UTI Learning Collaborative Playbook

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1. Background

a. Why focus on urinary tract infections (UTIs)?

Urinary tract infections (UTIs) are caused by bacteria and can range from mild to fatal. Since state fiscal year 2021 (SFY2021) quarter 4 (Q4), UTI serious incident reports reported by DBHDS licensed providers have continued to increase throughout the Commonwealth and, as of FY2023 Q2, UTI is the leading serious illness reported. If not detected early through physical or unusual behavioral symptoms for the person, UTIs can lead to emergency department (ED) visits, hospitalizations and possible death from sepsis or other physical maladies.

According to a review of serious incident data presented by the Risk Management Review Committee (RMRC) for SFY2021 Q1 and Q2, Region 4 UTIs accounted for the third highest number of UTIs reported by DBHDS licensed providers for the DD population*. Additionally, SFY2022 Q2, RMRC presented a special report that showed Group Home and Sponsored Residential settings had the largest proportion of UTIs in comparison to other living situations in Region 4 and statewide. The RMRC UTI report was produced in February of 2021, and was based on data during the period October 2019-September 2020.

*Region 4 charted the third highest number of UTIs:

Fiscal Year (FY) 21	**FY 22**	**FY 23**
Q1 - 15	Q1 - 25	Q1 - 28
Q2 - 23	Q2 - 26	Q2 - 29
Q3 - 20	Q3 - 34	Q3 - 31
Q4 - 22	Q4 - 34	

b. Quality Improvement Initiative, Driver Diagram and Root Cause Analysis

The Region 4 Regional Quality Committee (RQC4) quality improvement initiative (QII) for 2023-2024 focuses on determining the root causes for the continued increase of UTI among adults in the DD waiver population and to identify current knowledge, practices, and opportunities to support the individuals and staff through education.

The aim of the RQC4 QII is to reduce the rate of reported UTIs statewide in the developmental disabilities (DD) waiver population from 41.27 per 1,000 to 39.2 per 1,000 or fewer by June 2024. This is a 5% decrease. The baseline consists of the rate of UTIs for SFY23, Q1=40.15 per 1,000and in FY23, Q2=41.27 per 1,000waiver recipients. The measure is the rate of UTI serious incidents per 1,000individuals with developmental disabilities who receive DD waiver every quarter and obtain the data from CHRIS (the Comprehensive Human Rights Information System) matched to WaMS (the Waiver Management System). (Numerator: serious incident reports (SIRs) in which UTI is checked for illness; Denominator: Waiver population from WaMS, estimated using midpoint of fiscal quarter multiplied times 1,000).

A team comprised of RQC4 QII members and staff from the DBHDS Office of Integrated Health (OIH) began by developing a Driver Diagram to help describe factors that could result in improving the rate of UTIs (see Appendix A). Subsequently, the RQC4 work group conducted a root cause analysis (RCA) by doing a survey of direct support professionals (DSPs) and supervisors, primarily in Region 4. The purpose was to help understand the strengths and barriers related to the elements in the Driver Diagram. A summary of the survey results will be provided separately.

The results of the survey were utilized to discuss options to do something new and different to try to reduce the number of UTIs. The team decided on a learning collaborative approach that focused on four strategies: hand hygiene, providing proper perineal hygiene, getting timely care for UTIs, and doing a clean urine catch.

2. Overview of the Learning Collaborative

a. What is a learning collaborative?

A learning collaborative is an educational experience in which multiple organizations participate to improve performance towards a common goal. It can last 6 months or longer. Providers participate in regular calls or meetings with the faculty, to learn about changes they can make to improve performance. Between meetings, the providers test these changes in their organization to see if they result in improvement. Throughout the collaborative, organizations share their experiences with each other and collect and share data. At the end, the results are examined to see if improvement was achieved, and organizations reflect on their experiences.

b. Setting the Aim

The aim of the UTI learning collaborative is to reduce the rate of UTIs among learning collaborative participants from 21% (16/75) at baseline to 13%, by September 2024. This is a collaborative goal that the group will be working together to try to achieve.

c. Defining the Measures

Measures of the Learning Collaborative:

- We will measure the number and percent of individuals experiencing any UTI as our primary measure.
- We will also measure the number and percent of individuals experiencing multiple UTIs, Level I, Level II and multiple Level II UTIs per individuals served, as well as the total number of Level I UTIs, Level II UTIs, and Level II serious incidents from providers.
    a. We will monitor these for the purpose of understanding if the Learning Collaborative impacted these additional UTI related outcomes.
- The baseline period is January 1 – December 31, 2023.
- The learning collaborative period is March 1 – September 30, 2024.
- We will collect baseline data by asking participants to report these data for the baseline period, and then monthly within 5 days of the following month, each month, during the learning collaborative data period.
- Participants will submit data using a MS Form survey tool.
- See Appendix B – Data Collection Forms

d. Quality Improvement Framework

The learning collaborative will feature the Model for Improvement as the quality improvement framework. This framework features developing an Aim, Measure and Change, and conducting Plan-Do-Study-Act (PDSA) Cycles. At the beginning and throughout the learning collaborative, participants will learn about this model and

how to do PDSA cycles. They can also reference DBHDS materials available here: https://dbhds.virginia.gov/clinical-and-quality-management/

- QI Resources revised 2024
- QI Job Aid with PDSA worksheet_2024
- FOCUS Worksheet
- Office of Clinical Quality Management Quality Improvement Training Series

e. Change package.

The change package consists of tools and resources in four areas, described in the table below. Throughout the learning collaborative, each topic area will be reviewed along with a practical resources and instructional information on how to use the tool in the provider setting, as well as how to test it using quality improvement strategies such as plan-do-study-act.

Change topic area	Description	Tool / Resource
1. Hand hygiene/ Handwashing	Proper handwashing/hand hygiene, for staff and individuals receiving services, is critical to preventing UTIs. It prevents the spread of germs from one person to another.	Demonstration of proper handwashing/ hand hygiene. Instructions on the frequency and timing of handwashing. Ideas for fun ways to encourage proper handwashing in your organization.
2. Perineal care (peri-care) for males and females	The perineum is the area between the penis or vagina, and the rectum. UTIs are caused by bacteria that enter the urethra, or the tube that allows urine to leave the body when you urinate. Proper perineal care is important to prevent bacteria from entering the urethra.	A video that demonstrates proper perinatal care for males and females with developmental disabilities.
3. Timely medical care for UTIs	It is important to get medical treatment for UTIs as soon as possible. It helps to have a plan where an individual can get medical care.	A 'Local Medical Care Card' that lists the primary, urgent, and emergency medical care locations, and contact information, that an individual can go to in the event of an urgent health matter. The topic will also review signs and symptoms of a UTI, and the My Care Passport resource from the Office of Integrated Health.
4. Obtaining urine for a urinalysis	It is important to get a clean catch of urine to test for UTIs using urinalysis.	A resource that describes how to get a clean urine sample for individuals who have developmental disabilities.

f. Assumptions

These changes do not replace any current practices. They are intended to supplement current services and practices.

3. Participants

a. Eligibility, Identification and Recruitment

Providers will be eligible and invited to participate if they reported any UTI Level II serious incident during calendar year 2023. DBHDS OCQI will use the DBHDS CHRIS Data Warehouse 80a report to identify providers that meet eligibility criteria. These providers will be contacted via email, given introductory information about the learning collaborative, and invited to participate.

b. Participant teams
    a. Ideal: At least two people per organization
        i. The following roles: Person(s) responsible for risk management (RM) and quality improvement (QI) functions; DSP Supervisor; DSP (if possible)
    b. Alternately – One person can participate, with a commitment to bring the information back to their organization using a train-the-trainer model.

c. Self-Assessment

Participants will be asked to complete a self-assessment to help identify which of the changes in the change menu may be most applicable to their organization. However, organizations will be encouraged to try all of the menu items. See Appendix C for the Self-assessment.

d. Expectations
    a. It's preferable that at least two people from each organization participate.
    b. Please attend each call to the best of your ability.
    c. Please actively participate in discussions by asking questions and sharing your opinions and what you have learned.
    d. Please take information you learn back to your organization and share it with your team members, especially DSPs who work directly with individuals.
    e. Please collect and submit the data elements each month in a timely fashion.
    f. Please utilize the quality improvement tools, for example the plan-do-study-act cycle worksheet, to test the changes in your organization.

4. Faculty

a. Positions and expertise.

