discuss issues associated with the overuse of antibiotics, symptoms that indicate a UTI and new organizational processes related to UTI assessment documentation.

> **Tip: There are different ways to deliver education in your LTCH, such as classroom education, bullet rounds, online learning platforms and orientation for new staff. Some LTCHs have also provided tailored education to Personal Support Workers (PSWs) to teach them about the Program and their roles in supporting the practice changes.**

The UTI Program includes a variety of tools to assist with staff education. One is a PowerPoint presentation that provides background information on the practice changes. Time allotted for classroom education should be 30 to 45 minutes, depending on the amount of dialogue and the sharing of additional resources.

Some additional resources that can be distributed during education are:

- Assessment Algorithm for Urinary Tract Infection (UTI) in Medically Stable Non-Catheterized Residents

- Fact Sheet: How to interpret a urine culture report and methods for specimen collection

- Fact Sheet: Asymptomatic Bacteriura

- Fact Sheet: Causes of delirium and mental status changes

- Fact Sheet: When to collect a urine specimen for culture and susceptibility for non-catheterized resident

- Fact Sheet: How to collect a mid-stream urine specimen

- Literature Summary: Evidence to Support Discontinuing the Use of Dipsticks to Diagnose a Urinary Tract Infection (UTI) in Residents of Long-Term Care Homes

- Frequently Asked Questions: Urinary Tract Infections for Residents and Families

- Resident and Family Communication/Update

See Action Plan (Appendix G) and consider:

- Who will lead the education session(s)?

- Who will develop the schedule for the education session(s)?

- When will the sessions be delivered?

- What resources are needed to deliver education?

- Are there other educational channels we will use (e.g., orientation sessions, online learning platforms, huddles, bullet rounds)? If so, who will coordinate this?

Strategy F: Provide Information and Education to Residents and Families

It is important to provide educational resources to residents and their families as a part of the UTI Program. Residents and families may have concerns about not providing antibiotics to residents with nonspecific symptoms or asymptomatic bacteriuria. This strategy involves identifying opportunities to ensure that residents and families are informed about antibiotic-related harms, asymptomatic bacteriuria and the process for identifying and managing UTIs.

Information or education can be provided in print, verbally or in group or individual educational sessions, depending on the needs of the LTCH. Existing classroom-style educational sessions (e.g., family council meetings) could be used to inform family members about new approaches/practices and the risks of antibiotics.

The Frequently Asked Questions for Residents and Families provides useful information about common questions that residents and families might ask. It also provides some standard messaging that staff can provide to families and residents when discussing the UTI Program.

Tip: LTCHs had positive experiences when sharing this Program at family council meetings. One LTCH shared that the family council meeting dedicated to the UTI Program was one of their most well-attended meetings to date. Staff also received calls from family members who shared that they were happy to hear that the LTCH was focusing on such an important issue.

An important barrier to best practice adherence is pressure on staff from families to administer antibiotics for a presumed UTI. This tool (Resident and Family Communication/Update) can be used to support conversations with families, assuring them that their family member is being looked after. Staff may complete this tool and provide it to families who have questions.

Another communication vehicle for families can be a UTI communication newsletter (Communication for Family Newsletter). This is a template for an article that could be placed in a newsletter for residents and families. This communication newsletter mirrors the messaging used in other tools that have been specifically created for and residents and families.

See Action Plan (Appendix G) and consider:

- Who will coordinate the communication strategy with residents and families?

- How will staff be oriented to these resources?

Coaching: The ability to provide one-on-one education on the unit, in addition to supervision, assessment, feedback and emotional support.[7] This form of support can help address beliefs about consequences and emotional barriers. Coaches also support the expansion of and reinforcement of knowledge and skills related to the assessment and management of UTIs that may have been taught through training. Coaching is a key strategy to help address staff concerns about potential harms if a urine is not collected.

Strategy G: Use Coaching to Reinforce Practices and Support Staff

Once you deliver education, staff will continue to need support to align their practices with the Program practice changes. This is where coaching can be used to support practice change. Having designated "go-to" coaches is helpful for LTCH staff. These coaches can help staff become familiar with the Program processes – recognizing symptoms, who to consult, who approves a urine collection, where to document symptoms and actions, etc. They also should be available to work through more challenging cases. Those who provide coaching should be well acquainted with the UTI Program. They can provide the additional teaching required to support the practice changes. They can also provide support to staff to help address any concerns that arrise about potential consequences of not collecting a urine culture or prescribing an antibiotics. The Coaching for Beliefs and Consequences tool was created to assist in the dialogue on this topic.

