

## **Health Care Staffing Services Certification Program Performance Measurement Implementation Guide, 3<sup>rd</sup> Edition Updated May 2018**

We are pleased to share with you the third edition of the Health Care Staffing Services (HCSS) Certification Program Performance Measure Implementation Guide. All HCSS firms certified by The Joint Commission are required to utilize a set of three standardized measures in order to meet the performance measurement requirements for certification. Detailed information regarding the standardized HCSS measure set and performance measurement is provided in this revised edition.

The standardized measures contained in this final set reflect modifications and revisions made to the candidate measures following the findings of a six-month pilot test (August 1, 2006 through January 31, 2007), and subsequent recommendations from the Health Care Staffing Services Performance Measure Expert Panel. (In addition to the three standardized measures included in the set, it is strongly encouraged that HCSS firms also develop non-standardized measures for personnel file audits that monitor state-specific and / or client specific requirements for their organizations.)

Questions respecting measure specifications or data collection for the standardized measures should be submitted to:

<https://manual.jointcommission.org>.

**Health Care Staffing Services (HCSS)  
Certification Program  
Performance Measurement Implementation Guide**

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## INTRODUCTION AND BACKGROUND

### ***The History of the Performance Measurement Initiative***

In 1987, The Joint Commission announced its *Agenda for Change*, which outlined a series of major steps designed to modernize the accreditation process. A key component of the *Agenda for Change* was the future incorporation of performance measurement into the accreditation process. As the performance measurement initiative evolved, the name ORYX® was chosen to represent the overall initiative. Beginning with the Hospital and Long Term Care accreditation programs, performance measurement requirements were phased in over several years. Initial requirements allowed organizations to select a performance measurement system from a Joint Commission approved list to collect aggregate health care data on individual performance measures. In March of 1999, the ORYX® initiative became operational when the performance measurement systems began transmitting data to The Joint Commission on behalf of accredited hospitals and long term care organizations. Since that time, home care and behavioral health organizations have been included in the ORYX® initiative.

The eventual development and inclusion of standardized core performance measures was a standing goal of the ORYX® initiative. The next phase of the ORYX® initiative focused on the identification of standardized sets of valid, reliable, and evidence-based “core” measures for use in the hospital accreditation program. In early 1999, The Joint Commission solicited input from a wide variety of stakeholders - clinical professionals, health care provider organizations, health care consumers, and performance measurement experts – about potential focus areas for core measures. The input of these stakeholders, together with recommendations from State Hospital Associations led to the identification of five initial core measurement areas:

- Acute myocardial infarction (including coronary artery disease)
- Heart Failure
- Community acquired pneumonia
- Pregnancy and related conditions (including newborn and maternal care)
- Surgical procedures and complications

A period of extensive work involving clinical input from expert panels, attributes and evaluation criteria for core performance measures developed with the Advisory Council on Performance Measurement and pilot testing with state hospital associations, measurement systems, and hospitals led to the final selection of hospital core measures. Implementation of data collection on the first sets of ORYX® core measures for hospitals began in July 2001.

### ***Performance Measurement in Certification***

In 2004, The Joint Commission launched the Health Care Staffing Certification Program to meet quality oversight needs that have arisen in recent years as a result of significant, on-going shortages of nurses, pharmacists, and other health care professionals. These shortages have caused health care organizations to increasingly fill positions with temporary workers through contractual arrangements with staffing firms. The Joint Commission's certification program provides an independent, comprehensive evaluation of a staffing firm's abilities to provide competent staffing services. The certification evaluation process is reliant on standards which, in addition to other specific topics relating to health care staffing firms, outline expectations for performance measurement and improvement.

Since consensus-based nationally standardized performance measures have not historically existed for Health Care Staffing Services (HCSS), The Joint Commission initiated a two-stage process with respect to performance measurement expectations for HCSS certification. Stage I of the process required HCSS firms to select, collect, and analyze data on one or more non-standardized, industry-related performance measure(s) derived from the universe of measures. Simultaneously, a systematic process for the identification of Stage II, or standardized performance measures, for the HCSS Certification Program was initiated.

Identification of standardized measures for Stage II involved a multi-faceted approach which included an extensive literature review, development of a framework for identification of measurement areas, a targeted call for measures, a stakeholder comment period, and development of detailed measure specifications. These activities were advised and guided by an advisory panel of external experts. Measure specifications for a set of three performance measures were ultimately drafted along with development of this HCSS Certification Program Performance Measurement Implementation Guide which includes the HCSS measurement framework, measure information forms, data element dictionary, data collection tools, sampling methodology for data collection, glossary of terms, and references.

August 1, 2006, marked the beginning of a six-month pilot test of the candidate measure set. The pilot process, completed on January 31, 2007, tested the utility and reliability of this set of three standardized performance measures. Modifications to the candidate measure set were then made based on the feedback received from pilot site participants and recommendations from the expert panel.

The measures included in this edition of the Health Care Staffing Services Implementation Guide are the outcome of the Stage II measure development process. These Stage II measures replace the Stage I measures previously used by HCSS firms for performance improvement.

## HEALTH CARE STAFFING SERVICES FRAMEWORK

### ***Introduction***

The application of a systematic approach can be useful in identifying the varied factors that influence a process. The following framework was created as part of the identification and development of the standardized performance measures. It served as a guide to selecting areas of performance measurement that will enhance the quality of services, are evidence based, and are scientifically sound. The framework was designed to identify domains and key measurement areas for health care staffing services (HCSS).

The framework is included in this guide exactly as it was used during the process of identifying the related performance measures. While it is not meant to be exhaustive, it does provide a foundation for considering performance measurement in HCSS programs. As such, your organization may wish to use or enhance the framework to assess for additional opportunities for performance measurement within your quality improvement initiative. In addition, factors in the framework may be helpful when considering root causes (see section *Data Analysis and Display*) as your organization undertakes analysis and interpretation of data collected for the performance measures.

## HEALTH CARE STAFFING SERVICES STANDARDIZED MEASURE SET FRAMEWORK

| Domains   | Key Measurement Areas  |
|---|--|
| Coordination of Services –<br>Service to client<br>organization                                     | <ul style="list-style-type: none"> <li>• Cancellation rates               <ul style="list-style-type: none"> <li>○ Per diem                   <ul style="list-style-type: none"> <li>▪ Staff cancellations of assignments</li> <li>▪ Client organization cancellation of staff assignments</li> <li>▪ HCSS cancellation of staff assignments</li> </ul> </li> <li>○ Traveler                   <ul style="list-style-type: none"> <li>▪ Staff cancellations of assignments</li> <li>▪ Client organization cancellation of staff assignments</li> <li>▪ HCSS cancellation of staff assignments</li> </ul> </li> </ul> </li> </ul> |
|   | <ul style="list-style-type: none"> <li>• Response rate</li> </ul>  |
|   | <ul style="list-style-type: none"> <li>• Fill rate</li> </ul>  |
| Coordination of Services –<br>Client organization to<br>Service                                     | <ul style="list-style-type: none"> <li>• Do not return (DNR) evaluation process</li> <li>• Other complaints</li> </ul>   |
| Outcomes  | <ul style="list-style-type: none"> <li>• Repeat assignments               <ul style="list-style-type: none"> <li>○ HCSS to same client organization</li> <li>○ Individual staff to same client organization</li> </ul> </li> <li>• Number of times traveler accepts additional assignments</li> <li>• Number of years traveler has been with HCSS</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>• Number of W-2 employees</li> </ul>  |
| Organizational/system<br>factors  | <ul style="list-style-type: none"> <li>• Ability of HCSS to make payroll</li> </ul>  |
|   | <ul style="list-style-type: none"> <li>• Timeliness of HCSS payroll</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>• Financial viability of HCSS</li> </ul>  |
|   | <ul style="list-style-type: none"> <li>• Experience of HCSS management staff</li> </ul>  |
|   | <ul style="list-style-type: none"> <li>• Contract clarity and delineation of required components</li> </ul>  |
|   | <ul style="list-style-type: none"> <li>• Requirements of contract are followed by HCSS</li> </ul>  |
|   | <ul style="list-style-type: none"> <li>• HCSS meets contract requirements</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Subcontracting requirements to multiple parties</li> </ul> |  |

| Domains | Key Measurement Areas   |
|---------|---|
| Safety  | <ul style="list-style-type: none"> <li>• Competency of clinical staff               <ul style="list-style-type: none"> <li>○ On hire</li> <li>○ Periodic</li> </ul> </li> </ul>   |
|         | <ul style="list-style-type: none"> <li>• Credentialing process               <ul style="list-style-type: none"> <li>○ On hire</li> <li>○ Periodic</li> </ul> </li> </ul>  |
|         | <ul style="list-style-type: none"> <li>• Performance evaluations include:               <ul style="list-style-type: none"> <li>○ All aspects of nursing/patient care processes</li> <li>○ Patient feedback</li> <li>○ Performance of the technical elements of the role</li> </ul> </li> </ul>  |
|         | <ul style="list-style-type: none"> <li>• Orientation is provided for each client organization, unit, or specialty               <ul style="list-style-type: none"> <li>○ HCSS has documented requirements for each client organization they staff</li> <li>○ Staff must complete orientation prior to placement in any client organization</li> <li>○ Completion of each client organization's orientation process is documented in each staff person's file</li> </ul> </li> </ul> |
|         | <ul style="list-style-type: none"> <li>• Clinical performance issues with staff are evaluated/investigated               <ul style="list-style-type: none"> <li>○ Medication errors</li> <li>○ Restraint and seclusion</li> <li>○ Operative and other invasive procedures</li> <li>○ Blood administration</li> </ul> </li> </ul>  |
|         | <ul style="list-style-type: none"> <li>• Clinical issues with staff result in appropriate counseling, administrative and remedial action, as needed for:               <ul style="list-style-type: none"> <li>○ Medication errors</li> <li>○ Restraint and seclusion</li> <li>○ Operative and other invasive procedures</li> <li>○ Blood administration</li> </ul> </li> </ul>  |
|         | <ul style="list-style-type: none"> <li>• Clinical incident reports of adverse patient outcomes are investigated</li> </ul>  |
|         | <ul style="list-style-type: none"> <li>• HCSS has a risk management process</li> <li>• Background checks are completed for each employee</li> </ul>   |

**HEALTH CARE STAFFING SERVICES  
PERFORMANCE MEASURES**

| <b>Set-Measure</b> | <b>Health Care Staffing<br/>Services<br/>Performance Measure<br/>Name</b> |
|--------------------|---|
| HCSS-1             | Do Not Return - Clinical  |
| HCSS-2             | Do Not Return - Professional  |
| HCSS-3             | Completeness of Personnel<br>File   |

## Measure Information Form

**Measure Set:** Health Care Staffing

**Candidate Measure ID:** HCSS-1

**Performance Measure Name:** Do Not Return - Clinical

**Rationale:** Health care staffing services (HCSS) are contracted to fill vacancies that health care organizations are unable to fill with currently employed staff. Client needs may be temporary due to staff turnover or retirement, backfill for sick days or vacation, seasonal or routine. According to a 2017 report from the Kaiser Family Foundation, 10% of the more than 3.3 million professionally active registered nurses in the United States are travelers.<sup>1</sup> A 2017 Survey of Temporary Physician Staffing Trends revealed that 94% of healthcare managers had used a locum tenens physician during the last 12 months and 26% had used a nurse practitioner (NP) or physician assistant (PA), compared to 80% and 12.4% respectively in 2011-2012.<sup>2</sup> The demand for healthcare staffing services is expected to increase an average 7% per annum, including allied health professionals, per diem nursing, traveler nursing, and locum tenens.<sup>3</sup> Temporary help employment growth averaged 3.9% over the first five months of 2017, with the highest level recorded for May at 4.9%.<sup>4</sup> Healthcare staffing services demand continues to grow as a result of an aging Baby Boomer population, an increased number of insured under the Affordable Care Act, healthcare professional shortages, and a push for lower nurse-to-patient ratios.

The Joint Commission 2018 standard LD.04.03.01 for hospital accreditation states that hospitals provide services, either directly or through referral, consultation, contractual arrangements, or other agreements, that meet patient needs. Essential services include: diagnostic radiology, dietary, emergency, medical records, nuclear medicine, nursing care, pathology and clinical laboratory, pharmaceutical, physical rehabilitation, respiratory care, and social work services. Healthcare staffing firms provide services to hospitals and other customers according to a written agreement. Firms have a responsibility to provide their customers with written descriptions of important service features, such as the use of subcontractors, the designation of who determines competencies, and communication methods (HSLD.5).

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<sup>1</sup> Kaiser Family Foundation, April 2017.

<sup>2</sup> Staff Care, Inc. 2017 Survey of Temporary Physician Staffing Trends.

<sup>3</sup> Harris Williams & Co. Healthcare Staffing Market Overview, November 2015.

<sup>4</sup> Thiyagarajan S. Uptick in 2017. Staffing Industry Review, July/August 2017.

In the health care environment, it is crucial that care givers maintain clinical competence and the necessary skill level to provide quality of care and patient safety. It is the responsibility of health care providers to address performance issues as they occur. The responsibility for dealing with performance issues of contracted staff reverts to the health care staffing service. In order to deal effectively with performance issues, the healthcare staffing firm must have ongoing and open communication with the organizations that they contract with, especially when dealing with a report of "Do Not Return." Firms should communicate the complaint process to customers and staff, review complaints received and, when possible, resolve complaints (HSLD.7).

In a study of agency nursing in acute care settings, health care staffing services indicated that they valued constructive and open communication with hospitals with the ultimate aim of insuring quality practice. The importance of hospitals acknowledging their responsibilities in the whole process was highlighted. Targeting problems so they are addressed and corrected when valid, could significantly enhance the working relationships between organizations and improve quality of care.

**Type of Measure:** Outcome

**Improvement Noted As:** Decrease in rate

**Numerator Statement:** Occurrences of Do Not Return attributed to clinical events

**Inclusions:** N/A

**Exclusions:**

Reasons for Do Not Return unrelated to clinical issues or clinical competency.

A reason for Do Not Return is not specified by the client or cannot be determined by the HCSS firm.

**Data Elements:**

- Do Not Return - Clinical
- Do Not Return Occurrence Identifier

**Denominator Statement:** Total hours worked

**Inclusions:**

Hours Worked

**Exclusions:** None

**Data Elements:**

- Hours Worked
- Active Clinical Staff
- Clinical Staff

**Denominator Basis:** per 1,000 hours\*

\*The denominator will be calculated by using the denominator basis of 1,000 hours:

Total number of hours worked / 1,000 = denominator

**Data Collection Approach:** Retrospective

For purposes of determining the denominator, the total number of hours worked by active clinical staff is to be recorded for the reporting month. The HCSS firm must be able to identify the documents or database used to calculate this number. In addition the HCSS firm is advised:

- To keep track of the calculation method for monthly hours worked.
- That the same documents / database should be used for each reporting period.
- That the documents / database should be available for purposes of review.

