

## Leapfrog Survey Section 6D Hand Hygiene Questions Relevant to Arrowsight Direct Observation Solution

Part 1: Hand Hygiene Survey Questions/Requirements	Arrowsight Protocol to be Followed by Facility to Respond “Yes”	Questions/Comments
<b>Domain: Monitoring</b>		
<p><b>8. Does your hospital collect hand hygiene compliance data on at least 200 hand hygiene opportunities, or at least the number of hand hygiene opportunities outlined based on the unit type in Tables 1-3, each month in each patient care unit?</b></p> <p><b>If “yes” to question #8, skip questions #9-10 and continue to Question #11</b></p>	<p>The Arrowsight Wall Mounted Camera System when deployed per our protocol as described in Exhibit 1, will capture more than 200 hand hygiene opportunities, or at least the number of hand hygiene opportunities outlined based on the unit type in Tables 1-3, each month in each patient care unit.</p> <p>The facility is responsible for ensuring they use the technology to monitor the quantity specified in the question in each unit (i.e., 200 per month per unit for question #8, 9, or 10). See (<a href="https://www.leapfroggroup.org/survey-materials/survey-and-cpoe-materials">\https://www.leapfroggroup.org/survey-materials/survey-and-cpoe-materials</a>) for more information about document requirements.</p>	<p>Unlike human observers, with Arrowsight technology we have the video documentation to support all feedback should there be push back on data accuracy.</p> <p>Think of this as a “game day analytics video” capability.</p>
<p><b>9. Does your hospital collect hand hygiene compliance data on at least 100 hand hygiene opportunities, or at least the number of hand hygiene opportunities outlined based on the unit type in Tables 4-6, each month in each patient care unit?</b></p>	<p>The Arrowsight Wall Mounted Camera System when deployed per our protocol as described in Exhibit 1, will capture more than 100 hand hygiene opportunities, or at least the number of hand hygiene opportunities outlined</p>	

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<p>If “yes” to question #9, skip question #10 and continue to question #11.</p>	<p>based on the unit type in Tables 4-6, each month in each patient care unit.</p>	
<p><b>10. Does your hospital collect hand hygiene compliance data on at least 100 hand hygiene opportunities each quarter in each patient care unit?</b></p> <p>If “no” to question #10, skip questions #11-19 and continue to question #20</p>	<p>The Arrowsight Wall Mounted Camera System when deployed per our protocol as described in Exhibit 1, will capture more than 100 hand hygiene opportunities each quarter in each patient care unit.</p>	
<p><b>11) Does your hospital use hand hygiene coaches or compliance observers to provide individuals who touch patients or who touch items that will be used by patients in your patient care units with feedback on both when they are and are not compliant with performing hand hygiene?</b></p>	<p>The Hand Hygiene (HH) Dashboard accompanied by the video clips from our System (faces may be blurred or not, it is the facility’s option) of the hand hygiene opportunities/events provided within 12 hours of the completion of each 24 hour video capture cycle, will deliver data for use by hand hygiene coaches or compliance observers to provide feedback to individuals who touch patients or who touch items that will be used by patients in facility patient care units. Examples of hand hygiene compliance and noncompliance are documented and captured on camera.</p> <p>In addition, the facility should also deploy coaches and compliance observers to provide immediate feedback on compliance and technique. While no</p>	<p>Having the video clips aka “game day analytics video” makes this solution superior to human direct observation which has no verifiable record of hand hygiene behavior.</p> <p>This also helps eliminate “data denial” on the part of staff.</p> <p>The Arrowsight solution does not provide nor enable <i>immediate</i> feedback and as such, coaches and compliance observers must be deployed to give immediate feedback as discussed in the middle column.</p>

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	<p>specific amount is specified, we recommend 20 coaching and feedback direct observations <i>with immediate feedback</i> per quarter, the same that Leapfrog recommends when an electronic compliance monitoring system is used.</p> <p>“On a <u>quarterly</u> basis, hospitals using electronic compliance monitoring (ECM) need to perform 10% of the observations noted in Tables 1-3 in ALL patient care units included in Leapfrog’s Hand Hygiene Standard (e.g., if the unit would require 200 direct observations without ECM, then with the use of ECM, they need to collect 20 direct observations)”</p>	
<b>12 and 13 are Related to ECM</b>	N/A	
<p><b>14) In those patient care units where an electronic compliance monitoring system is NOT used, do the direct observations meet all the following criteria?</b></p> <p><b>a) Observations identify both opportunities for hand hygiene and compliance with those opportunities.</b></p> <p><b>b) Observations determine who practiced hand hygiene, verify when they practiced it, and</b></p>	<p>a) Identifies hand hygiene opportunities and compliance with those opportunities when the camera view is unobstructed.</p> <p>b) Arrowsight observers determine who* practiced hand hygiene, when they practiced it (time stamped video), and</p>	<p>All the observations will be the alcohol-based hand sanitizer.</p> <p>*Role specific data is provided when uniform descriptions (e.g., color) are provided by the facility – this is illustrated in Exhibit 2 – Sample Dashboard Reports.</p> <p>**When camera view is not obstructed, technique can be observed. This is no different from when Direct Human</p>