See the Action Plan (Appendix G) and consider:

- Who can deliver coaching?

- How will they be orientated to the program?

- What resources will we provide them with?

- How will we let staff know who the coaches are and how they can help?

Monitor Practice and Give Feedback to Staff

The next step of implementation is for LTCHs to continue to monitor practice and support to staff as they fully incorporate the practice changes into their day-to-day activities. These strategies are essential for ensuring the sustainability of the practice changes.

Strategy H: Keep Track of How Your Home is Doing and Provide Feedback to Staff

This strategy complements Strategy D (review how resident symptoms are documented and communicated). Continue to track resident symptoms, urine culturing and antibiotic prescriptions as the Program is implemented. (See page 18 for options on how to do this.)

Once your LTCH has been monitoring for practice changes, it is important to share these results with staff to demonstrate how well they are adhering to the practice changes. LTCHs can choose the way they prefer to share this type of feedback with their staff. Some ways that this has been accomplished include:

- Via email

- Sharing results at staff meetings

- Huddles with staff

- 1:1 feedback

- Creating one-page reports or posters or memos

- Share at meetings where this topic would be of interest, such as Professional Advisory Committees (PAC), IPAC Committee or during Quality Improvement Planning (QIP).

The purpose of this step is to celebrate the successes and review on-going opportunities for improvement.

See the Action Plan (Appendix G) and consider:

- Who will be responsible for providing the information back to staff?

- How will they share this information back and in what format?

- How often will they share this information back?

Strategy I: Continue to Remind Staff of Key Practice Changes

Reminders (e.g., posters, computer pop-ups, cards, prompts in charts) are useful when staff and LTCHs are adopting new ways of work. Reminders can be used to reinforce practice change.

The implementation planning process can also involve creating a plan for delivering reminders. Over time, staff may need reminders about different aspects of the UTI Program, such as:

- where they can access resources to support practice change (e.g., UTI Algorithm)

- the indicated symptoms of a UTI

- that dipsticks are no longer to be used to diagnose a UTI

- the best practices for obtaining a urine culture

- ensure that antibiotics that have been prescribed are reassessed once urine culture and susceptibility results are received and that adjustment are made where necessary

The need for which practices need reminders and how to provide reminders can be informed by ongoing surveillance.

Some examples from LTCHs on how they implemented this strategy include:

- Posting the algorithm, instructions on when and how to collect a urine specimen, with the supplies for urine collection (i.e., on the supply cabinet)

- Restricting access to supplies for urine collection

- Directing staff to the Program champions to discuss best practices for when and how to collect a urine specimen

- Sending out information, including the new practice changes, policy updates and/or algorithm, with staff pay stubs

See the Action Plan (Appendix G) and consider:

- How will your home deliver reminders to staff?

- Who will be responsible for this strategy?

After LTCHs have reviewed the implementation strategies and completed the action plan, they can move on to the Implement phase.

Implement

Ensure Roll-Out of Strategies and Action Plans

This phase is about implementing the practice changes. This will require frequent dialogue between staff and the implementation team. The implementation team must meet regularly when strategies are being delivered. They may have to meet weekly in the beginning and then less often or on an as-needed basis as the program becomes more entrenched.

Responsibilities of the implementation team at this stage are as follows:

- ☐ Ensuring that the plan for each strategy has been addressed.

- ☐ Obtaining front-line staff feedback on the strategies and tools.

- ☐ Dealing with issues as they arise.

- ☐ Reviewing the process surveillance and providing feedback to staff.

- ☐ Engaging in continuous quality improvement.

As LTCHs implement the UTI Program, they will likely encounter challenges. Strategies might have to be re-visited or new ones added. Keeping the practice changes useful and relevant may require routine updates. Suggestions for revisions or updates can be driven by the front-line staff who are using the tools. It may be helpful to document any revisions or modifications and share/verify them with front-line staff to ensure that the changes are useful.

> **Tip: LTCH Implementation teams should consider meeting on a quarterly basis to discuss the Program and any additional improvement changes that need to be implemented. This may be the original team or a smaller subset of the team, depending on your LTCH.**

Create a Sustainability Plan

Often, core components of a new program are implemented and not followed up and practice changes are not sustained. Even if the practice changes are adopted early, without continued support, staff may go back to previous habits or modify the practices change so they do not reach the intended outcomes. To avoid this, the implementation team needs to plan for how they will maintain continued support for the UTI Program.