For purposes of determining the numerator, the HCSS firm will total the number of occurrences of Do Not Return for clinical reasons.

**Sampling:** No

**Data Reported As:** Ratio

**Setting:** Health Care Staffing Services

**Report Period:** Quarterly with monthly data points

**Selected References:**

The Joint Commission. *2018 Comprehensive Accreditation Manual for Hospitals*. Oakbrook Terrace, IL: Author. July, 2018.

The Joint Commission. *2018 Health Care Staffing Services Certification Manual*. Oakbrook Terrace, IL: Author. January, 2018.

American Staffing Association. *Annual Economic Analysis*. Alexandria, VA: Author. 2007.

Kaiser Family Foundation, April 2017. Retrieved September 11, 2017 from the World Wide Web: <http://www.kff.org/other/state-indicator/total-registered-nurses/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D>.

Manias, E, BPHARM, MPHARM, M NursStud, PhD, RN, FRCNA, Aitken, R, Bed, Med, RN, Peerson, A, BA, Phd, RN, Parker, J BA, AM, PhD, RN, Wong, K, BA ,MPH, RN. Agency nursing work in acute care settings: perceptions of hospital nursing managers and agency nurse providers. *Journal of Clinical Nursing*. 2003;12:457-466.

2004 Market Analysis and Executive Summary: Temporary Healthcare Staffing. Retrieved July 2, 2007 from the World Wide Web:  
[http://www.healthleadersmedia.com/print.cfm?content\\_id=60699&parent=103](http://www.healthleadersmedia.com/print.cfm?content_id=60699&parent=103).

Shoemaker, P, Schuhmann TM. Trends in Hospitals' Use of Contract Labor. *Healthcare Financial Management*, April 2007.

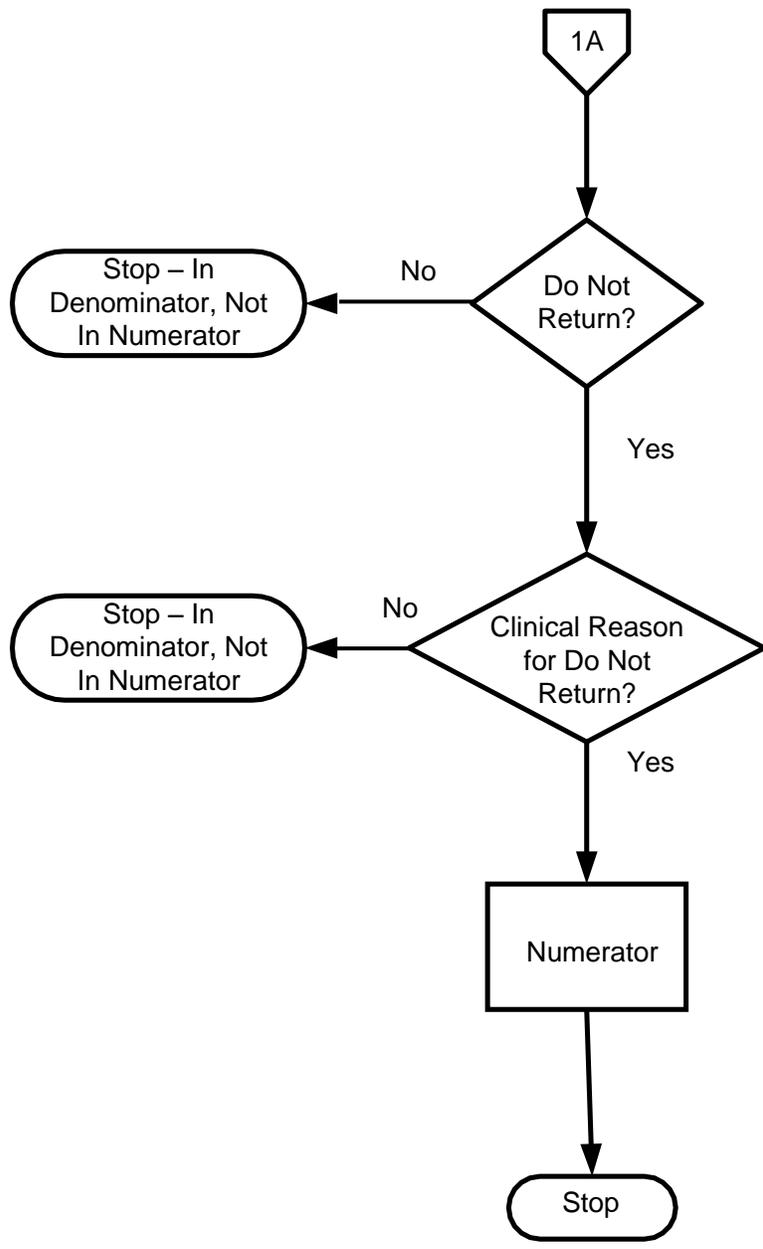
Staff Care, Inc. 2017 Survey of Temporary Physician Staffing Trends. Retrieved September 8, 2017 from the World Wide Web:  
[https://www.staffcare.com/uploadedFiles/2017-survey-temporary-physician-staffing-trends.pdf?utm\\_source=resourcecenter&utm\\_campaign=resourcecenter&utm\\_medium=website](https://www.staffcare.com/uploadedFiles/2017-survey-temporary-physician-staffing-trends.pdf?utm_source=resourcecenter&utm_campaign=resourcecenter&utm_medium=website).

Stiehl, RR. Quality Assurance Requirements for Contract/Agency Nurses. *JONA's Healthcare Law, Ethics, and Regulation*, 2004;6(3): 69-74.

Thiyagarajan S. Uptick in 2017. *Staffing Industry Review*. 2017 July/August; 22(5): 12-13.

Warren, IB, MSN, RN, Rozell, BR, DSN, RN. Supplemental Staffing Nurse Manager Views of Costs, Benefits, and Quality of Care. *JONA*.1995;25 (6):51-57.





## Measure Information Form

**Measure Set:** Health Care Staffing

**Candidate Measure ID:** HCSS-2

**Performance Measure Name:** Do Not Return - Professional

**Rationale:** Health care staffing services (HCSS) are contracted to fill vacancies that health care organizations are unable to fill with currently employed staff. Client needs may be temporary due to staff turnover or retirement, backfill for sick days or vacation, seasonal or routine. According to a 2017 report from the Kaiser Family Foundation, 10% of the more than 3.3 million professionally active registered nurses in the United States are travelers.<sup>1</sup> A 2017 Survey of Temporary Physician Staffing Trends revealed that 94% of healthcare managers had used a locum tenens physician during the last 12 months and 26% had used a nurse practitioner (NP) or physician assistant (PA), compared to 80% and 12.4% respectively in 2011-2012.<sup>2</sup> The demand for healthcare staffing services is expected to increase an average 7% per annum, including allied health professionals, per diem nursing, traveler nursing, and locum tenens.<sup>3</sup> Temporary help employment growth averaged 3.9% over the first five months of 2017, with the highest level recorded for May at 4.9%.<sup>4</sup> Healthcare staffing services demand continues to grow as a result of an aging Baby Boomer population, an increased number of insured under the Affordable Care Act, healthcare professional shortages, and a push for lower nurse-to-patient ratios.

The Joint Commission's 2018 standard LD.04.03.01 for hospital accreditation states that hospitals provide services, either directly or through referral, consultation, contractual arrangements, or other agreements, that meet patient needs. Essential services include: diagnostic radiology, dietary, emergency, medical records, nuclear medicine, nursing care, pathology and clinical laboratory, pharmaceutical, physical rehabilitation, respiratory care, and social work services. Healthcare staffing firms provide services to hospitals and other customers according to a written agreement. Firms have a responsibility to provide their customers with written descriptions of important service features, such as the use of subcontractors, the designation of who determines competencies, and communication methods (HSLD.5),

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<sup>1</sup> Kaiser Family Foundation, April 2017.

<sup>2</sup> Staff Care, Inc. 2017 Survey of Temporary Physician Staffing Trends.

<sup>3</sup> Harris Williams & Co. Healthcare Staffing Market Overview, November 2015.

<sup>4</sup> Thiyagarajan S. Uptick in 2017. Staffing Industry Review, July/August 2017.

According to the National Student Nurses' Association *Code of Professional Conduct*, student nurses should maintain the highest standard of personal and professional conduct. Nurses, as do other health care professionals, have strong responsibilities to demonstrate behavior that is ethically and legally appropriate at all times. It is the responsibility of HCSS firms to address employee events of professional misconduct as they occur. In order to deal effectively with professional conduct issues, the HCSS firm must have ongoing and open communication with the organizations that they contract with, especially when dealing with a report of "Do Not Return." Firms should communicate the complaint process to customers and staff, review complaints received and, when possible, resolve complaints (HSLD.7).

In a study of agency nursing in acute care settings, health care staffing services indicated that they valued constructive and open communication with hospitals with the ultimate aim of insuring quality practice. The importance of hospitals acknowledging their responsibilities in the whole process was highlighted. Targeting problems so they are addressed and corrected when valid, could significantly enhance the working relationships between organizations and improve quality of care.

**Type of Measure:** Outcome

**Improvement Noted As:** Decrease in rate

**Numerator Statement:** Occurrences of Do Not Return attributed to professional events

**Inclusions:** N/A

**Exclusions:**

Reasons for Do Not Return unrelated to professional conduct or behavior. A reason for Do Not Return is not specified by the client or cannot be determined by the HCSS firm.

**Data Elements:**

- Do Not Return – Professional
- Do Not Return Occurrence Identifier

**Denominator Statement:** Total hours worked

**Inclusions:**

Hours Worked

**Exclusions:** None

**Data Elements:**

- Hours Worked
- Active Clinical Staff
- Clinical Staff

**Denominator Basis:** per 1,000 hours\*

\*The denominator will be calculated by using the denominator basis of 1,000 hours:

Number of hours worked / 1,000 = denominator

**Data Collection Approach:** Retrospective

For purposes of determining the denominator, the total number of hours worked by active clinical staff is to be recorded for the reporting month. The HCSS firm must be able to identify the documents or database used to calculate this number. In addition the HCSS firm is advised:

- To keep track of the calculation method for monthly hours worked.
- That the same documents / database should be used for each reporting period.
- That the documents / database should be available for purposes of review.

For purposes of determining the numerator, the HCSS firm will total the number of occurrences of Do Not Return for professional reasons.

**Sampling:** No

**Data Reported As:** Ratio

**Setting:** Health Care Staffing Services

**Report Period:** Quarterly with monthly data points

**Selected References:**

The Joint Commission. *2018 Comprehensive Accreditation Manual for Hospitals*. Oakbrook Terrace, IL: Author. July, 2018.

The Joint Commission. *2018 Health Care Staffing Services Certification Manual*. Oakbrook Terrace, IL: Author. January, 2018.

American Staffing Association. *Annual Economic Analysis*. Alexandria, VA: Author. 2007.

American Nurses Association. Code of Ethics for Nurses With Interpretive Statements, 2001. Retrieved June 29, 2007 from the World Wide Web:

<http://www.nursingworld.org/mods/mod580/cecdefull.htm>.

Harris Williams & Co. Healthcare Staffing Market Overview, November 2015. Retrieved September 8, 2017 from the World Wide Web: [http://www.harriswilliams.com/sites/default/files/content/hwco\\_healthcare\\_staffing\\_update\\_-\\_11.18.15.pdf](http://www.harriswilliams.com/sites/default/files/content/hwco_healthcare_staffing_update_-_11.18.15.pdf).

Kaiser Family Foundation, April 2017. Retrieved September 11, 2017 from the World Wide Web: <http://www.kff.org/other/state-indicator/total-registered-nurses/?currentTimeframe=0&sortModel=%7B%22collId%22:%22Location%22,%22sort%22:%22asc%22%7D>.

Manias, E, BPHARM, MPHARM, M NursStud, PhD, RN, FRCNA, Aitken, R, Bed, Med, RN, Peerson, A, BA, Phd, RN, Parker, J BA, AM, PhD, RN, Wong, K, BA ,MPH, RN. Agency nursing work in acute care settings: perceptions of hospital nursing managers and agency nurse providers. *Journal of Clinical Nursing*. 2003;12:457-466.

2004 Market Analysis and Executive Summary: Temporary Healthcare Staffing. Retrieved July 2, 2007 from the World Wide Web: [http://www.healthleadersmedia.com/print.cfm?content\\_id=60699&parent=103](http://www.healthleadersmedia.com/print.cfm?content_id=60699&parent=103).

NSNA Code of Professional Conduct, 1999. Retrieved June 29, 2007 from the World Wide Web: <http://www.jsu.edu/depart/nursing/JANS/page3.html>.

Shoemaker, P, Schuhmann TM. Trends in Hospitals' Use of Contract Labor. *Healthcare Financial Management*, April 2007.

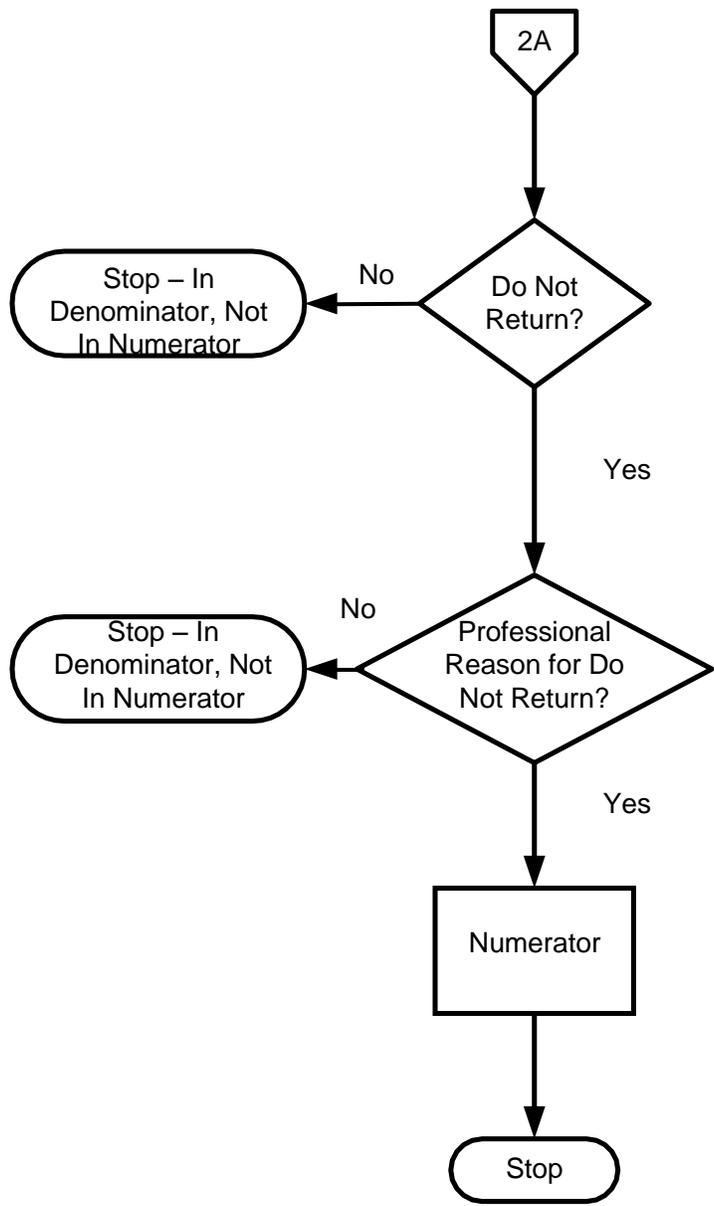
Staff Care, Inc. 2017 Survey of Temporary Physician Staffing Trends. Retrieved September 8, 2017 from the World Wide Web: [https://www.staffcare.com/uploadedFiles/2017-survey-temporary-physician-staffing-trends.pdf?utm\\_source=resourcecenter&utm\\_campaign=resourcecenter&utm\\_medium=website](https://www.staffcare.com/uploadedFiles/2017-survey-temporary-physician-staffing-trends.pdf?utm_source=resourcecenter&utm_campaign=resourcecenter&utm_medium=website).