Position	Role description	Person(s) name(s)
Learning Collaborative (LC) Coordinator(s)	• Coordinate the planning and execution of the learning collaborative. • Recruit and orient participants. • Create Teams webinar event each month. • Plan and facilitate non-SME portions of monthly calls. • Assist participants with sharing their data & stories.	• Pebbles Brown, Quality Improvement Specialist • Mary Beth Cox, Quality Improvement Coordinator

Quality Improvement Coordinator	• Provide training content related to quality improvement, including aim, measure, change and PDSA cycles. • Provide consultation to faculty and participants on using PDSA cycles. • Assist with discussions related to evaluating the changes, identifying strengths and barriers, and identifying lessons learned.	Mary Beth Cox, QI Coordinator
Data Specialist	• Assist with developing aim and measure. • Consult on data collection activities. • Collect data and summarize results for participating sites, individually and collectively.	Mary Beth Cox, QI Coordinator
Faculty	• Participate in planning learning collaborative calls and experiences. • Share expertise on identifying, preventing, and treating UTIs. • Develop evidence-based tools and resources for the change package. • Attend Learning Collaborative meetings to explain how to use each tool/resource in the change package, in a train-the-trainer approach.	Office of Integrated Health team: • Marylou Bryan, RN, Nurse Care Coordinator • Tammie Williams, RN, Nurse Care Coordinator • Brian Phelps, Behavior Analyst

5. Workshop outline

a. Call schedule

The call frequency will be at least monthly, if not more often as needed. The call schedule will be determined and announced at the beginning of the collaborative.

Call	Topic	Duration
Info session **Thursday Feb. 29, 2024, 9:30 AM – 12:30 PM**	Participant recruitment and information call. • Explain the project; Explain expectations; answer questions.	30 minutes
Pre-work Due: **Application & Baseline Data Due: Friday March 8, 2024**	Ask participants to submit information via an electronic Microsoft form. • Name of organization • Team members and roles • Who is the QI/QA staff member? • Reason for interest in participating. • Baseline data on UTIs for CY2023 • Agreement to expectations.	60 minutes
Kick off meeting & Topic 1: Handwashing and Hand Hygiene	1. Welcome to the Learning Collaborative a. Background i. Why focus on UTIs? ii. Root Cause Analysis iii. Quality Improvement Initiative b. Purpose of the Learning Collaborative i. Aim / Goal	3 hours

Thursday March 28, 2024, 9:30 AM – 12:30 PM	ii. Measures / Data iii. Change package - Menu iv. Assumptions c. Participants i. Team introductions. d. Faculty Introductions and Role e. Workshop outline i. Call schedule ii. Content summary f. Completion stage g. Intro to Quality Improvement Concepts and Tools h. How to collect and submit baseline data i. Q&A 2. Change 1: **Handwashing / Hand Hygiene** a. How to do a PDSA on this change. b. Planning and sharing time i. Are you going to test this change? ii. How are you going to bring this back to your team members, including DSPs? iii. Sketch out your 'Plan' now. 3. Adjourn	
Meeting 2 / Virtual **Thursday April 25, 2024, 10:00 am – 11:30 AM**	1. Brief review of orientation call highlights 2. Introduce of 2nd Change: **Proper Perineal Care** a. Why it was selected. b. What is the change? c. How to use the change and teach it to others. 3. How to do a PDSA on this change. 4. Planning and sharing time a. Are you going to test this change? b. How are you going to bring this back to your team members, including DSPs? c. Sketch out your 'Plan' now. 5. Review of data collection and reporting	90 minutes
Meeting 3 / Virtual **Thursday May 30, 2024, 10:00 am – 11:30 AM**	1. Brief review of previous call highlights. 1. Who tested the 1st Change? What happened? What worked well? What were some barriers? What did you learn? 2. Introduce 3rd Change: **Timely medical care** 1. Why it was selected. 2. What is the change? 3. How to use the change and teach it to others. 3. How to do a PDSA on this change. 4. Planning and sharing time. 1. Share a PDSA that you have done. 2. Are you going to test this change? 3. How are you going to bring this back to your team members, including DSPs?	90 minutes

	4. Sketch out your 'Plan' now. 5. Review of data collection and reporting.	
Meeting 4 / Virtual **Thursday June 27, 2024, 10:00 am – 11:30 AM**	4th change FINAL: **Clean urine catch**	90 minutes
Call 5 **Thursday July 25, 2024, 10:00 am – 11:30 AM**	1. Conclusion call. *All changes have been introduced.* 2. Team presentations. a. Share a PDSA that you have done. b. Review of data collection and reporting. Reflections on lessons learned and how to build on the work that has happened.	90 minutes