Considerations for building a sustainability plan include:

- ☐ Determine frequency of ongoing implementation team meetings.

- ☐ Continuing to meet to review the surveillance data. In evaluating this data, LTCHs should determine whether they are getting the desired results from the practice changes. For example, if annual urine collection is still being done, the implementation team may wish to revisit the strategies (e.g., education session, reminders, review of policy and procedures) to ensure that they support the practice changes.

- ☐ Ensuring that the orientation of new staff allows for comprehensive education on the practice changes (e.g., using the PowerPoint, introduction to tools and strategies); defining who will provide this education and follow up on any questions that the new staff might have.

- ☐ Ensuring that part of the orientation for family and residents is explaining the UTI program and having supports in place to address any questions or concerns.

Creating and developing a sustainability plan will ensure that the phases of planning and implementation of the strategies receive continued support to help the LTCH achieve the recommended practice changes that are part of the UTI Program.

Summary

This implementation guide was developed to support LTCHs to implement the UTI Program. It provides a phased approach to implementing the practice changes in LTCHs, which are the core components of the Program. Good planning is key to success in implementing and sustaining the UTI program. Taking time to consider how to implement the UTI Program will save time in the long run. When you have worked through this guide, you will have assessed for the need and fit of this Program in your LTCH; identified barriers and resources required before implementation; created an action plan for implementation; and considered additional strategies for sustaining the Program in your LTCH.

Appendix A: Summary of Practice Recommendations

These five practices all contribute to defining best practice to minimize unnecessary antibiotic prescribing for ASB in LTCH residents.

These recommended practice changes were informed by a literature review and a provincial needs assessment conducted by PHO, expert consultation and pilot testing.

Practice changes	Description of the practice recommendation and associated evidence for practice recommendation	Associated UTI Program Resources
Obtain urine cultures only when residents have indicated clinical signs and symptoms of a UTI.	Obtain urine cultures only when residents have been determined to have accepted clinical signs and symptoms of a UTI. Accepted clinical signs and symptoms of a UTI were based on the Loeb 2005 criteria.[10] Accepted clinical signs and symptoms of a UTI are defined as: new difficult or painful urination (acute dysuria) OR Two or more of fever, new flank or suprapubic pain, new or increased urinary frequency/urgency, gross hematuria.[10,11,12]	Assessment Algorithm for UTIs in Medically Stable Non-catheterized Residents When to Collect a Urine Specimen for Culture Susceptibility for Non-catheterized Residents
Obtain and store urine cultures properly.	Obtain urine cultures using proper technique to avoid contamination. This includes the use of a clean catch or mid-stream collection or in/out catheterization and adherence to aseptic technique. Store urine cultures under refrigeration if transport is not immediate.	How to Collect a Mid-Stream Urine Specimen
Prescribe antibiotics only when specified criteria have been met, and reassess once urine culture and	Prescribe antibiotics only when clinical criteria for UTI are present (as defined above). Review and reassess when urine	Assessment Algorithm for UTIs in Medically Stable Non-catheterized Residents

Practice changes	Description of the practice recommendation and associated evidence for practice recommendation	Associated UTI Program Resources
susceptibility results have been received.	culture and susceptibility results are received. A bacterial count greater than or equal to 10^8 CFU/L with typical signs or symptoms of a UTI is considered diagnostic.[13] If antibiotics are started empirically, the physician or nurse practitioner should reassess the need for, choice and duration of antibiotic therapy based on the culture and susceptibility report.	
Do not use dipsticks to diagnose a UTI.	Discontinue use of dipsticks to diagnose a UTI. Clinical symptoms of a UTI (defined above) and a positive culture are required for a UTI diagnosis.[13,14]	Evidence to Support Discontinuing the Use of Dipsticks to Diagnose UTI in Residents of Long-Term Care Homes
Discontinue routine annual/admission screening if residents do not have indicated clinical signs and symptoms of a UTI.	Discontinue routine urine screening (e.g., at admission and annually) unless residents have clinical signs and symptoms of a urinary tract infection (UTI).[13,15]	Assessment Algorithm for UTIs in Medically Stable Non-catheterized Residents

Appendix B: Practice Change Questionnaire

A step in assessing for need and fit is to look at the UTI Program practice changes. The following questionnaire describes the activities recommended as practice changes. LTCHs use this questionnaire to review which of the practices they are already doing, what may need to be discontinued and which ones they will need to implement.