Stiehl, RR. Quality Assurance Requirements for Contract/Agency Nurses. *JONA's Healthcare Law, Ethics, and Regulation*, 2004;6(3): 69-74.

Thiyagarajan S. Uptick in 2017. *Staffing Industry Review*. 2017 July/August; 22(5): 12-13.

Warren, IB, MSN, RN, Rozell, BR, DSN, RN. Supplemental Staffing Nurse Manager Views of Costs, Benefits, and Quality of Care. *JONA*.1995;25 (6):51-57.





## Measure Information Form

**Measure Set:** Health Care Staffing

**Candidate Measure ID:** HCSS-3

**Performance Measure Name:** Completeness of Personnel File

**Rationale:** The current health care staffing shortage has created considerable competition for qualified nurses and other clinical professionals.<sup>5</sup> According to a recent Allegis Group survey, attracting quality talent (38%), time to fill open positions (31%), and retaining quality talent (18%) are key issues for staffing firms.<sup>6</sup> Due to the urgency in meeting staffing needs, HCSS firms may often streamline the application process by taking application information by phone and accepting verbal references.

One of the nine principles identified by the American Nurses Association (ANA) Board of Directors for nurse staffing indicates: “All institutions should have documented competencies for nursing staff, including agency or supplemental and traveling RN’s, for those activities that they have been authorized to perform.” Updated principles published in 2012 further state that the organization must specify the appropriate credentials and qualifications of registered nurse staff, including: licensure; experience with the population being served; level of experience (i.e., novice to expert); competency with technology and clinical interventions; professional certification; educational preparation; language capabilities; and, organizational experience.<sup>7</sup>

The Joint Commission’s 2018 Comprehensive Hospital Accreditation Manual states in standard HR.01.01.01: “The hospital defines and verifies staff qualifications.” Additionally, it is expected that staff will participate in ongoing education and training to maintain or increase their competency, or whenever staff responsibilities changes (HR.01.05.03). Healthcare staffing firms are contractually bound to confirm that staff qualifications are consistent with his or her assignment(s) (HSHR.1), and encourage the improvement of clinical staff competence through ongoing educational activities (HSHR.5).

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<sup>5</sup> Shoemaker P, Schuhmann TM. Trends in hospitals’ use of contract labor. *Healthcare Financial Management*. April 2007.

<sup>6</sup> Staffing Industry Review. May 2017.

<sup>7</sup> American Nurses Association. Principles for Nurse Staffing, Second Edition, June 2012.

Reputable staffing services understand that a part of the service they provide is to supply documentation on their staff. Sound quality assurance guarantees that staff supplied by health care staffing services meets government and accrediting body standards. Specific regulations may differ from state to state; however, some basic requirements for health care staffing employees generally apply. Health care staffing firms that provide patient care staff must therefore be able to demonstrate due diligence in assuring their staff's competence and ability to practice safely and legally.

**Type of Measure:** Structure

**Improvement Noted As:** Increase in rate

**Numerator Statement:** Personnel files meeting the minimum data set requirements for all required components of a complete personnel file:

1. Job Appropriate Credentials
  - a. Current license for employees licensed / registered by state boards of Professional Regulation and Education, OR
  - b. Verification of certification program completion for employees not licensed by state boards of Professional Regulation and Education (i.e. Clinical Nursing Assistants)
2. Evidence of Current Competency
  - a. Verification of prior work experience in the profession assigned,  
AND
  - b. Clinical skills assessment appropriate to the discipline and / or specialty at the time of hire / assignment and annually thereafter,  
AND
  - c. OSHA and HIPAA compliance training at the time of initial assignment then annually thereafter or as dictated per specific regulation,  
AND
  - d. Current CPR card for those categories of employees required under state law to be certified in basic life support (e.g., RN, LPN / LVN, etc.)
3. Health Status
  - a. TB test (PPD) annually OR documentation that employee previously tested positive (e.g., CXR report, physician note or physical exam)
4. Background Check
  - a. Verification of previous employers at the time of hire,  
AND
  - b. Reference checks at the time of hire,

AND

- c. Background check, including criminal records search, at the time of hire and rehire

**Inclusions:** Not Applicable

**Exclusions:** None

**Data Elements:**

- Job Appropriate Credentials
- Competency
- Health Status
- Background Check

**Denominator Statement:** Total active clinical staff

**Inclusions:**

Active Clinical Staff

**Exclusions:** None

**Data Elements:**

- Active Clinical Staff
- Clinical Staff
- Personnel File Record Identifier

**Data Collection Approach:** Retrospective

**Sampling:** Yes, for additional information see the Sampling Section

**Data Reported As:** Proportion

**Setting:** Health Care Staffing Services

**Report Period:** Quarterly with monthly data points

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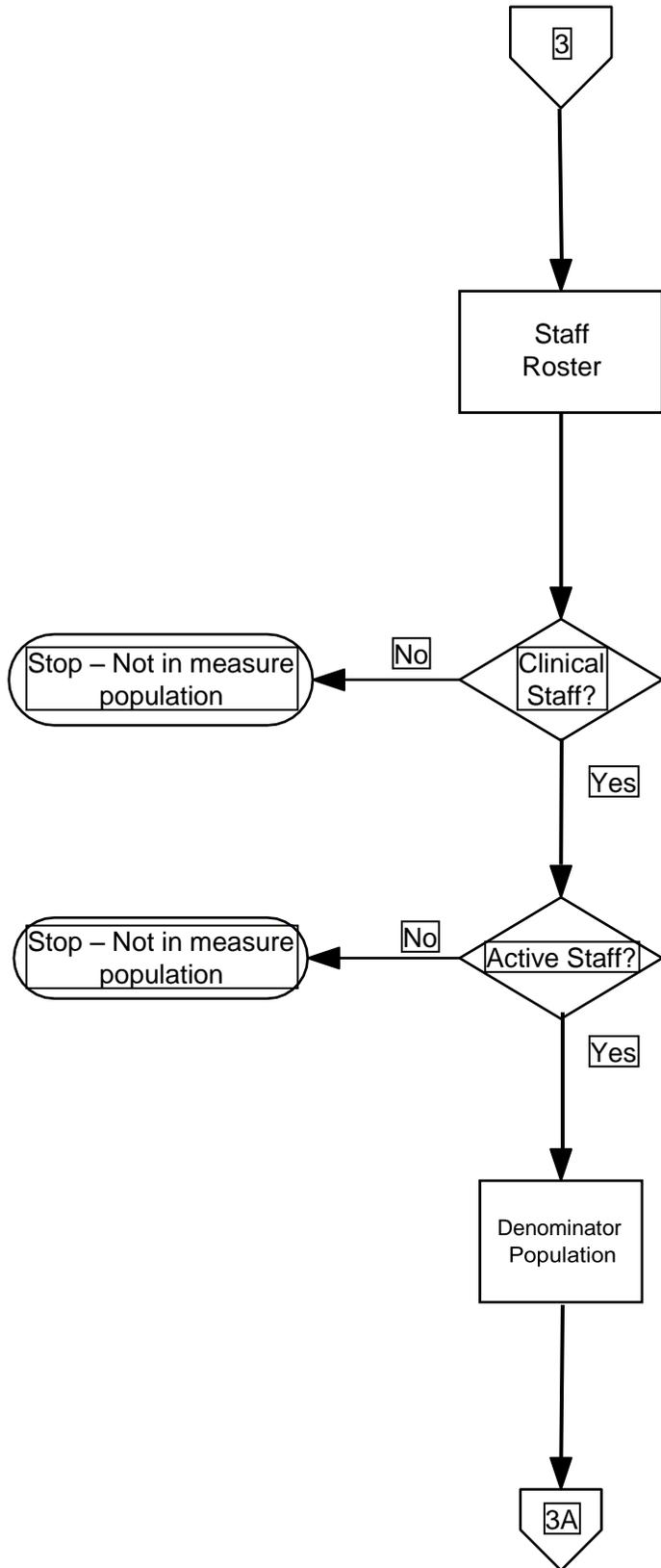
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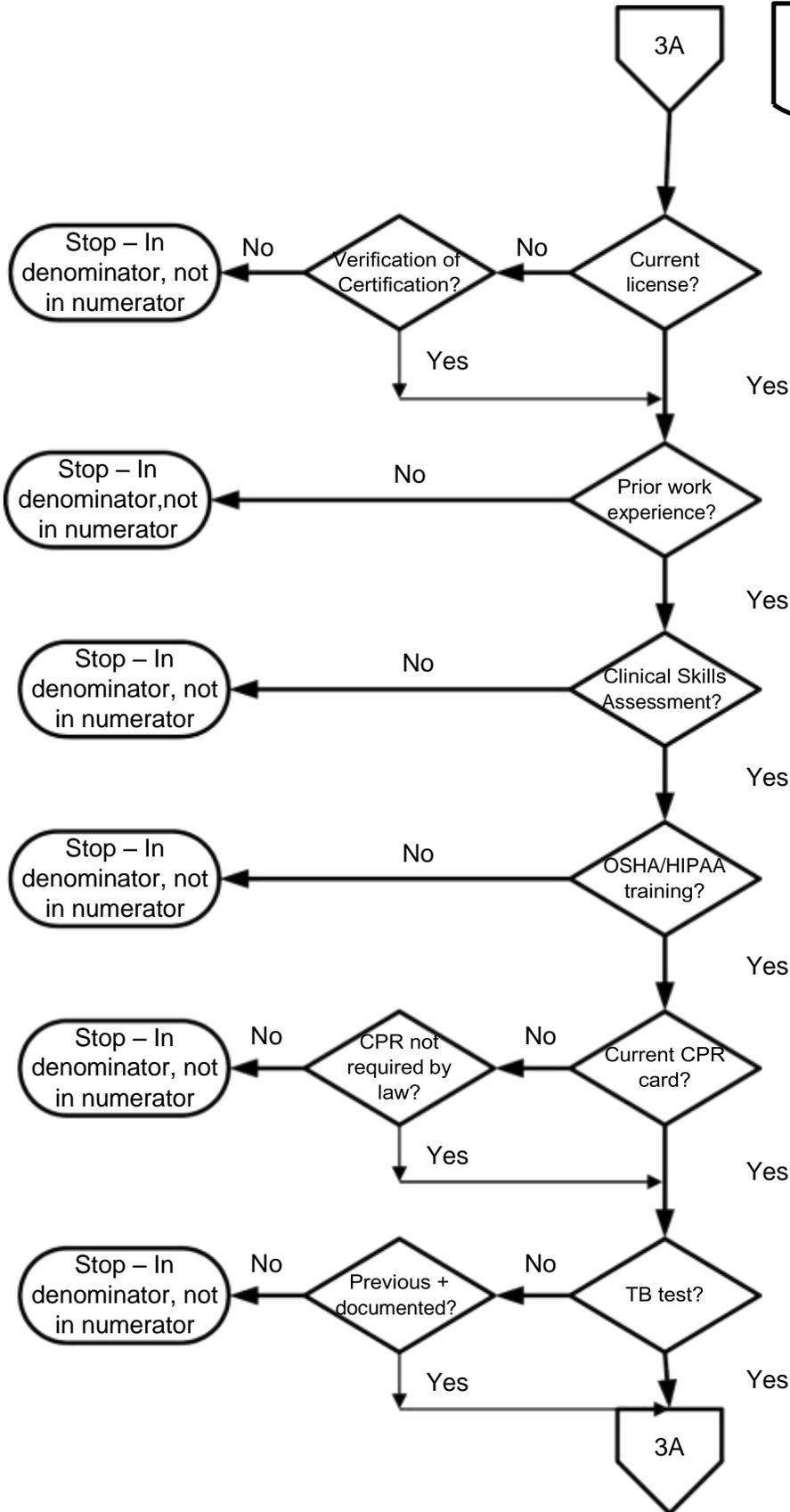
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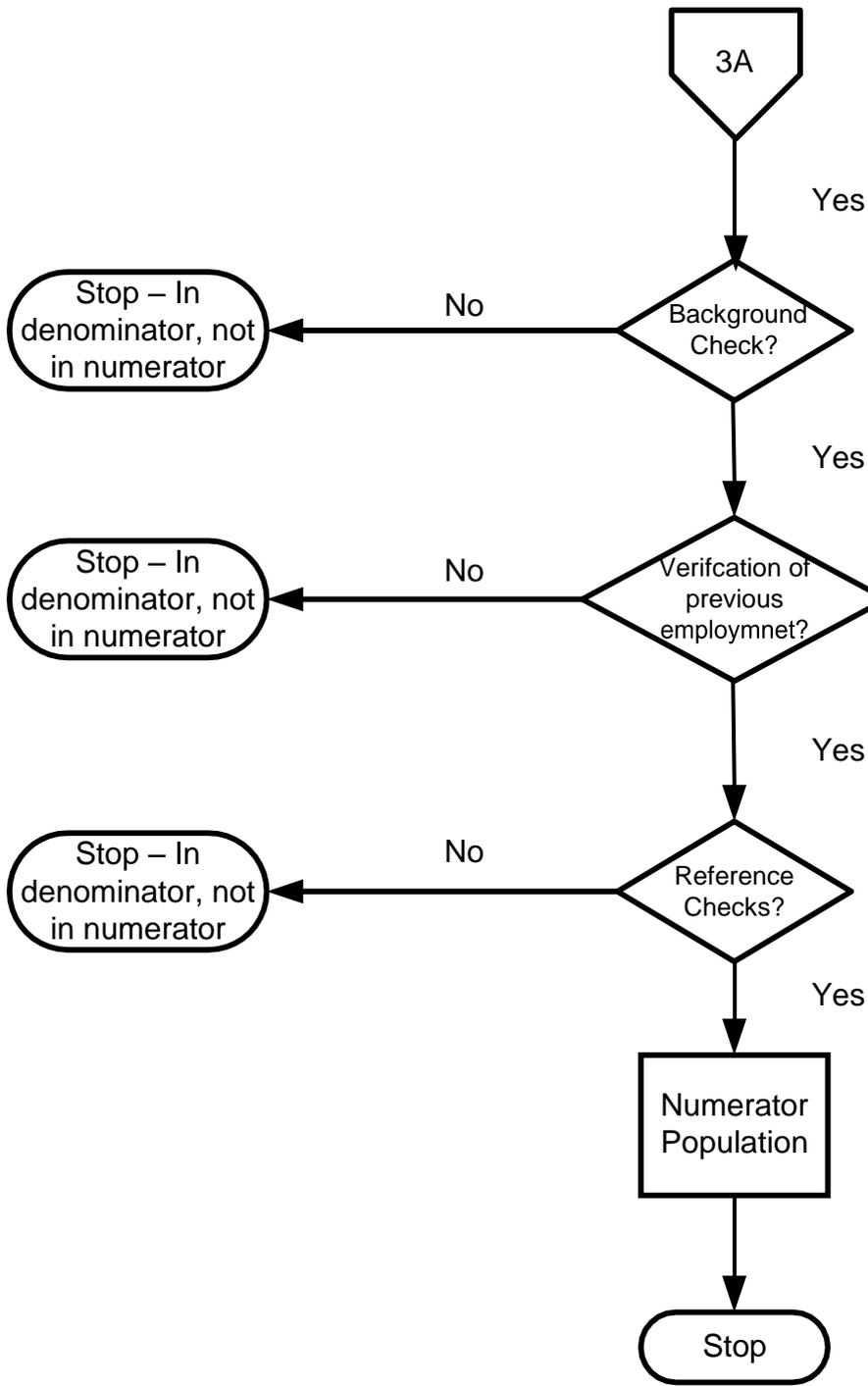
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## DATA ELEMENT DICTIONARY