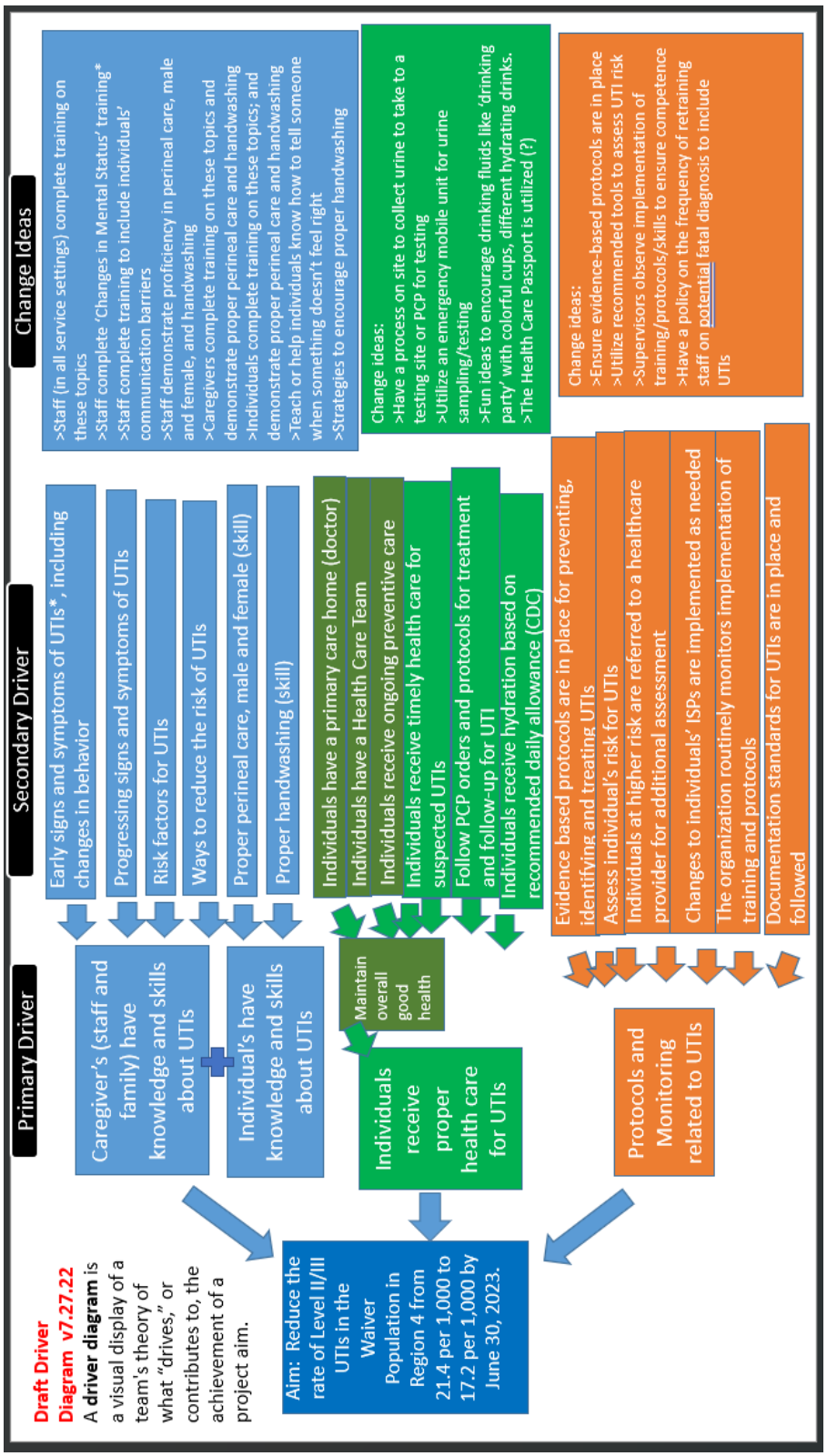
Overview of call and data submission schedule:

	Call: Last Thursday of the Month	Data: First Friday of Following Month
1. Informational call – 30 minutes	Thursday Feb. 29, 2024, 9:30 AM – 12:30 PM	Application & Baseline Data Due: Friday March 8, 2024
2. Meeting one – In person	Thursday March 28, 2024, 9:30 AM – 12:30 PM	Friday April 5 (still baseline – practice run)
3. Meeting two: Virtual/Call	Thursday April 25, 2024, 10:00 AM – 11:30 AM	Friday May 3, 2024 [data for handwashing month/April]
4. Meeting three: Virtual/Call	Thursday May 30, 2024, 10:00 AM – 11:30 AM	Friday June 7, 2024 [data for May]
5. Meeting four: Virtual/Call	Thursday June 27, 2024, 10:00 AM – 11:30 AM	Friday July 5, 2024 *(Or next business day due to July 4th Holiday)* [data for June]
6. Meeting five Virtual/Call: Final call	Thursday July 25, 2024, 10:00 AM – 11:30 AM	Friday August 2, 2024 [data for July]
7. BONUS Month: Monitoring	--	Friday September 6, 2024 [data for August]

6. Learning Collaborative Completion

The end of the learning collaborative will be the final call where teams will shared their story of the work they have done during the learning collaborative, which changes they tried, the result of their work, and lessons learned. The learning collaborative DBHDS team will also take time to reflect on the outcomes and the lessons learned and decide whether to make recommendations to adopt, adapt or abandon using this type of learning collaborative approach as part of DBHDS quality improvement efforts.

Appendix A. Driver Diagram



Appendix B. Learning Collaborative Registration and Data Collection Forms

Registration Information and BASELINE Data Collection Form:

1. Name of organization:
2. What services does your organization provide? Check all that apply.
    a. Group home
    b. Sponsored Residential
    c. Other: _____
3. Name of participating team members and their roles:
    - Note: It's preferable that at least two people from each organization participate.
4. Please check that you understand each of the following expectations:
    - ☐ We will attend each call to the best of your ability.
    - ☐ We will actively participate in discussions by asking questions and sharing your opinions and what you have learned.
    - ☐ We will take information you learn back to your organization and share it with your team members, especially DSPs who work directly with individuals.
    - ☐ We will collect and submit the data elements each month in a timely fashion.
    - ☐ We will utilize the quality improvement tools, for example the plan-do-study-act cycle worksheet, to test the changes in your organization.

Baseline Data Collection

Questions 5-10 will be used to document the % of individuals with these types of UTIs.

5. From January-December 31, 2023, how many individuals with DD did you serve in group home and/or sponsored residential programs?
6. How many of these individuals had <u>at least one</u> UTI diagnosed by a medical provider?
7. How many of these individuals had <u>two or more</u> UTIs diagnosed by a medical provider?
8. How many of these individuals had <u>at least one</u> **Level I** UTI?
9. How many of these individuals had <u>at least one</u> **Level II** UTI serious incident?
10. How many of these individuals had <u>two or more</u> **Level II** UTI serious incidents?

Questions 11-13 will be used to document the # of UTIs, and the proportion of all SIRs.

11. During this time, how many Level I UTIs did you document?
12. During this time, how many level II UTI serious incidents did you document/report?
13. During this time, how many total reportable Serious Incidents did you document/report?

14. What patterns or trends in UTIs did you identify?
15. What change(s) did you put in place to try to reduce UTIs?
16. What new intervention(s) are you interested in trying? Check all that apply.
    a. Better hand hygiene
    b. More timely care for suspected UTI
    c. Proper perineal care
    d. Collecting a urine sample
    e. Other:
17. How do you track UTIs on a monthly and ongoing basis? *E.g., what tool do you use such as Excel? How do you review them?*
18. What else would you like us to know about your organization?

MONTHLY Data Collection Form:

1. Month: [Pre-populated]
2. Provider name: [Dropdown list of participants to choose from.]

3. How many individuals with DD did your organization serve this month in group home and/or sponsored residential programs?
4. How many of these individuals had at least one UTI diagnosed by a medical provider?
5. How many of these individuals had two or more UTIs diagnosed by a medical provider?
6. How many of these individuals had at least one **Level I** UTI?
7. How many of these individuals had at least one **Level II** UTI serious incident?
8. How many of these individuals had two or more **Level II** UTI serious incidents?

9. During this time, how many Level I UTIs did you document?
10. During this time, how many Level II UTI serious incidents did you document/report?
11. During this time, how many total reportable Serious Incidents did you document/report?

12. What did your root cause analysis (RCA) show as the cause(s) of these UTIs?
13. Based on the RCA, what change(s) do you need to make to improve UTIs?