This questionnaire contains five questions: the first three address activities that should be implemented; the last two address activities that should be stopped.

Activities recommended in the practice change	Your answer
In our LTCH, we obtain urine cultures only when residents have the indicated clinical signs and symptoms of a UTI.	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH
In our LTCH, we obtain and store urine cultures properly.	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH
In our LTCH, we ensure that antibiotics are prescribed only when specified criteria have been met and that residents are reassessed once urine culture and susceptibility results have been received.	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH

These activities are *not* recommended. LTCHs should discuss this list and determine whether they are doing either of them.

Activities *not* recommended in the practice change	Your answer
In our LTCH, we use dipsticks to diagnose a UTI.	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH
In our LTCH, we obtain routine annual urine screening and screening at admission if residents do not have indicated clinical signs and symptoms of a UTI.	☐ Yes, we do this in our LTCH ☐ No, we do not do this in our LTCH

Appendix C: Considerations for Readiness

The following considerations will help LTCHs reflect on their current practice and assist them in determining their readiness to implement the UTI Program.

- ☐ It is important to time the planning and roll-out of the program so it does not conflict with other significant changes underway (e.g., significant staff changes, another program being rolled out).

- ☐ Consider who else should be consulted for support in moving forward with this program. Having senior management and medical directors on-board can help to move the initiative forward.

- ☐ Ensure there is a designated lead for the initiative and to confirm that time can be committed to this project.

- ☐ Identify all staff that are directly involved in clincial decision making and orient them to this opportunity (i.e., Registered Nurses, Nurse Practitioners and Physicians). See "getting buy-in" on page 17 for more information about this step.

For corporate LTCHs:

- ☐ LTCHs belonging to a corporation should consult with the corporate representative about their plans for implementing this program. This individual may be consulted or could be included as a member of the implementation team.

Not all LTCHs will find that they are ready to implement the Program. Some LTCHs will have identified UTIs as a concern and have the support to move forward. Others will find that there are too many conflicting priorities to start implementing this program right away. LTCHs that are not ready can plan to revisit the program in the future to determine whether their readiness has changed. Some LTCHs will find that they need to do some additional work before moving forward (e.g., further discussion with senior management).

When a LTCH has determined that they are ready to implement the UTI Program, they can formalize their implementation team and continue on to the Plan and Implement Phases.

Appendix D: Get the Implementation Team Together

Another essential part of the UTI Program involves the creation of an implementation team. This team is responsible for moving the UTI Program forward and developing a plan to ensure the program is sustained.

When choosing and setting up the implementation team, consider the following:

☐ Look for *action people*—individuals who enthusiastically participate in challenges and opportunities.

☐ Try to ensure representation from as many key groups as possible (e.g., registered nurses, front-line staff, director of care, infection prevention and control leads, personal support workers, resident assessment instrument coordinators, lead physicians, nurse practitioners, pharmacists, corporate infection control consultants); however, it is not necessary to include all groups on the team, since getting buy-in from key groups/roles is a strategy addressed in the Plan phase.

☐ Implementation team membership and size will vary depending on facility size and resources.

☐ Outline the roles and responsibilities of the implementation team (e.g., the team will review this Implementation Guide, the team will complete an initial assessment phase, the team will outline the plan for how strategies will support staff, the team will continue to meet to assess how things are going).

☐ Outline the roles, process, and responsibilities for implementation team members. Consider who can act as champions, who could coach front-line staff. This will be explored more during the Plan phase.

After LTCHs have addressed their readiness, decided to move forward with the UTI Program and created an implementation team, they can move on to the Plan phase.

Appendix E: Examining Barriers to Practice Change

This tool lists some common barriers to practice change that have been identified in LTCHs and can be used for discussion in the Implementation Team.

Barriers to the practice changes	Is this a barrier in our LTCH?