### Introduction

This section of the manual describes the data elements required to calculate the rates of the Health Care Staffing Services (HCSS) performance measures. It includes information necessary for defining and formatting the data elements, as well as the allowable values for each data element. This information is intended to assist in processing the data elements for the measures.

It is of primary importance that all HCSS organizations using these measures gather and utilize the data elements as defined in this section. This will ensure that the data are standardized and comparable across organizations.

### Data Element Dictionary Terms

|  |  |
|--|--|
| <b>Data Element Name:</b>                  | A short phrase identifying the data element.   |
| <b>Collected For:</b>                      | Identifies the measure(s) that utilize this data element.  |
| <b>Definition:</b>                         | A detailed explanation of the data element.  |
| <b>Suggested Data Collection Question:</b> | A suggested wording for a data element question in a data abstraction tool.  |
| <b>Format:</b>                             | <ul style="list-style-type: none"><li>• <b>Type:</b> type of information the data element contains (i.e., numeric, alphanumeric, date, decimal, or time)</li><li>• <b>Occurs:</b> the number of times the data element occurs in a single episode of care record</li></ul> |
| <b>Allowable Values:</b>                   | A list of acceptable responses for this data element   |
| <b>Suggested Data Sources:</b>             | Source document from which data can be identified such as administrative or personnel records.   |
| <b>Guidelines for Abstraction:</b>         | Designed to assist abstractors in determining how a data element should be answered.   |

### Alphabetical Data Element List

| <b>Element Name</b>                 | <b>Page #</b> | <b>Collected For:</b>   |
|-------------------------------------|---------------|-------------------------|
| Active Clinical Staff               | 4-3           | HCSS-1, HCSS-2 & HCSS-3 |
| Background Check                    | 4-4           | HCSS-3                  |
| Clinical Staff                      | 4-6           | HCSS-1, HCSS-2 & HCSS-3 |
| Competency                          | 4-7           | HCSS-3                  |
| Do Not Return - Clinical            | 4-8           | HCSS-1                  |
| Do Not Return Occurrence Identifier | 4-10          | HCSS-1 & HCSS-2         |
| Do Not Return - Professional        | 4-11          | HCSS-2                  |
| Health Status                       | 4-13          | HCSS-3                  |
| Hours Worked                        | 4-14          | HCSS-1 & HCSS-2         |
| Job Appropriate Credentials         | 4-15          | HCSS-3                  |
| Personnel File Record Identifier    | 4-16          | HCSS-3                  |

|  |   |
|--|---|
| <b>Data Element Name:</b>                  | Active Clinical Staff   |
| <b>Collected For:</b>                      | HCSS-1, HCSS-2 & HCSS-3   |
| <b>Definition:</b>                         | Clinical staff that worked assigned shifts/contracts during the designated reporting period (data collection month).  |
| <b>Suggested Data Collection Question:</b> | Did the clinical staff member work at any time during the applicable reporting period?  |
| <b>Allowable Values:</b>                   | <p>Yes Clinical staff member worked at any time during the designated reporting period (data collection month)</p> <p>No Clinical staff member did not work at any time during the designated reporting period (data collection month)</p>  |
| <b>Suggested Data Sources:</b>             | <ul style="list-style-type: none"> <li>• Personnel files</li> <li>• Time cards</li> <li>• Time sheets</li> <li>• Work schedules</li> </ul>  |
| <b>Guidelines for abstraction:</b>         | <ul style="list-style-type: none"> <li>• Clinical staff that has worked any time during the designated reporting period should be included in this measure.</li> <li>• Clinical staff that has worked one or more hours during the designated reporting period should be included in this measure.</li> </ul> |

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| <b>Data Element Name:</b>                  | Background Check   |
| <b>Collected For:</b>                      | HCSS-3   |
| <b>Definition:</b>                         | Documentation in personnel file to verify that employee is not disqualified from patient contact due to criminal conviction or other conduct substantially related to patient care.  |
| <b>Suggested Data Collection Question:</b> | Is there documentation in the personnel file that a background check has been done and does this documentation verify that the employee is not disqualified from patient contact due to criminal conviction or other conduct substantially related to patient care?  |
| <b>Allowable Values:</b>                   | <p>Yes There is documentation in the personnel file demonstrating that the requirements of the minimum data set for this element have been met.</p> <p>No Documentation in the personnel file of the minimum data set requirements for this element is missing, incomplete, or expired.</p>  |
| <b>Suggested Data Sources:</b>             | <ul style="list-style-type: none"> <li>• OIG on-line check, Sanctions search, License Look-Up, and other computer searches</li> <li>• Departments of professional registration and regulation</li> <li>• State licensing boards</li> <li>• State disciplinary boards</li> <li>• State/national background studies</li> <li>• State/national data bases</li> </ul>  |
| <b>Guidelines for abstraction:</b>         | <p>For purposes of data collection for this measure, personnel file documents must meet requirements as specified by the minimum data set for background check. Proof of background check includes the following components:</p> <ul style="list-style-type: none"> <li>• Verification of previous employers for new hires</li> <li>• Reference checks for new hires</li> <li>• Background check, including criminal records search, at the time of hire and rehire</li> </ul> |

Disqualifications from patient care may include:

- Health care related civil judgments in federal or state court
- Health care related criminal convictions in federal or state court
- Injunctions
- Actions taken by federal or state licensing and certification agencies, including revocations, reprimands, censures, probations, suspensions, any other loss of license, or the right to apply for or renew a license
- Exclusions from participation in federal or state health care programs

**Data Element Name:** Clinical Staff

**Collected For:** HCSS-1, HCSS-2 & HCSS-3

**Definition:** Healthcare staff that are directly involved in the provision of patient care or direct patient care as part of their assigned duties. Clinical Staff may include but are not limited to:

1. Licensed Independent Practitioners (LIPs)
2. Registered Nurses
3. Licensed Practical Nurses
4. Certified Nursing Aides and Assistants
5. Pharmacists
6. Allied health staff (see guidelines for abstraction)
7. Care companions
8. Sitters

**Suggested Data Collection Question:** Is the staff member directly involved in the provision of patient care or direction of patient care as part of his or her assigned duties?

**Allowable Values:** Yes Assigned duties include direct provision of patient care or direction of patient care.  
No Assigned duties do not involve direct provision of patient care or direction of patient care.

**Suggested Data Sources:**

- Assignment sheets
- Personnel files
- Position description
- Work schedules

**Guidelines for abstraction:** Allied health staff are those clinical healthcare professions distinct from the medical doctor and nursing professions. They may include but are not limited to:

- Diagnostic Technicians supervisors
- Pharmacists
- Pharmacy Technicians
- Phlebotomists
- Physical Therapists
- Physical Therapy Assistants
- Physician Assistants
- Respiratory Therapists
- Speech Pathologists
- Surgical Assistants
- Hemodialysis
- Sonography
- Radiology
- Dieticians / Nutritionists
- Medical Technologists
- Medical Assistants
- Occupational Therapists
- Patient care managers/

|  |   |
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| <b>Data Element Name:</b>                  | Competency  |
| <b>Collected For:</b>                      | HCSS-3  |
| <b>Definition:</b>                         | Documentation in personnel file that the employee's clinical knowledge, experience, and capabilities are appropriate for assigned duties per the requirements of the minimum data set for competency.   |
| <b>Suggested Data Collection Question:</b> | Are the necessary sub-components of the minimum data set for this element present in the personnel file?  |
| <b>Allowable Values:</b>                   | <p>Yes There is documentation in the personnel file demonstrating that the requirements of the minimum data set for this element have been met.</p> <p>No Documentation in the personnel file of the minimum data set requirements for this element is missing, incomplete, or expired.</p>   |
| <b>Suggested Data Sources:</b>             | <ul style="list-style-type: none"> <li>• Clinical skills checklists / competency assessments</li> <li>• Continuing education credits</li> <li>• Documents that verify training and education</li> <li>• References from previous employers</li> </ul>   |
| <b>Guidelines for abstraction:</b>         | <p>Personnel file documents must meet requirements as specified by the minimum data set for competency. Proof of appropriate competency includes the following components:</p> <ul style="list-style-type: none"> <li>• Verification of prior work experience in the profession assigned</li> <li>• Assessment of clinical skills and knowledge appropriate to the discipline and / or specialty at the time of hire / assignment, and annually thereafter</li> <li>• OSHA and HIPAA compliance training at the time of initial assignment then annually or as dictated per specific regulation</li> <li>• Current CPR card for those categories of employees required under state law to be certified in basic life support (e.g., RN, LPN / LVN, etc.)</li> </ul> |

**Data Element Name:** Do Not Return - Clinical

**Collected For:** HCSS-1

**Definition:** A type of complaint received from a HCSS client dissatisfied with some aspect of the quality of care or service provided to that organization by a clinical staff employee of the HCSS firm, which generates a request that the HCSS employee should not be assigned again to the healthcare organization or a specific unit / division within the organization or that a HCSS employee should not return to complete an assignment as originally contracted; a request for Do Not Return that includes a clinical reason, provided by the HCSS client to the HCSS firm, either verbally or in writing.

**Suggested Data Collection Question:** Has the client requested that a HCSS employee not return due to a clinical reason?

**Allowable Values:**

Yes A Do Not Return due to a clinical reason was requested by the client.

No There is no documentation of a Do Not Return due to a clinical reason, OR no reason for Do Not Return was given.

**Notes for Abstraction:**

- Documentation includes all forms of tracking reports of Do Not Return, including written communication from a HCSS client stating a clinical reason, electronic documentation from a HCSS client stating a clinical reason, or clinical reasons verbally communicated by the HCSS client to the HCSS firm and transcribed using an internal form or software databases.
- Follow-up with the client after verbal requests for Do Not Return may be necessary to clarify the nature of the complaint and identify a reason for the request. Information verbally communicated by the client should be documented by the HCSS firm and used to substantiate a reason for the Do Not Return request if possible.

- Clinical reasons for Do Not Return may be related but not limited to the following categories:
  - Clinical competency issues
  - Medication-related issues
  - Documentation-related issues
  - Patient abuse
  - Patient safety issues
  - Credentialing
  - Client or physician complaints about employee's clinical competence
  - Employee incidents related to clinical competence
  - Non-performance of clinical assignment /duties

**Suggested Data Sources:**

- Hard copy/electronic copy
- Personnel files
- Staff evaluation forms
- HCSS logs
- Client files
- Client satisfaction records
- Incident report forms
- Complaint forms
- Commercial and custom computer software
- Records / notes of telephone conversations and verbal discussion with clients about a request for Do Not Return

**Guidelines for abstraction:**

- Other terms and acronyms may be used to describe episodes / occurrences of Do Not Return
  - Do Not Rehire
  - Do Not Use (DNU)
- Termination of an employee by the HCSS firm is not a requirement for the designation of Do Not Return.
- Termination of an employee by the HCSS firm may occur after one or more requests for the employee to not return to one or more client organizations.
- The occurrence of Do Not Return is counted and included in the numerator population whether the firm decides to terminate the employee, or to remarket the employee to other clients following evaluation of the occurrence.

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| <b>Data Element Name:</b>                  | Do Not Return Occurrence Identifier  |
| <b>Collected For:</b>                      | HCSS-1 & HCSS-2  |
| <b>Definition:</b>                         | Identifier generated by the HCSS firm that uniquely identifies each occurrence of Do Not Return. The identifier is used in order to allow the HCSS firm to reference a particular client request for Do Not Return for purposes of data collection review. |
| <b>Suggested Data Collection Question:</b> | What is the unique identifier that distinguishes this client's specific request for Do Not Return from other occurrences / episodes involving the same HCSS employee or different clinical staff members?  |
| <b>Format:</b>                             | <b>Type:</b> Alphanumeric<br><b>Occurs:</b> Once   |
| <b>Allowable Values:</b>                   | Value greater than 0   |
| <b>Suggested Data Sources:</b>             | Unique HCSS generated number   |
| <b>Guidelines for abstraction:</b>         | <ul style="list-style-type: none"> <li>• There is no specific requirement for identifier length.</li> <li>• All occurrences of Do Not Return used for data collection purposes of this measure must have an assigned identifier.</li> </ul>                |

**Data Element Name:** Do Not Return - Professional

**Collected For:** HCSS-2

**Definition:** A type of complaint received from a HCSS client dissatisfied with some aspect of the quality of care or service provided to that organization by a clinical staff employee of the HCSS firm, which generates a request that the HCSS employee should not be assigned again to the healthcare organization or a specific unit / division within the organization or that a HCSS employee should not return to complete an assignment as originally contracted; a request for Do Not Return that includes a professional reason, provided by the HCSS client to the HCSS firm, either verbally or in writing.