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<p><b>whether their technique was correct.</b></p> <p><b>c) Observations within a unit are conducted weekly or monthly across all shifts and on all days of the week proportional to the number of individuals who touch patients or who touch items that will be used by patients on duty for that shift.</b></p> <p><b>d) Observations are conducted to capture a representative sample of the different roles of individuals who touch patients or who touch items that will be used by patients (e.g., nurses, physicians, techs, environmental services workers)</b></p>	<p>whether their technique** was correct per facility hand hygiene standard for all days and all shifts.</p> <p>c) Hospital is responsible for following the protocol in Exhibit 1 to ensure this requirement is met. Reminders are sent by Arrowsight to staff assigned to move the cameras. Additional data capture will be needed if they are not moved as assigned.</p> <p>d) Hospital is responsible for following the protocol in Exhibit 1 to ensure this requirement is met.</p>	<p>Observers on site are viewing behavior anonymously as “secret” shoppers.</p>

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<p><b>15) Does your hospital have a system in place for both the initial and recurrent training and validation of hand hygiene compliance observers?</b></p>	<p>Arrowsight uses the training procedures as outlined in the World Health Organization (WHO) Hand Hygiene Technical Reference Manual and the WHO Training Films. We use an adapted WHO Data Collection Tool (electronic).</p> <p>Training consists of:</p> <ul style="list-style-type: none"> <li>a) A review of the manual</li> <li>b) A discussion of the WHO 5 Moments for Hand Hygiene</li> <li>c) Review of the WHO Videos</li> <li>d) A review of hand hygiene opportunities using Arrowsight actual hospital video footage</li> <li>e) Observer practice will be conducted using the Adapted WHO Data Collection Tool, while reviewing actual hospital footage. This step ensures complete understanding of the hand hygiene monitoring process and establish inter-rater reliability.</li> <li>f) Inter-rater reliability test is conducted to “certify observer.” *</li> </ul> <p>Client Hospitals are asked to review Observer Data Inputs based on the footage to confirm inter-rater reliability.</p>	<p>Note that Arrowsight, like hospital human observers, captures room entry or Moment 1, Before touching the patient and Moments 4/5 after patient room environment contact when the individual cleans hands upon room exit and the view is available.</p> <p>Our video observers are trained in the entire HH monitoring process.</p> <p><b><u>Initial training:</u></b></p> <p>New Arrowsight observers will be required to pass an inter-reliability test prior to beginning work as “3<sup>rd</sup> party HH observers”.</p> <p>*New observers are required to score 90% compliance (5 HH compliant events and 5 HH non-compliant HH events). The observer must pass 9 out of the 10 total events that have been pre-qualified by 4 seniors Arrowsight observers, before the new observer is certified and permitted to function as a “3<sup>rd</sup> party hand hygiene observer”.</p> <p>The senior observers are individuals who have an inter-rate reliability score is 100% on 10 total HH events.</p>
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	<p>Arrowsight observers are trained and assessed for competency (inter-rater reliability) prior to being assigned hand hygiene observations responsibilities.</p> <p>Retraining and competency assessment is conducted annually.</p>	<p><b>Annual training:</b> The same process above will be conducted for all observers once a year and existing observers will need to score 90%+ before being permitted to stay enrolled as certified observers.</p> <p>If hospital is selected for documentation review, they would need to provide the training schedule used by Arrowsight, as well as results/documentation from regular quality monitoring as is outlined in Leapfrog Survey Binder (see <a href="https://www.leapfroggroup.org/survey-materials/survey-and-cpoe-materials">https://www.leapfroggroup.org/survey-materials/survey-and-cpoe-materials</a>).</p>
<b>Domain: Feedback</b>	Reports are Provided by Arrowsight to Enable Feedback Delivery and a “Yes” Response	See Exhibit 2 Sample Dashboard Reports
<b>16) Are unit-level hand hygiene compliance data fed back to individuals who touch patients or who touch items that will be used by patients at least monthly for improvement work?</b>	The HH Dashboard enables this Feedback by unit-based manager(s) or another designee.	<p>HH Dashboard for the unit is provided the week after observations for each shift during their unit-based meeting(s).</p> <p>This could also be done daily for those units monitored on a given day.</p>
<b>17) Are unit-level hand hygiene compliance data used for creating unit-level action plans?</b>	As with every other means of monitoring compliance, this is a task the healthcare facility completes using the data from the	Based on the data, an action plan is outlined by the unit level staff and implemented to address specific issues