Staff are not knowledgeable about the following:
 	
• Asymptomatic bacteriuria
    • What it is
    • How often it occurs
    • What it means to have it
• Recognition that antibiotics are being overused
• Consequences of unnecessary use/overuse of antibiotics
• True signs and symptoms of a UTI
• Uncertainty around how to diagnose residents with communication difficulties and nonspecific symptoms
• When to collect a urine specimen
• Urine specimens left at room temperature, which can result in false positives
	☐ Yes
	
	☐ No

Families are not knowledgeable about the following:
 	
• Asymptomatic bacteriuria
    • What it is
    • How often it occurs
    • What it means to have it
• Recognition that antibiotics are being overused
• Consequences of unnecessary use/overuse of antibiotics
• True signs and symptoms of a UTI
	☐ Yes
	
	☐ No

Staff lack skill on how to collect urine specimens for culture and interpret lab results, including the following: • Obtaining a mid-stream sample • Using an in/out catheter • Interpreting lab results • Knowing what contributes to a contaminated result and what the significance of this is	☐ Yes ☐ No

Barriers to the practice changes	Is this a barrier in our LTCH?
Staff lack the skill to support a UTI surveillance system, including data collection, management and analysis: • Do not have tools for UTI surveillance • Do not know how to develop tools for UTI surveillance • Do not know how to do surveillance (e.g., daily rounds; questions to ask; process vs. outcome surveillance) • Do not know how to compile and analyze data	☐ Yes ☐ No
Due to staff turnover, new staff are not educated on the UTI Program.	☐ Yes ☐ No
There is poor communication among the care team (verbal and/or documented) as to why a culture is sent for testing.	☐ Yes ☐ No
There is poor communication (verbal and/or documented) between staff and families about why a culture is sent for testing.	☐ Yes ☐ No
Our organizational culture has supported nursing staff in sending urine cultures for testing even when a resident does not have the clinical signs and symptoms of a UTI.	☐ Yes ☐ No
Our organization does not have policies and procedures with sufficient detail on UTI assessment and management practices or policies and procedures that are aligned with current best practices.	☐ Yes ☐ No
Urine specimens are left at room temperature, which can result in false positives.	☐ Yes ☐ No
There is a lack of support from the director/administrator/leadership/ corporation for making a change.	☐ Yes ☐ No
"UTIs" are reported to physicians (e.g., "resident has a bladder infection") without providing any details on signs, symptoms or culture and susceptibility report.	☐ Yes ☐ No
There is a lack of clarity about the roles and responsibilities of the care team; there seems to be a reliance on reports of a resident's symptoms from other parties (e.g., family and personal support workers).	☐ Yes ☐ No
We do not know to what extent we are following recommended practices and are not equipped to evaluate our progress because we are not collecting data routinely.	☐ Yes ☐ No

Barriers to the practice changes	Is this a barrier in our LTCH?
Our staff does not have access to adequate supports to provide education to residents/families.	☐ Yes ☐ No
We lack local diagnostic/treatment tools/algorithms; they are out of date or not evidence-based.	☐ Yes ☐ No
Our staff/nurse practitioners/physicians/families are concerned about the consequences of not providing antibiotics to residents with nonspecific symptoms or asymptomatic bacteriuria; nursing/nurse practitioners/physicians/family are afraid an infection will develop or be missed, resulting in a poor outcome.	☐ Yes ☐ No
Nurse practitioners/physicians agree with recommendations, but still feel pressure from nursing or the family to prescribe an antibiotic; the pressure stems from fears that an infection may develop or be missed, resulting in a poor outcome for the resident.	☐ Yes ☐ No
Front-line staff or physicians will not accept the new recommendations.	☐ Yes ☐ No
Some residents are labelled as having "recurrent UTIs": every time they have a change in behaviour or their urine becomes smelly, it is assumed they have a UTI based on this label; this label can be driven by staff or family.	☐ Yes ☐ No
Urine is sometimes sent for culture without specific symptoms and then comes back positive; this reinforces poor practice.	☐ Yes ☐ No

Appendix F: Implementation Steps and Core Strategies

The UTI Program includes nine implementation strategies organized under three categories that support five practice changes.

UTI Program implementation strategies
Increase buy-in and support
☐ **Strategy A: Involve local influencers**
☐ **Strategy B: Generate buy-in**
☐ **Strategy C: Align policy and procedures to reflect practice changes**
☐ **Strategy D: Review how resident symptoms are documented and communicated**
Increase knowledge and develop skills
☐ Strategy E: Deliver education to staff
☐ Strategy F: Provide information and education to residents and families
☐ Strategy G: Use coaching to reinforce practices and support staff
Monitor practice and give feedback to staff
☐ Strategy H: Keep track of how your home is doing and provide feedback to staff
☐ Strategy I: Continue to remind staff of key practice changes

Appendix G: Implementation Action Plan

This tool can be used to review program strategies, document decisions and assign tasks and timelines in preparation for each implementation strategy.