**Suggested Data Collection Question:** Has the client requested that a HCSS employee not return due to a professional reason?

**Allowable Values:** Yes A Do Not Return due to a professional reason was requested by the client.

No There is no documentation of a Do Not Return due to a professional reason, OR no reason for Do Not Return was given.

**Notes for Abstraction:**

- Documentation includes all forms of tracking reports of Do Not Return, including written communication from a HCSS client stating a professional reason, electronic documentation from a HCSS client stating a professional reason, or professional reasons verbally communicated by the HCSS client to the HCSS firm and transcribed using an internal form or software databases.
- Follow-up with the client after verbal requests for Do Not Return may be necessary to clarify the nature of the complaint and identify a reason for the request. Information verbally communicated by the client should be documented by the HCSS firm and used to substantiate a reason for the Do Not Return request if possible.
- Professional reasons for Do Not Return may be

related but not limited to the following categories:

- Professional conduct issues
- Attendance
- Tardiness
- No shows
- Job abandonment
- Non-performance of job responsibilities
- Insubordination
- Rule violation
- Disturbed work unit balance
- Damaged business reputation
- Damaged property
- Customer service issues
- Client or physician complaints related to employee's professional conduct
- Employee incidents related to professional conduct
- Unlawful activities

**Suggested Data Sources:**

- Hard copy/electronic copy
- Personnel files
- Staff evaluation forms
- HCSS logs
- Client files
- Client satisfaction records
- Incident report forms
- Complaint forms
- Commercial and custom computer software
- Records / notes of telephone conversations and verbal discussion with clients about a request for Do Not Return

**Guidelines for abstraction:**

- Other terms and acronyms may be used to describe episodes / occurrences of Do Not Return
  - Do Not Rehire
  - Do Not Use (DNU)
- Termination of an employee by the HCSS firm is not a requirement for the designation of Do Not Return.
- Termination of an employee by the HCSS firm may occur after one or more requests for the employee to not return to one or more client organizations.
- The occurrence of Do Not Return is counted and included in the numerator population whether the firm decides to terminate the employee, or to remarket the employee to other clients following evaluation of the occurrence.

|  |  |
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| <b>Data Element Name:</b>                  | Health Status  |
| <b>Collected For:</b>                      | HCSS-3   |
| <b>Definition:</b>                         | Documentation in the personnel file that demonstrates that the employee has completed appropriate health screening per the requirements of the minimum data set for health status.   |
| <b>Suggested Data Collection Question:</b> | Is there documentation in the personnel file that demonstrates that the employee has completed appropriate health screening requirements as specified by the minimum data set for this element?  |
| <b>Allowable Values:</b>                   | <p>Yes    There is documentation in the personnel file demonstrating that the requirements of the minimum data set for this element have been met.</p> <p>No     Documentation in the personnel file of the minimum data set requirements for this element is missing, incomplete, or expired.</p>   |
| <b>Suggested Data Sources:</b>             | <ul style="list-style-type: none"> <li>• Health records</li> <li>• History and physical records</li> <li>• Lab/test results</li> </ul>   |
| <b>Guidelines for abstraction:</b>         | <p>For purposes of data collection for this measure, personnel file documents must meet the following health status requirements:</p> <ul style="list-style-type: none"> <li>• Centers for Disease Control and Prevention (CDC) TB testing requirements for health care workers <ul style="list-style-type: none"> <li>○ Initial baseline testing upon hire</li> <li>○ Annual or serial screening as determined by state regulations or CDC risk classification,</li> </ul> <p style="text-align: center;"><b>OR</b></p> </li> <li>• Documentation that employee previously tested positive (e.g., CXR report, physician note or physical exam)</li> </ul> |

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| <b>Data Element Name:</b>                  | Hours Worked   |
| <b>Collected For:</b>                      | HCSS-1 & HCSS-2  |
| <b>Definition:</b>                         | Total number of hours actually worked by active clinical staff during the reporting month.   |
| <b>Suggested Data Collection Question:</b> | What is the total number of hours worked by my active clinical staff for the reporting month?  |
| <b>Format:</b>                             | <b>Type:</b> Numeric<br><b>Occurs:</b> Once  |
| <b>Allowable Values:</b>                   | Value greater than 0   |
| <b>Suggested Data Sources:</b>             | Time sheets<br>Time cards<br>Payroll logs<br>Billing logs<br>Financial reports<br>Software programs and payroll databases  |
| <b>Guidelines for abstraction:</b>         | <ul style="list-style-type: none"> <li>• Hours worked are not the same as “billable” hours.</li> <li>• Hours worked are not the same as “paid” hours.</li> <li>• Hours worked are not the same as “contracted” hours.</li> </ul> |

|  |   |
|--|---|
| <b>Data Element Name:</b>                  | Job Appropriate Credentials   |
| <b>Collected For:</b>                      | HCSS-3  |
| <b>Definition:</b>                         | Documentation in personnel file of: <ul style="list-style-type: none"> <li>• current licensure, registration, or certification in accordance with federal and state regulations, <u>or</u></li> <li>• education and training that is consistent with applicable legal and regulatory requirements and HCSS position description.</li> </ul>   |
| <b>Suggested Data Collection Question:</b> | Are the necessary components of the minimum data set for this element present in the personnel file?  |
| <b>Allowable Values:</b>                   | <p>Yes    There is documentation in the personnel file demonstrating that the requirements of the minimum data set for this element have been met.</p> <p>No     Documentation in the personnel file of the minimum data set requirements for this element is missing, incomplete, or expired.</p>  |
| <b>Suggested Data Sources:</b>             | <ul style="list-style-type: none"> <li>• Current state license</li> <li>• Registration/certification documents</li> <li>• School diploma</li> </ul>   |
| <b>Guidelines for abstraction:</b>         | <p>Proof of appropriate job credentials includes documentation in the personnel file of the following components:</p> <ul style="list-style-type: none"> <li>• Current license for employees licensed / registered by state boards of Professional Regulation and Education, or</li> <li>• Verification of certification program completion for employees not licensed by state boards of Professional Regulation and Education (i.e. Clinical Nursing Assistants)</li> </ul> <p>Note: The original, primary source document of a specific credential should be used to verify the accuracy of a qualification reported by an individual. It is acceptable to verify current licensure, certification, or registration with the primary source via a secure electronic communication or by telephone, if this verification is documented.</p> |

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| <b>Data Element Name:</b>                  | Personnel File Record Identifier   |
| <b>Collected For:</b>                      | HCSS-3   |
| <b>Definition:</b>                         | Identifier generated by the HCSS that uniquely identifies each personnel file. The identifier is used in order to allow the HCSS to reference a particular personnel file for purposes of data collection review.              |
| <b>Suggested Data Collection Question:</b> | What is the unique HCSS generated identifier that distinguishes the personnel file from others?  |
| <b>Format:</b>                             | <b>Type:</b> Alphanumeric<br><b>Occurs:</b> Once   |
| <b>Allowable Values:</b>                   | Value greater than 0   |
| <b>Suggested Data Sources:</b>             | Unique HCSS generated number   |
| <b>Guidelines for abstraction:</b>         | <ul style="list-style-type: none"> <li>• There is no specific requirement for identifier length.</li> <li>• All personnel files used for data collection purposes of this measure must have an assigned identifier.</li> </ul> |

## DATA COLLECTION AND DATA REPORTING

### ***Data Collection***

Data collection is the continuous process of gathering data points according to the measure specifications established for each of the three standardized HCSS measures. Data may be collected for additional non-standardized measures, if the firm chooses to monitor other indicators not included in the standardized measure set. All certified HCSS firms should be collecting data for all three standardized measures. Data collection for non-standardized measures may be used to enhance the firm's performance improvement plan, but cannot be used to replace or substitute for data collection for the standardized measures.

Ideally, firms should be collecting data for each of the three standardized measures every month; however, other schedules can be utilized (i.e. quarterly) with the provision that monthly data points are gathered and reported (e.g. graphs and/or tables with data plotted for every month of the calendar year.) Firms that do not prospectively collect data due to resource or other constraints should take steps to ensure that the appropriate number of personnel files is reviewed and findings displayed for each month.

### Example:

A firm reviews 60 personnel files for HCSS-3: "Completeness of Personnel File" third quarter performance measure data in October. The files selected should include 20 from active clinical staff on the roster in July, 20 from active clinical staff in August, and 20 from active clinical staff in September. All 60 records should not be pulled from active clinical staff on the roster in October, leaving gaps in monitoring for other months.

### ***Data Reporting***

Data reporting is a periodic event that provides the HCSS firm with an opportunity to share the findings and analyses of its data collection efforts with internal staff members, other divisions, or branch sites. Data reporting at intervals determined by The Joint Commission is also a requirement for HCSS certification.

Data reported to The Joint Commission should include the numerator and denominator figures for each measure, not just rates. Generally, the numerator is the smaller of the two numbers, and the denominator is the larger. The *Performance Measure Data Report* (see Appendix-5) is used to report data to The Joint Commission at the time of intra-cycle review and recertification. Graphic data displays should be used to demonstrate further analyses and included as part of the periodic data report. Data reporting should be done on a calendar year, rather than fiscal year basis.

# **DATA COLLECTION TOOLS HEALTH CARE STAFFING SERVICES**

## ***Introduction***

These data collection tools have been developed as one option for collecting HCSS performance measure data. Your firm may choose to design a manual data collection tool of its own or develop an electronic format for data collection.

These data collection tools have been created with the following objectives:

- Minimize unnecessary entries;
- Expedite and streamline the data collection process; and,
- Facilitate data aggregation for measure rate calculations.

## ***Guide to Use***

These data collection tools consist of worksheets and tally sheets for each measure. The worksheet should be utilized to collect data to identify the numerator population for that measure, and the tally sheet for data aggregation and measure rate calculations.

- Always complete the report period information. This is important to provide the monthly data points necessary for trend analysis, and to prevent gaps in data collection.
- Always create a unique identifier for each occurrence of Do Not Return. This is important since individual employees may be involved in more than one occurrence during the same reporting period or different reporting periods.
- Always create a unique identifier for each personnel file audited. This is also important since an individual personnel file might be included in the random sample for multiple reporting periods. Personnel files should not be re-audited until all files have been audited one time.

**Data Collection Tool  
Health Care Staffing Services**

| <b>HCSS-1 &amp; HCSS-2 Do Not Return Worksheet</b>              |                                     |                                     |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| Monthly Report Period:  |                                     |                                     |                                     |
| <input type="checkbox"/> Jan. 201 _                             | <input type="checkbox"/> Apr. 201 _ | <input type="checkbox"/> Jul. 201 _ | <input type="checkbox"/> Oct. 201 _ |
| <input type="checkbox"/> Feb. 201 _                             | <input type="checkbox"/> May 201 _  | <input type="checkbox"/> Aug. 201 _ | <input type="checkbox"/> Nov. 201 _ |
| <input type="checkbox"/> Mar. 201 _                             | <input type="checkbox"/> Jun. 201 _ | <input type="checkbox"/> Sep. 201 _ | <input type="checkbox"/> Dec. 201 _ |
| Do Not Return Occurrence Identifier                             |                                     | _____                               |                                     |
|   |                                     |                                     |                                     |
| Did the client request that an employee Do Not Return?          | Yes <input type="checkbox"/>        | No <input type="checkbox"/> (stop)  |                                     |
|   |                                     |                                     |                                     |
| 1). Was a clinical reason for the Do Not Return identified?     | Yes <input type="checkbox"/>        | No <input type="checkbox"/>         |                                     |
|   |                                     |                                     |                                     |
| Comments:   |                                     |                                     |                                     |
|   |                                     |                                     |                                     |
|   |                                     |                                     |                                     |
| 2). Was a professional reason for the Do Not Return identified? | Yes <input type="checkbox"/>        | No <input type="checkbox"/>         |                                     |
|   |                                     |                                     |                                     |
| Comments:   |                                     |                                     |                                     |
|   |                                     |                                     |                                     |

**Data Collection Tool  
Health Care Staffing Services**

| <b>HCSS-1 &amp; HCSS-2 Do Not Return Tally Sheet</b>  |                                     |   |                                     |
|---|-------------------------------------|---|-------------------------------------|
| Monthly Report Period:  |                                     |   |                                     |
| <input type="checkbox"/> Jan. 201 _   | <input type="checkbox"/> Apr. 201 _ | <input type="checkbox"/> Jul. 201 _                               | <input type="checkbox"/> Oct. 201 _ |
| <input type="checkbox"/> Feb. 201 _   | <input type="checkbox"/> May 201 _  | <input type="checkbox"/> Aug. 201 _                               | <input type="checkbox"/> Nov. 201 _ |
| <input type="checkbox"/> Mar. 201 _   | <input type="checkbox"/> Jun. 201 _ | <input type="checkbox"/> Sep. 201 _                               | <input type="checkbox"/> Dec. 201 _ |
| Do Not Return Occurrence Identifiers  |                                     | # _____ thru _____  |                                     |
| What is the total number of hours worked by active clinical staff for this reporting month?                   |                                     | _____   |                                     |
| What is the total number of hours worked by active clinical staff for this reporting month divided by 1,000?* |                                     | _____<br>*This is the denominator for measures HCSS-1 and HCSS-2. |                                     |
| Aggregate all worksheets with question #1 marked "yes".   |                                     | _____<br>This is the numerator for measure HCSS-1.                |                                     |
| Aggregate all worksheets with question #2 marked "yes".   |                                     | _____<br>This is the numerator for measure HCSS-2.                |                                     |
| Comments:   |                                     |   |                                     |
|   |                                     |   |                                     |