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	HH Dashboard. In fact, it is essential that this be done and 'owned' by leadership and staff at each facility.	that can lead to increased compliance. Action plans are shared with those overseeing the hand hygiene program, (e.g., Quality/Infection Prevention).
<p><b>18) Is regular (at least every 6 months) feedback of hand hygiene compliance data, with demonstration of trends over time, given to:</b></p> <ul style="list-style-type: none"> <li>• senior administrative leadership, physician leadership, and nursing leadership.</li> <li>• the board (governance); and</li> <li>• the medical executive committee?</li> </ul> <p>If "no" to question #18, skip question #19 and continue to question #20.</p>	<p>As with every other means of monitoring compliance, this is a task the healthcare facility completes using the data from the HH Dashboard. In fact, it is essential that this be done and 'owned' by leadership and staff at each facility.</p> <p>Arrowsight reports can be used to support providing feedback. Facilities will need to implement their own practices and answer based on their own adherence regarding sharing of data with various staff, use of data for action plans, etc.</p>	<p>The leadership group (e.g., Quality/Infection Prevention or designated individual) will share the generated 6-month HH Dashboard with trends for each unit. Each unit will analyze findings and staff will create an action plan and implement it. When newly trended data identifies a need for change to improve compliance, the outlined plan is revised and implemented. The unit's goal is to incrementally improve compliance rate, or to maintain the rate when high.</p>
<p><b>19) If "yes" to question #18, is senior administrative leadership, physician leadership, and nursing leadership held directly accountable for hand hygiene performance through performance reviews or compensation?</b></p>	<p>Arrowsight reports can be used to support providing feedback, facilities will need to implement their own practices and answer based on their own adherence regarding sharing of data with various staff, use of data for action plans, etc.</p>	<p>The facility needs to make the decision if and how to do this.</p>

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## Exhibit 1

### Arrowsight Hand Hygiene (HH) Solution to Meet the Leapfrog Group HH Survey Requirements

**NOTE – Arrowsight will recommend the proper number of cameras and rotation cycles on a facility-by-facility basis.**

#### ⇒ Arrowsight Hallway HH camera model:

- To capture up to 200 HH observations per month (smaller units require less HH observations), per patient unit that include HH observation data from each day of the week and from each of the two shifts per day, the following methodology can be used:
  - To capture HH observations of all patient rooms in a unit on a monthly basis during the course of a consecutive seven day cycle, two portable cameras placed in two wall mounted suction cup brackets (see below image) will be rotated once every 24 hours by a designated healthcare worker (HCW) to various positions in the unit by affixing the two portable cameras to multiple strategically plastic squares throughout each seven day cycle.
- At the end of each 24-hour period, the two portable cameras would be swapped by the designated HCW with two new portable cameras, and the two cameras removed from the wall would be brought back to a designated infection prevention room that would have a recharging & video transfer docking station for the portable cameras that connects to a hospital purchased network video recorder that Arrowsight will use to access the video footage from the portable cameras. This approach requires 4 portable cameras that could cover 4 patient units per month.
- Arrowsight will conduct remote HH observations and assessments during the 12-hour period after the portable cameras used in the prior 24-hour period are placed into the camera docking station. From there, Arrowsight will send performance scorecard reports to the hospital infection prevention team and the hospital unit managers to use as a coaching tool. The performance reports will provide HH metrics that will be segregated by healthcare worker (HCW) type uniforms would be used to define the type of HCW). Hospitals may elect to also utilize videos with facial blurring of the compliant and non-compliant HH observations as a coaching tool.
- If the hospital team ever misses a day of the week of HH observations, additional spare portable cameras will be available to make up any missed days.



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### Leapfrog Opinion Regarding Arrowsight Technology

**“When deployed correctly by Survey-responding facilities as per guidance above, Arrowsight technology that was submitted to Leapfrog for review can help facilities meet the Leapfrog Hand Hygiene standard.**

**In order to assure Leapfrog-responding facilities are able to document adherence to the Leapfrog Hand Hygiene standard, we suggest clients review the documentation requirements outlined in the Leapfrog Survey Binder (see <https://www.leapfroggroup.org/survey-materials/survey-and-cpoe-materials>).”** Opinion received from Leapfrog May 20, 2023.

⇒ We also suggest that hospitals check back for updates before any submissions.

**We believe that by using the above Arrowsight Protocol, hospitals will enjoy the following benefits:**

- Continuously updated and intuitive dashboards to enable constructive and positive staff feedback
- Video clips to support coaching and feedback for improvement
- Better use of clinical staff to support patient care vs. observing HH behavior
- An enhanced and “just” safety culture that embraces teamwork as a critical success factor for hand hygiene
- Lower cost to meet the Leapfrog standard when the cost for all staff salary plus benefits are factored in.

## **Leapfrog Survey Section 6D Hand Hygiene Questions Relevant to Arrowsight Direct Observation Solution**

**Notice:** The Arrowsight System is designed as a highly reliable and accurate method for capturing hand hygiene observations, compliance events and other aspects of hand hygiene behavior as set forth in the Leapfrog Hand Hygiene Standard. Arrowsight does not guarantee that use of its technology will result in a facility achieving the Standard, nor any specific Leapfrog Safety Grade. Achieving the standard and meeting all Leapfrog reporting and documentation requirements is the sole responsibility of the responding hospital and its staff.