Increase Buy-in and Support

Strategy A: Involve Local Influencers

Question	Your Answer
Who are our local opinion leaders and influencers?	
How will they be involved?	
If they are not yet involved, who is responsible for including them?	
How will they reach out to them and when will they reach out?	

Strategy B: Generate Buy-in

Question	Your Answer
What existing meetings/events can we use to address the problem of antibiotic-related harms?	
Who should be involved?	
Who will lead this initiative?	
Who will identify the groups that need to be involved in creating buy-in?	
How will we address resistance to the UTI program from these groups?	

Strategy C: Align Policy and Procedures to Reflect Practice Changes

Question	Your Answer
Who will lead the review of policies and procedures?	
With whom do we need to consult?	
When do we hope this process will be complete?	

Question	Your Answer
How will we notify staff about these changes?	

Strategy D: Review How Resident Symptoms are Documented and Communicated

Question	Your Answer
What information do you want to collect? (e.g., presenting signs and symptoms, urine cultures taken, antibiotics prescribed)	
How will you collect the information?	
Who will be responsible for completing the documentation?	
What supports will they need?	
Who will be responsible for tallying the monthly results?	
Who will share this information back with the UTI Implementation Team for further discussion?	

Increase Knowledge and Develop Skills

Strategy E: Action Plan: Deliver Education to Staff

Question	Your Answer
Who will lead the education session(s)?	
Who will develop the schedule for the education session(s)?	
When will the sessions be delivered?	
What resources are needed to deliver education?	
Are there other educational channels we will use (e.g., orientation sessions, online learning platforms, huddles, bullet rounds)? If so, who will coordinate this?	

Strategy F: Provide Information and Education to Residents and Families

Question	Your Answer
Who will coordinate the communication strategy with residents and families?	
How will staff be oriented on these resources?	

Strategy G: Use Coaching to Reinforce Practices and Support Staff

Question	Your Answer
Who can deliver coaching?	
How will they be oriented on the program?	
What resources will we provide them with?	
How will we let staff know who the coaches are and how they can help?	

Monitor Practice and Give Feedback to Staff

Strategy H: Keep Track of How Your Home is Doing and Provide Feedback to Staff

Question	Your Answer
Who will be responsible for providing informatiion back to staff?	
How will they share this information back and in what format?	
How often will they share this information back?	

Strategy I: Continue to Remind Staff of Key Practice Changes

Question	Your Answer
How will your home deliver reminders to staff?	
Who will be responsible for this strategy?	

Appendix H: UTI Program Checklist

This tool can help implementation teams monitor their progress and ensure that each step in the implementation guide has been addressed.

Activities	Yes	No
Review the implementation guide		

Assess:

Activities	Yes	No
Complete the practice change questionnaire		
Complete the considerations for readiness		
Decide to move ahead with the UTI Program		
Get the implementation team together		

Plan:

Activities	Yes	No
Complete the barriers to practice change questionnaire		
Examine implementation phases, strategies and complete an action plan as applicable for each strategy		

Increase Buy-in and Support

Activities	Yes	No
Strategy A: Involve local influencers • Create action plan		
Strategy B: Generate buy-in • Create action plan		
Strategy C: Align policy and procedures to reflect practice changes • Create action plan		
Strategy D: Review how resident symptoms are documented and communicated • Create action plan		

Increase Knowledge and Develop Skills

Activities	Yes	No
Strategy E: Deliver education to staff • Create action plan		
Strategy F: Provide information and education to residents and families • Create action plan		
Strategy G: Use coaching to reinforce practices and support staff • Create action plan		

Monitor Practice and Give Feedback to Staff

Activities	Yes	No
Strategy H: Keep track of how your home is doing and provide feedback to staff • Create action plan		
Strategy I: Continue to remind staff of key practice changes • Create action plan		

Implement:

Activities	Yes	No
Ensure roll-out of implementation strategies and action		
Obtain front-line staff feedback on strategies and tools		
Engage in continuous quality improvement		
Create a sustainability plan: • determine frequency of implementation team meetings • ensure frequent review of implementation of strategies by implementation team • on-going education for new staff, residents and family		
Continue to monitor success in sustaining practice changes through review of process surveillance documentation and ongoing discussions about implemented strategies that support recommended practice changes		

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