**Data Collection Tool  
Health Care Staffing Services**

| <b>HCSS-3 Personnel File Worksheet</b>   |  |   |   |
|--|--|---|---|
| Monthly Report Period:   |  |   |   |
| <input type="checkbox"/> Jan. 201 _<br><input type="checkbox"/> Feb. 201 _<br><input type="checkbox"/> Mar. 201 _  | <input type="checkbox"/> Apr. 201 _<br><input type="checkbox"/> May 201 _<br><input type="checkbox"/> Jun. 201 _                                   | <input type="checkbox"/> Jul. 201 _<br><input type="checkbox"/> Aug. 201 _<br><input type="checkbox"/> Sep. 201 _                     | <input type="checkbox"/> Oct. 201 _<br><input type="checkbox"/> Nov. 201 _<br><input type="checkbox"/> Dec. 201 _ |
| Personnel File Record Identifier   |  |   |   |
|  |  |   |   |
| Is the staff member involved in the provision or direction of patient care as part of his or her assigned duties?  | Yes <input type="checkbox"/>   | No <input type="checkbox"/> (stop)  |   |
|  |  |   |   |
| Did the staff member work at any time during the applicable reporting period?  | Yes <input type="checkbox"/>   | No <input type="checkbox"/> (stop)  |   |
|  |  |   |   |
| Is there documentation in the personnel file that demonstrates that employee has met the minimum data requirements for job appropriate credentials?<br><ul style="list-style-type: none"> <li>• Current state license</li> <li style="text-align: center;">OR</li> <li>• Verification of certification</li> </ul> (if license not required by state law) | Yes <input type="checkbox"/><br>(file meets all requirements for this element)<br><br>Yes <input type="checkbox"/><br>Yes <input type="checkbox"/> | No <input type="checkbox"/> (stop)<br><br>No <input type="checkbox"/> N/A <input type="checkbox"/><br><br>No <input type="checkbox"/> |   |
|  |  |   |   |
| Is there documentation in the personnel file that demonstrates that employee has met the minimum data requirements for competency appropriate for  | Yes <input type="checkbox"/><br>(file meets all requirements for this element)   | No <input type="checkbox"/> (stop)  |   |

|   |  |   |
|---|--|---|
| assigned duties?  |  |   |
| <ul style="list-style-type: none"> <li>• Verification of prior work experience<br/>AND</li> <li>• Assessment of clinical skills (new hire &amp; annually)<br/>AND</li> <li>• OSHA &amp; HIPAA compliance training<br/>AND</li> <li>• Current CPR Card (if required by state law)</li> </ul>   | <p>Yes <input type="checkbox"/></p> <p>Yes <input type="checkbox"/></p> <p>Yes <input type="checkbox"/></p> <p>Yes <input type="checkbox"/></p>  | <p>No <input type="checkbox"/></p> <p>No <input type="checkbox"/></p> <p>No <input type="checkbox"/></p> <p>No <input type="checkbox"/>    N/A <input type="checkbox"/></p> |
| <p>Is there documentation in the personnel file that demonstrates that employee has met the minimum data requirements for health screening?</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> TB test (PPD) (annually)<br/>OR</li> <li><input type="checkbox"/> Documentation of previous +</li> </ul>                    | <p>Yes <input type="checkbox"/> (file meets all requirements for this element)</p> <p>Yes <input type="checkbox"/></p> <p>Yes <input type="checkbox"/></p>                                     | <p>No <input type="checkbox"/> (stop)</p> <p>No <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>   |
| <p>Is there documentation in the personnel file that demonstrates that employee has met the minimum data requirements for background check?</p> <ul style="list-style-type: none"> <li>• Verification of previous employers<br/>AND</li> <li>• Reference checks<br/>AND</li> <li>Criminal records search (new hire &amp; rehire)</li> </ul> | <p>Yes <input type="checkbox"/> (file meets all requirements for this element)</p> <p>Yes <input type="checkbox"/></p> <p>Yes <input type="checkbox"/></p> <p>Yes <input type="checkbox"/></p> | <p>No <input type="checkbox"/> (stop)</p> <p>No <input type="checkbox"/></p> <p>No <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>                          |
| <p>Comments:</p>  |  |   |

**Data Collection Tool  
Health Care Staffing Services**

| <b>HCSS-3 Personnel File Tally Sheet</b>  |                                     |                                     |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| Monthly Report Period:  |                                     |                                     |                                     |
| <input type="checkbox"/> Jan. 201 _   | <input type="checkbox"/> Apr. 201 _ | <input type="checkbox"/> Jul. 201 _ | <input type="checkbox"/> Oct. 201 _ |
| <input type="checkbox"/> Feb. 201 _   | <input type="checkbox"/> May 201 _  | <input type="checkbox"/> Aug. 201 _ | <input type="checkbox"/> Nov. 201 _ |
| <input type="checkbox"/> Mar. 201 _   | <input type="checkbox"/> Jun. 201 _ | <input type="checkbox"/> Sep. 201 _ | <input type="checkbox"/> Dec. 201 _ |
| Personnel File Record Identifiers   |                                     | # _____ thru _____                  |                                     |
| What is the total number of active clinical staff for this reporting month?   |                                     | _____                               |                                     |
| How many personnel files were sampled? *  |                                     | _____                               |                                     |
|   |                                     | *This is the denominator.           |                                     |
| What is the total number of personnel files for which the answer is "yes" for all components of the four data elements? |                                     | _____                               |                                     |
|   |                                     | This is the numerator.              |                                     |
| Comments:   |                                     |                                     |                                     |
|   |                                     |                                     |                                     |

## SAMPLING

### ***Introduction***

Sampling is a process of selecting a representative part of a population in order to estimate the organization's performance, without collecting data for its entire population. Using a statistically valid sample, an organization can measure its performance in an effective and efficient manner. Sampling is a particularly useful technique for performance measures that require primary data collection from a source such as the personnel file. Sampling should not be used unless the organization has a large number of cases in the measure population because a fairly large number of sample cases is needed to achieve a representative sample of the population of interest.

To obtain statistically valid sample data, the sample size should be carefully determined and the sample cases should be randomly selected in such a way that the individual cases in the population have an equal chance of being selected. Only when the sample data truly represent the whole population can the sample-based performance measure data be meaningful and useful.

Health Care Staffing Services (HCSS) firms must meet the following sampling requirements:

### **HCSS-1 Do Not Return – Clinical, and HCSS-2 Do Not Return – Professional:**

- NO SAMPLING
- 100% of Do Not Return occurrences per month are considered for these measures.

### **HCSS-3 Personnel File Audit: SAMPLING ALLOWED**

### ***Sample Size Requirements***

HCSS firms selecting sample cases for the performance measure should ensure that their measure population(s) and sample size(s) meet the following conditions:

- Active clinical staff: must have worked during the reporting month.
- Clinical staff: staff involved in the provision or direction of patient care as part of their assigned duties (see Data Dictionary, Page 4-6).
- The sampling methodology is as follows:

#### **Monthly Sample Size Based on Population Size**

| <b># of Active Clinical Staff</b> | <b>Sample Size</b> |
|-----------------------------------|--------------------|
| 1 - 9                             | 100%               |
| 10 - 49                           | 10 personnel files |
| 50 - 99                           | 20%                |
| > 100                             | 20 personnel files |

### **Sample Size Examples**

- A HCSS has 8 active clinical staff for the reporting month. The sample size will be all 8 personnel files (100%).
- A HCSS has 43 active clinical staff for the reporting month. The sample size will be 10 personnel files.
- A HCSS has 85 active clinical staff for the reporting month. The sample size will be 17 personnel files (20% of 85).
- A HCSS has 235 active clinical staff for the reporting month. The sample size will be 20 personnel files.

### **Sampling Approaches**

Organizations that choose sampling must use simple random sampling or systematic random sampling.

Large corporations and multi-branch firms with greater than 100 active clinical staff may randomly select a minimum of 20 files for review each month from the total number of active clinical staff at all branches, or select a sample based on the size of each branch site.

**Simple random sampling** - selecting a sample size ( $n$ ) from a population of size ( $N$ ) in such a way that every possible sample of size  $n$  has the same chance of being selected.

#### Example:

For an HCSS with a population size of 240 active clinical staff per month, the sample size would be 20. To select a random sample of 20 files:

Simple random sampling:

- 1) Generate random numbers for individual files from a random number function using a statistical software package or computer programming language.
- 2) Sort data by the random numbers either in an increasing or decreasing order.
- 3) Select the first 20 personnel as the random sample.
- 4) Files should not be re-audited in subsequent months until all files have been audited one time.

**Systematic random sampling** - selecting every  $k^{\text{th}}$  record from a population of size  $N$  in such a way that a sample size of  $n$  is obtained, where  $k \leq N/n$ . The first sample record (i.e., the starting point) must be randomly selected before taking every  $k^{\text{th}}$  record. This is two step process:

- a) Select the starting point; and
- b) Then select every  $k^{\text{th}}$  record thereafter until the selection of the sample size is completed.

#### Example:

For a HCSS with a population size of 240 active clinical staff per month, the sample size would be 20. To select a random sample of 20 personnel files:

- 1) Determine the population size (total # of active clinical staff = 240) for the month;
- 2) Determine the sample size using the above table (20 personnel files);
- 3) Divide the population size by the sample size and take the quotient (i.e., the integer as the sampling interval  $k$ . The sampling interval  $k = 240/20 = 12$ . Thus, every 12<sup>th</sup> personnel file will be selected from the measure population until 20 files are selected.)
- 4) To ensure that each file has an equal chance of being selected, the "starting point" must be randomly determined before selecting every 12<sup>th</sup> file. Therefore a simple approach to determine where to start would be to write the numbers 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 on separate pieces of paper and place the numbers in a container and pull one piece of paper. For example if you draw the number 3, start with the 3<sup>rd</sup> file on your list and select every 12<sup>th</sup> file after that until you reach 20 files.
- 5) Files should not be re-audited in subsequent months until all files have been audited one time.

## DATA UTILIZATION

### *Introduction*

Improving the delivery of health care and the patient outcomes related to that care has always been a goal for health care providers. The last several decades have seen exciting advances in the methods employed toward this end. Through the study of work conducted in the industrial community and improvement methods with demonstrated effectiveness, tools and techniques of quality improvement have been applied to health care settings. However, the concept of collecting health care data to study care delivery and outcomes is not really new. Historical examples include the work of Florence Nightingale and Dr. Ernest Codman. Miss Nightingale is generally remembered as the founder of modern nursing, however her groundbreaking-work involving the collection of standardized data, the use of statistical analysis and graphical display is equally important. It was during the Crimean war that she invented the polar-area diagram to display various causes of death among soldiers as proportions of a wedge in a circle. Each wedge represented a month, thereby providing comparisons over time. Ernest Codman, a surgeon, was another pioneer in the use of data to track outcomes in healthcare. Early in the twentieth century he developed a system for collecting a set of standardized data on his surgical patients that included diagnosis, treatment, hospital complications and the result one year later. Called the End Result Idea, many of Codman's principles are now captured in current outcomes measurement. Both of these pioneers used data and scientific methods to evaluate performance and improve the quality of care. While advances in the science and technology of quality improvement have introduced additional tools and sophisticated types of data analysis, it is important to remember that measurement need not be difficult and complex to be effective, as illustrated by these historical examples.

For many readers of this guide, the methods and terminology associated with the use of performance measures, data collection, analysis and interpretation are very familiar and no introduction is needed. For others, this material may be less familiar. This section provides a brief review of some basic data analysis options as well as references for publications that address this topic in more detail.

The greater the understanding of the measurement process, the more effectively opportunities for improvement can be identified and changes implemented. Deciding what to measure, how to measure and how to analyze your data are important keys to success. The performance measures in this booklet are quantitative tools (for example, rate ratio, index, percentage) developed to provide an indication of your organization's performance on a selected process or outcome related to a specific disease or topic. The individual measure data provide the critical pieces that will be used in various analyses to identify patterns, trends, and opportunities for improvement, and to document performance and results. By using the standardized data definitions and calculation formulas (flowcharts) provided for each measure in this disease specific set, performance within your organization can be tracked over

time. In addition to these measures your organization may find it important to examine other processes and outcomes. The performance measurement tools and analysis approaches reviewed in this section may assist your organization to understand variations in processes, to identify improvement opportunities, and to document and sustain improved performance.

## ***Analysis***

Data are the critical components used for analysis. As such, a few words about the data themselves are warranted. Data include facts, observations, and measurements. As collected and recorded, they are often referred to as “raw data”. Through the application of appropriate statistical techniques and analysis tools, data can be interpreted and translated into information. Because analyses and ultimately conclusions are driven by data, the quality of the data is critical. The old adage “garbage in – garbage out” definitely applies here. Time spent up front to ensure that data are accurate, complete and consistent will support the integrity of the results. Data definitions and suggested sources have been provided for each measure in this set. It will be important to apply the definitions exactly as written and identify a consistent source for each data element within your organization’s documentation system. In some cases it may be necessary or more efficient to add a data element or a place to document observations/measurements to existing forms. These steps will help to streamline the collection process, minimize missing entries and ensure the credibility of your data.

There are a variety of tools used to facilitate the performance improvement process and analysis of performance measure data. Some are designed to support activities conducted by a team as part of a systematic approach to quality improvement. Many approaches are available but they share the use of methodology designed to systematically guide people through the stages of an improvement initiative. One example of a well known method is the Plan-Do-Study-Act (PDSA) cycle developed by Walter Shewart (1891-1967). Examples of performance measurement tools designed for group processes include brainstorming and multi-voting. Use of an organized approach to performance measurement is one of the expectations for health care staffing services certification. For an in-depth review of performance measurement methods and analysis tools/techniques several references are included at the end of this section. The overview of some of the common tools used for data analysis and display provided here may assist participants beginning the process of translating data into information. The tools described below are divided into two categories; those for understanding root causes for problems and those for analyzing/displaying data. For additional information on the methods and tools presented here, as well as others, see *Tools for Performance Measurement in Health Care: A Quick Reference Guide* and other suggested references for additional reading at the end of this section.

**Root Cause Analysis** (Identifying relationships and possible causes):

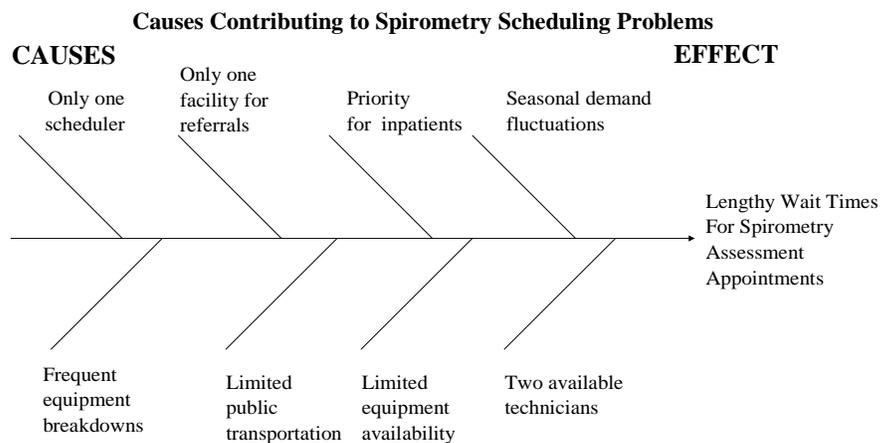
These tools are designed to assist your organization in examining the relationship of various factors to the targeted performance as well as identifying possible causes for unsatisfactory performance/outcomes.