Intervention Qs. This month's intervention is: ***Handwashing, Pericare, Healthcare Card, Clean urine catch***

14. Did you try this month's intervention? Yes/No
15. Did you train your staff on this intervention? IF YES:
    a. How many staff?
    b. Describe how you provided training.
16. How else did you use this month's intervention? *E.g., you created handouts, made it part of staff orientation, taught the information to individuals and families, etc.*
17. What did you learn from trying this intervention? What were your successes? What were the barriers?
18. What additional help do you need?
19. How are you enjoying the learning collaborative so far? ***5 star option***
20. What is going well? Or What could be improved?

THANK YOU

End of Project Data Collection

1. Name or organization [dropdown list]

   Data Collection
2. From [THE PROJECT PERIOD], how many individuals with DD did you serve in group home and/or sponsored residential programs?
3. How many of these individuals had at least one UTI diagnosed by a medical provider?
4. How many of these individuals had two or more UTIs diagnosed by a medical provider?
5. How many of these individuals had at least one **Level I** UTI?
6. How many of these individuals had at least one **Level II** UTI serious incident?
7. How many of these individuals had two or more **Level II** UTI serious incidents?

8. During this time [THE PROJECT PERIOD], how many Level I UTIs did you document?
9. During this time, how many level II UTI serious incidents did you document/report?
10. During this time, how many total reportable Serious Incidents did you document/report?

11. What new intervention(s) did you try? Check all that apply.
    a. Better hand hygiene
    b. More timely care for suspected UTI
    c. Proper perineal care
    d. Collecting a urine sample
    e. Other:
12. What patterns or trends in UTIs did you identify?
13. Please share at least two things you learned from the collaborative.
14. How will you apply information from the collaborative to your work?
15. What did you like best about the learning collaborative?
16. What could be improved?
17. Would you recommend the Learning Collaborative to other providers?
18. Overall, how did you enjoy the learning collaborative? ***5 star option***
19. What else would you like to share with us?

Appendix C. Self-Assessment

UTI Improvement Opportunities: Self-assessment

For each of the following statements, please rank your opinion from 1-10, with 1=Strongly disagree and 10=Strongly agree. **The results should reflect the collective opinion of your team. Please gather your team and complete this questionnaire together.**

Hand hygiene

1. I think our team needs more information about hand washing and hand hygiene practices.

1	2	3	4	5	6	7	8	9	10

Strongly disagree *Neither* *Strongly agree*

2. I feel like our **staff members** can benefit from having better hand washing and hand hygiene practices.

1	2	3	4	5	6	7	8	9	10

3. I feel like the **individual we serve** can benefit from having better hand washing and hand hygiene practices.

1	2	3	4	5	6	7	8	9	10

Hand hygiene score: Add up the scores for Questions 1, 2, 3 and divide by 3. Score=_____

Perineal care

4. I think our staff members can benefit from training on perineal care for males and females. *The perineal area is the area between the penis or vagina, and the rectum.*

1	2	3	4	5	6	7	8	9	10

5. I think our team needs to improve how they provide perineal care for males and females.

1	2	3	4	5	6	7	8	9	10

Perineal care score: Add up the scores for Questions 4,5 and divide by 2. Score=_____

Having a plan for timely medical care

6. Our team needs to be more aware of urgent care centers that individuals can go to in our community.

1	2	3	4	5	6	7	8	9	10

7. I think we need a better plan to get medical care for an individual if his/her PCP does not have same-day appointments available.

1	2	3	4	5	6	7	8	9	10

Timely medical care score Add up the scores for Questions 6,7 and divide by 2. Score=_____

Getting a urine sample for urinalysis

8. Our staff needs more information on how to get an individual's urine sample for a urinalysis test.

1	2	3	4	5	6	7	8	9	10

9. On a regular basis, it is challenging for our staff to help an individual get a clean urine sample.

1	2	3	4	5	6	7	8	9	10

Urinalysis score: Add up the scores for Questions 8,9 and divide by 2. Score=_____

UTI as a concern

10. UTIs are a significant concern in our organization.

1	2	3	4	5	6	7	8	9	10

11. We serve individuals who have had multiple UTIs.

1	2	3	4	5	6	7	8	9	10

UTI concern score: Add up the scores for Questions 10, 11 and divide by 2. Score=_____