**Root Cause Analysis Tools**

- a) **Cause and Effect (Fishbone) Diagram:** A schematic drawn to clearly illustrate the various causes affecting a process by sorting out the causes contributing to the effect. The notation format used takes on the appearance of a fish skeleton leading to the name “Fishbone Diagram”.
  - Key applications
    - Early in the performance improvement process
    - Assists in focusing on a number of possible causes
  - Benefits
    - To identify possible causes contributing to a possible problem
    - Depict the relationship between the problem and its causes

## Performance Improvement in Asthma Care

Sample Cause and Effect Diagram

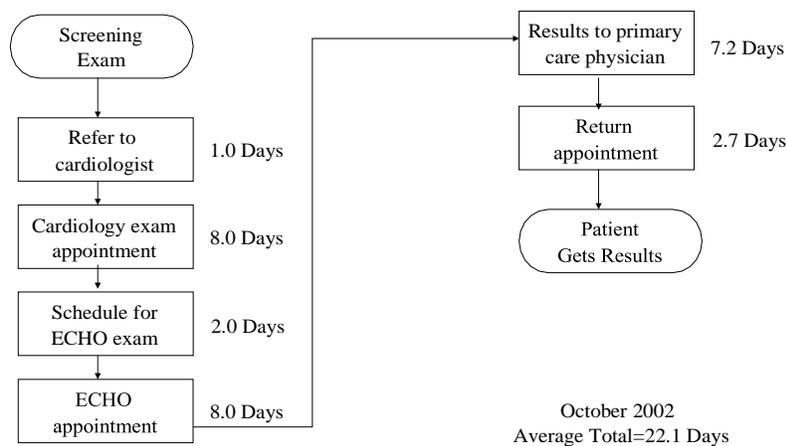


- b) **Flowchart:** A diagram illustrating, through the use of common symbols (see Appendix-4), the step by step path a process follows. Generally a tool used in planning stages.

- Key applications
  - When designing new processes, identifying problems, planning solutions
- Benefits
  - Graphically presents the path a process follows, step by step
  - Helps identify inefficiencies, misunderstanding, and redundancies, while providing insight into how a given process should be performed

## Performance Improvement in Heart Failure Care

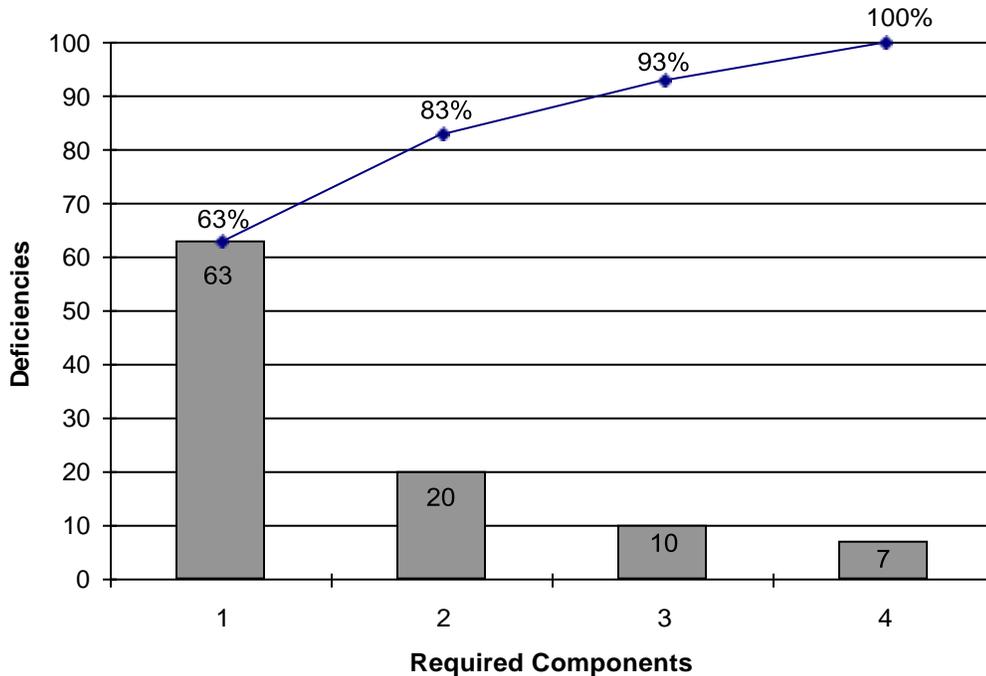
**Heart Failure Screening Flowchart**  
**LVE Assessment Process**  
 (Average Data)



c) **Pareto Chart:** A chart displaying the causes of a problem ranked by order of occurrence. By revealing which causes have the greatest influence, priorities can be set for interventions.

- Key applications
  - Finding causes of a problem, and setting priorities for intervention-focus efforts
  - Bars in rank order of occurrence
  - Bars represent a different variable or problem
- Benefits
  - Reveals which causes of a problem are most important
  - Separate “vital few” (80/20 rule)
- Drawbacks
  - Not applicable to problems with a single cause

### Pareto Chart on Deficiencies in Personnel File Audits



Key:

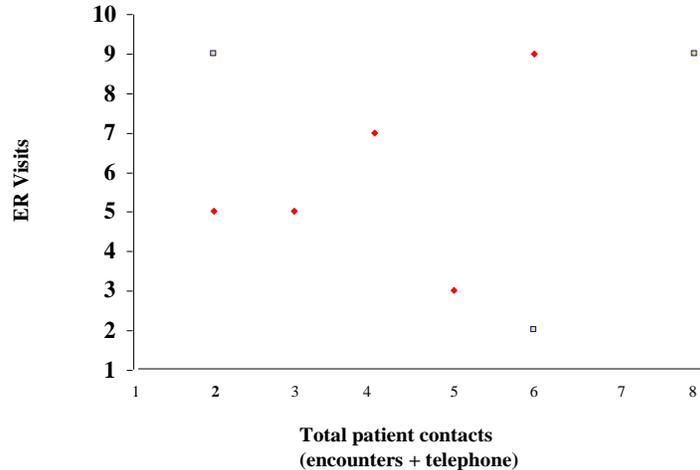
- 1 = Job Appropriate Credentials
- 2 = Competency
- 3 = Health Status
- 4 = Criminal Background Check

d) **Scatter Diagram:** This tool is a graph on which variables are represented by individual points. The patterns formed by the individually plotted points reveal the relationship (or lack of) between variables. It does not establish causation but rather the correlation between two factors.

- Key applications
  - Determines whether a correlation exists between two variables: Is variable A related to or affecting variable B?
  - Chart facilitates searching for possible cause and effect relationship (e.g. education accompanied by written instructions with improved self-management)
- Benefits
  - Quick, easy and certain
- Drawbacks
  - Requires a large set of data
  - Indicates a relationship, but not causation

# Performance Improvement in Asthma Care

Sample Scatter Diagram – Patient Contacts and number of ER Visits



## Analysis – Display

These tools are useful for assessing your data. As part of data assessment, analysis tools support sorting, organizing, and aggregating data as well as displaying patterns/trends in performance. These tools provide the keys to unlocking what the data mean and they support accurate interpretation. Analysis can vary in complexity making the selection of techniques and tools an important consideration. It is also important to consider organizational expertise and resources (human and technological), and thoughtfully match the tools with the type and volume of data. The quality improvement professional at your organization is a valuable resource and, if available, should be consulted early and often. Fortunately, there are also many publications now available that provide “how to” guidance that demystifies data analysis and interpretation. Please see the suggested references at the end of this section for the names of a few.

When examining the data collected for the purpose of studying performance it is important to recognize that some variation will exist. For example, if the sales figures at a department store were examined monthly from October to January it would not be surprising to see a steady rise for October to December with a noticeable drop in January. This would be expected due to holiday shopping and would not necessarily mean that there was a problem requiring changes in operations. On the other hand, if sales fell between October and December, there may be some unusual cause; perhaps road construction diverted shoppers to another mall. The patterns of variation in healthcare performance are also subject to normal and unusual variation and therefore it is important to use techniques to understand the variation in a process before taking any action. It should be remembered that these tools will help discern processes that are in *statistical control* (normal variation) versus *out of*

*statistical control* (special causes of variation). It does not mean that the performance is satisfactory. Using the store example, sales could be in statistical control but be extremely low leading to bankruptcy. Several of the tools reviewed here are designed to help discern between these types of variation.

Common cause variation: Normal variation in any process; not indicative of a process that is out of statistical control.

Examples:

- Number of ambulatory patients seen daily
- Varying levels of patient acuity
- Percentage of incomplete records

Special cause variation: A factor that intermittently and unpredictably induces variation over and above that inherent in the system. When viewing a control chart, it often appears as an extreme point, such as the point beyond the control limits or as one of several defined patterns in the data.

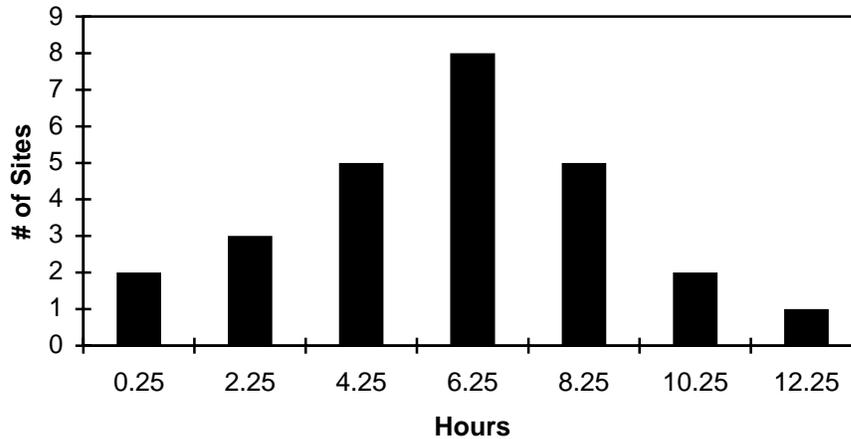
Examples:

- Damage to client records because of water damage from a burst pipe
- Increased volume of patients seeking laser surgery for vision correction following an extensive promotional media campaign
- Increase in telephone calls from parents to a public health department following news stories about several cases of bacterial meningitis in local children

### **Data Analysis/Display Tools**

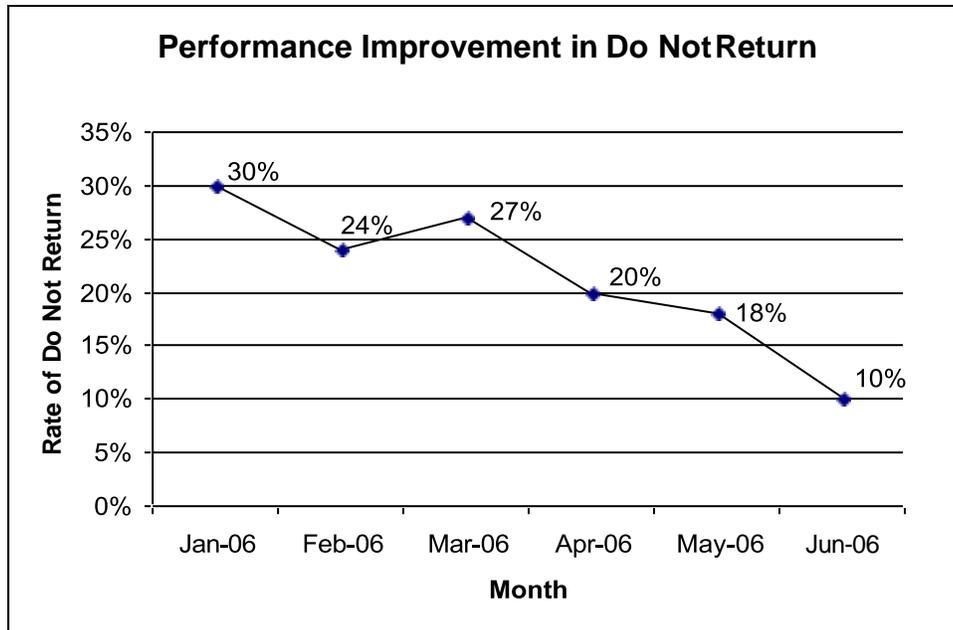
- a) **Histogram**: A bar chart that displays the variation and the distribution of that variation for a process at a single point in time.
- Key applications
    - Bar chart used for one variable
    - Evaluating a process at a specific point in time
    - Used when there is a wide variety of results
  - Benefits
    - Reveals whether the distribution in a process is normal and which areas are probable causes of trouble
    - Used to visualize central location, shape and spread of data
  - Drawbacks
    - Not applicable to binary (yes/no) outcomes
    - Needs a large set of data

### Average Number of Hours Spent on Data Collection in January



b) **Line Graph:** This is one of the simplest graphs that can be used to display measurements over specific time periods. Data are plotted and then connected with a line creating upward and downward patterns as performance varies.

- Key applications
  - Used to spot trends in a process
- Benefits
  - Quick, easy up-to-the-minute
- Drawbacks
  - Not able to show if a process is in statistical control

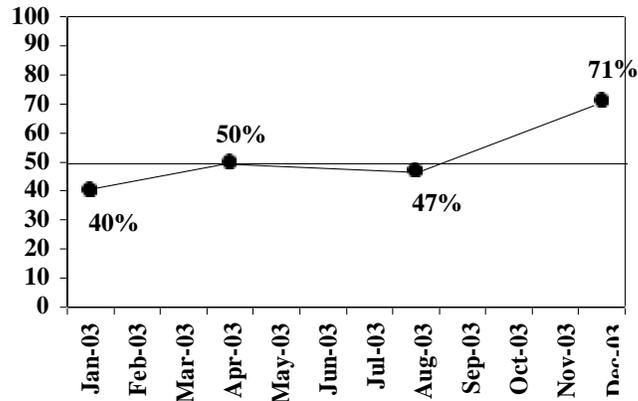


- c) **Run Chart:** A run chart is a line chart to which a calculated median value has been drawn as a line for the full length of the X axis. Using this line as a reference, three specific tests can be used to determine if there is special cause variation present.
- Key applications
    - Used when analysis is required that is more sophisticated than a line graph, but simpler than a control chart
  - Benefits
    - Can indicate whether variation is due to a common or special cause
    - Quicker and easier to construct than a control chart
  - Drawbacks
    - Not as sensitive as a control chart for diagnosing outlier data

# Performance Improvement in Diabetic Care

## Sample Run Chart -

Percentage of patients with 2 HbA1c done in past year at least 3 months apart



d) **Control Chart:** This is a line graph which includes a line depicting the mean. It also includes two lines, one on either side of the mean, that are referred to as the upper and lower control limits. These limits are calculated using the mean, standard deviation and the number of observations. The control chart is used to assess if a process is in or out of statistical control, through the application of a series of tests to identify patterns in data points. There are several types of control charts and choosing the correct chart is important. Factors including the type of data, type of performance measure (e.g., rate, ratio) and the size of the sample determine which control chart should be used.

➤ Key applications

- To discover whether a process is in or out of statistical control

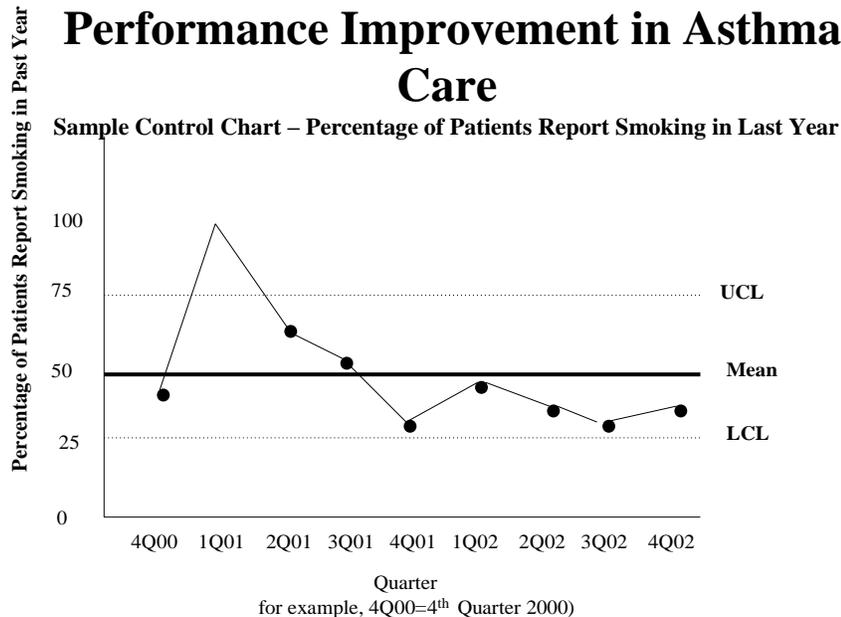
➤ Benefits

- Monitor changes in performance over time
- Ascertain causes of variation (special versus common)
- Assist in developing change strategies
- Demonstrate if change was an improvement
- Provides an accurate basis for prediction

➤ Drawbacks

- Not easy to construct unless using statistical process control (SPC) software
- Requires knowledge to interpret

## Performance Improvement in Asthma Care



Data analysis can be exciting and rewarding as it begins to provide meaning to a collection of facts, measurements or observations. The tools described here will help to answer some questions but may pose many more. Most importantly, data analysis will help to dispel assumptions and conserve resources by providing a scientific basis for making decisions about performance and selecting areas for improvement.

### ***Suggested References for Additional Reading***

*Framework for Improving Performance: From Principle to Practice.* Joint Commission on Accreditation of Healthcare Organizations, Oakbrook Terrace, Il. 1994.

*Managing Performance Measurement Data in Health Care.* Joint Commission Resources, Inc, Oakbrook Terrace, Il. Joint Commission on Accreditation of Healthcare Organizations, 2001.

*Measuring Quality Improvement in Healthcare: a guide to statistical process control applications.* In: Quality Resources. Carey RG, Lloyd RC. ASQ Press, Milwaukee, WI, 2001

*Overcoming Performance Measurement Challenges For Hospitals.* Joint Commission Resources, Oakbrook Terrace, Il. 2005.

*The Team Handbook*. PR Scholtes, BL Joiner, BJ Streibel. Oriel, Madison, WI, 2003.

*Tools for Performance Measurement in Health Care: A Quick Reference Guide*. Joint Commission on Accreditation of Healthcare Organizations, Oakbrook Terrace, IL. 2002.

*Using Performance Improvement Tools in HEALTH CARE Settings*. Joint Commission on Accreditation of Healthcare Organizations, Oakbrook Terrace, IL. 2006.

## **References**

Florence Nightingale. Agnes Scott College. Available at: <http://www.agnesscott.edu/lriddle/women/nitegale.htm>. Accessed December 15, 2003.

*Tools for Performance Measurement in Health Care: A Quick Reference Guide*. Joint Commission on Accreditation of Healthcare Organizations, Oakbrook Terrace, IL. 2002

## HEALTH CARE STAFFING SERVICES PERFORMANCE MEASURES GLOSSARY

**administrative performance measures:** Measures that address the organizational structure for coordinating and integrating services, functions, or activities across operational components, (for example: staff recruitment, credentialing, filling assignments).

**aggregate (measurement data):** Measurement data collected and reported by organizations as a sum or total over a given time period (e.g., monthly, quarterly), or for certain groupings (e.g., health care organization level).

**clinical performance measures:** Measures designed to evaluate the processes or outcomes of care associated with the delivery of clinical services; allow for intra- and inter-organizational comparisons to be used to continuously improve patient health outcomes; may focus on the appropriateness of clinical decision making and implementation of these decisions; and must be condition or procedure specific, or address important functions of patient care (for example: medication use, clinical events, sentinel events etc.).

**continuous variable:** An aggregate data measure in which the value of each measurement can fall anywhere along a continuous scale (for example: average number of days to fill open positions).

**customer satisfaction measures:** Measurement data that focus on the client's perception of care or services provided by the organization, (for example: staff satisfaction, patient satisfaction, or client satisfaction).

**data collection:** The act or process of capturing raw or primary data from a single or number of sources. Also called "data gathering."

**data collection effort:** The availability and accessibility of the required data elements, the relative effort required, and associated cost of abstracting or collecting the data.

**data element:** A discrete piece of data, such as "filled job orders" or "clinical staff."

**data sources:** The primary source document(s) used for data collection (for example, billing or administrative data, personnel files, agency logs).

**denominator:** The lower part of a fraction used to calculate a rate, proportion, or ratio. A statement that depicts the primary or overall population of interest that the measure is interested in evaluating, (for example: all clinical staff participating in direct patient care).

**flowchart:** An ordered sequence of data element retrieval and aggregation through which numerator and denominator events or continuous variable values are identified by a measure.

**measure information form:** Tool to provide specific and technical information on a measure. The information contained includes: measure set, measure I.D., performance measure name, rationale, type of measure, improvement noted as, numerator/denominator/continuous variable statements, inclusions, exclusions, data elements, data collection approach, sampling, data reported as, report period, and selected references.

**measure set:** Grouping of carefully selected information that when analyzed, provides a comprehensive understanding of the HCSS firm's performance.

**minimum data set:** An accepted set of data terms and definitions related to data collection.

**numerator:** The upper portion of a fraction used to calculate a rate, proportion, or ratio. The numerator depicts the portion of the denominator population that satisfies the condition of the performance measure to be an indicator event (for example: number of staff who has had their annual performance reviews).

**original source of measure:** An individual, group of individuals or an organization who is initially responsible for developing the measure.

**outcome measure:** A measure that indicates the result of the performance (or non-performance) of a function or process.

**performance measure:** A quantitative tool (for example, rate, ratio, index, percentage) that provides an indication of an organization's performance in relation to a specified process or outcome.

**process measure:** A measure which focuses on a process which leads to a certain outcome, meaning that a scientific basis exists for believing that the process, when executed well, will increase the probability of achieving a desired outcome.

**proportion:** A type of rate in which the numerator is expressed as a subset of the denominator (for example: proportion of staff who has had required screenings for TB).

**rate based:** An aggregate data measure in which the value of each measurement is expressed as a proportion or ratio.

**ratio:** The relationship between two counted sets of data, which may have a value of zero or greater. In a ratio, the numerator is not necessarily a subset of the denominator (for example: the number of Do Not Returns per hours worked).

**rationale:** An explanation of why an indicator is useful in specifying and assessing the process or outcome of care measured by the indicator. The rationale may include supportive evidence such as published literature, unpublished studies, focus group results, etc.

**reliability:** The ability of the indicator to accurately and consistently identify the events it was designed to identify across multiple settings.

**sampling:** A basic statistical technique or process consisting of drawing a limited number of measurements from a larger source (population) and then analyzing those measurements to estimate characteristics of the population from which the measurements have been drawn.

**validity:** Ability to identify opportunities for improvement in the quality of service/care; demonstration that the indicator use results in improvements in outcomes and/or quality of service/care.

**verification:** The process of confirming the accuracy or truth of information. Verification of previous employers substantiates that an individual was an employee of a business or organization for a certain period of time. Verification of prior work experience substantiates that an individual was employed to perform specific clinical duties or skills.

## Overview of Measure Information Form For Health Care Staffing Services

### Measure Set

The specific certification measure set to which an individual measure belongs (e.g., health care staffing services, stroke).

### Measure ID #

A unique alpha-numeric identifier assigned to a measure. Information associated with a measure is identified by this unique alpha-numeric number.

### Performance Measure Name

A brief title that uniquely identifies the measure.

### Rationale

An explanation that states why it is important to receive data/information on this measure. This may include specific literature references, evidence based information, expert consensus, etc.

### Type of Measure

Indicates whether the measure is used to examine a process or an outcome over time.

- **Process:** A measure used to assess a goal directed, interrelated series of actions, events, mechanisms, or steps, such as measure of performance that describes what is done to, for, or by patients, as in performance of a procedure.
- **Outcome:** A measure that indicates the result of performance (or non-performance) of a function(s) or process(es).

### Improvement Noted As

Describes how improvement would be indicated by the measure.

- An increase in the rate/score/number of occurrences (for example, customer satisfaction)
- A decrease in the rate/score/number of occurrences (for example, do not returns)
- Either an increase or a decrease in the rate/score/number of occurrences, depending upon the context of the measure (for example, utilization)

## Numerator Statement

Represents the portion of the denominator population that satisfies the conditions of the performance measure to be an indicator event.

**Numerator Inclusions** Specific information describing the components: comprising the numerator, not contained in the numerator statement, or not applicable.

**Numerator Exclusions** Specific information describing the components: that should not be included in the numerator, or none.

**Data Elements** Those data elements necessary or required to construct the numerator.

## Denominator Statement

Represents the population evaluated by the performance measure.

**Denominator Inclusions** Specific information describing the components: comprising the denominator, not contained in the denominator statement, or not applicable.

**Denominator Exclusions** Specific information describing the components: that should not be included in the denominator, or none.

**Data Elements** Those data elements required to construct the denominator

## Data Collection Approach

Recommended timing for when data should be collected for a measure. Data collection approaches include retrospective, concurrent or prospective data collection.

**Retrospective** data collection involves collecting data for events that have already occurred. **Concurrent** data collection is the process of gathering data on how a process works or is working while a patient is in active treatment. **Prospective** data collection is data collection in anticipation of an event or occurrence.

## Sampling

Indicates whether a measure is amenable to selecting a random subset of a population in order to estimate the organization's performance level without collecting data for the entire population.

### Data Reported As

Indicates how data will be reported for a measure.

- Aggregate rate generated from count data reported as a **proportion** (for example, rate-based measures which report summary data generated from the number of Cesarean sections as a proportion of deliveries)
- Aggregate rate generated from count data reported as a **ratio** (e.g., bloodstream infection per 1,000 line days).
- Aggregate measures of **central tendency** (e.g., continuous variables which report means and medians such as length of stay).

### Setting

The setting to which the performance measure set applies.

### Report Period

The defined time period for data collection.

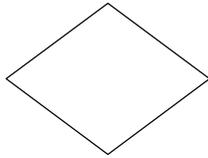
### Selected References

Specific literature references that are used to support the importance of the performance measure.

## Flowchart Symbols



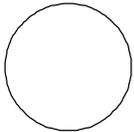
Start/Stop denotes the beginning or end of an algorithm.



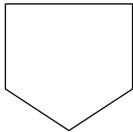
Diamonds represent "If...Then" decision points for logic tests and comparisons. Two or three flow lines exit the decision point to reflect alternative actions based upon an evaluation of the condition(s) stated around the decision point.



Rectangles or process boxes show when computation or manipulation of the data are required, such as a calculation or summarization.

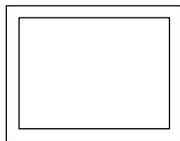


Circle or "On-page" connectors, labeled with a letter, show a link to sections of the algorithm which are continued on the same page.



Five-sided or "Off-page" connectors, labeled with a letter, show a link to sections of the algorithm which are continued on different pages.

*Note: Both circular, On-page, and five-sided, Off-page, Connectors containing the letters A, B, C, D, E, F, or G lead to measure Outcome Boxes.*



Outcome Boxes represent the result of data passed through the algorithm. Connectors extending from outcome boxes lead to the end of the algorithm, or to risk adjustment procedures, where applicable. This symbol is also used to identify the strata within a stratified measure.



Symbol to represent comments that should be taken into account when programming flowchart.



**Performance Measure Data Report # ( -- ), cont.**

**PART II: Provide current information for this measure as follows:**

|  |         |        |
|--|---------|--------|
| Have any modifications been made to this measure since the Measure Information Form was submitted?   | [ ] Yes | [ ] No |
| <p><u>If this measure has been modified:</u></p> <ul style="list-style-type: none"> <li>• <u>Describe the modifications and note when the change took place</u></li> <br/> <li>• <u>Describe what prompted the need for the change</u></li> </ul> <p><b>NOTE:</b> If the measure has undergone significant reconstruction during the certification cycle, e.g., redefining of numerator and/or denominator, submit a revised Measurement Information Form. Please contact your Account Representative.</p> |         |        |
| <p><b>PART III:</b></p> <p><u>Describe how data for this measure have been used to evaluate processes and/or patient outcomes of care.</u></p>   |         |        |
| <p><u>Identify potential opportunities for improvement.</u></p>  |         |        |
| <p><u>Describe any interventions and/or process modifications that may have been made based on measurement results and how the effectiveness of these changes were/will be measured.</u></p>   |         |        |
| <p><u>Explain any significant variations occurring in the updated data submitted for this measure. This would include any interruption in continuous data collection or change in the normal pattern of the data, that is, those variations that may be attributable to a special cause.</u></p>   |         |        |

Release Notes Version 2018May

Health Care Staffing Services Performance Measurement Implementation Guide  
May 24, 2018

**Data Element Updates**

Health Status was updated to reflect 2016 CDC guidelines for TB testing in health care workers.

**Measure Information**

**Impacts:**

Measure(s)

HCSS-1, HCSS-2, HCSS-3

**Rationale:**

The rationale for each measure was updated to reflect current evidence.

**Description:**

Selected references were updated to note the current Joint Commission certification manual cited. Additionally, recent periodicals and publications were added to the list.