TABLE OF CONTENTS

Benchmarking General Overview
  Introduction
  Types of Benchmarking (Internal/External)
  Role of National Home Infusion Foundation (NHIF)
  Data De-identification
  Contact Information

Benchmark Metric Status at Discharge
  Participation Criteria
  Participation Process
  Program Timelines
  Data Collection and Reporting
    Data Portal Instructions for Use
    Provider Report Access
    Data for Collection (Table 1: Required Data Elements)

Revision History

Appendix A: Sample Status at Discharge Provider Report
Appendix B: Discharge Reasons and Standard Definitions for Patient Outcome Data Elements
Appendix C: Sample Data Collection and Submission Tool
Appendix D: NHIF Data Portal Instructions

The Benchmarking Program is generously supported by

[Logo of brighttree by ResMed]
Introduction
Benchmarking in the health care industry collects measurable performance data to develop quality standards based on aggregating information from a wide range of providers. When multiple providers participate, it adds context for comparing results from one location to standards determined through reporting from locations across the entire industry. National benchmarks are the gold standard for measuring individual performance, and reporting over time encourages continuous quality improvement. Applying benchmarking in home infusion is a process of identifying where action can be specifically directed and monitored.

NHIF Benchmarking Programs
• Status at Discharge
• Patient Satisfaction
• 30-Day Hospital Readmission Rate

Types of Benchmarking

Internal Benchmarking
Internal benchmarking is used when providers compare their historical performance, such as comparing one year's data with another. This process allows providers to track, analyze, and trend their performance over time or compare different locations within the same organization.

External Benchmarking
External benchmarking establishes context for judging results. It is a tool that provides key information on how one provider’s service measures up against other “similar” providers. Without this added context, providers lack the perspective of what constitutes good performance.

Role of NHIF
NHIF is a not-for-profit 501(c)(3) affiliate of the National Home Infusion Association. The mission of NHIF is to advance infusion practice through research, leadership, and education programs. Benchmarking programs are funded and administered through NHIF as a research initiative. Data submitted from individual organizations is used following all aspects of the Ethics Code of the American Association of Public Opinion Researchers, thereby protecting respondent confidentiality. Data received by NHIF is de-identified, and NHIF will never have the ability to associate the raw, extracted data with any individual provider who participates in benchmarking. NHIF will not sell or otherwise provide participating location contact information to anyone and retains ownership of all raw data and benchmarks.

Data De-identification
A unique data participation code (DPC) is assigned to each location using a third party to de-identify the provider with their data. Data is submitted using a secure data entry portal available through registration by the provider entering a new password and using their DPC code. The DPC code and password-protected data entry portal maintain provider privacy. Provider data is anonymous to NHIA/NHIF.

Contact Information: Inquiries about this project may be directed to NHIIfdata@nhia.org.
Status at Discharge Benchmark Metric

Purpose
NHIF proposes this metric as a baseline for other clinical outcome data. Discharge data will be used to validate data from other benchmarking metrics.

Individual providers will use this data to quantify success rates associated with various home infusion therapies and patient populations. Providers can use this data to investigate and modify their clinical practice to reduce patient discharges due to unplanned hospitalizations, adverse reactions, and other therapy-related complications.

Benchmarking Metric Definition
The percentage of patients discharged from infusion therapy for standardized discharge reasons

Metric category: Core Metric
Total quarterly minimum number of patient cases for determining participation in benchmarks:
Individual locations = 20; or
Quarterly Patient sample size = 1000

Participation Criteria
Providers participating in the status at discharge benchmark must:

1. Adopt and report data according to the NHIF standard therapy categories.
   NHIF published standardized therapy categories to facilitate consistent analysis of benchmarking results by therapy type. In addition, this requirement ensures providers can quickly identify patients eligible for inclusion in the benchmarking metric. (Table 1: Required Data Elements)

2. Adopt, collect, and report data according to the standard NHIF discharge reason categories for individual patients.
   • NHIF benchmarking metrics require participating providers to follow the Standard Definitions for Patient Outcome Data Elements. These definitions ensure consistent application of the standardized Discharge Reasons.
   • For example, the assignment of “Therapy Complete” as a discharge reason must have a consistent meaning across all providers participating in the benchmarking program.
   • Providers may use more detailed reason codes within their software programs to categorize patient discharges as long as data can be consolidated to the broader reason in the NHIF definitions for reporting in the benchmarking program.

3. Adopt, collect, and report data using the NHIF categories for access device type.
   NHIF published standardized categories for access device types. This metric requires providers to classify access devices according to the NHIF standard definitions to facilitate analysis that may identify trends in access device utilization related to unplanned hospitalizations. (Table 1: Required Data Elements)
4. Adopt an organizational policy describing the methods for identifying eligible patients and exclusions, conducting employee training, and designing data collection procedures.
   - The organizational policy outlines the data sources (e.g., reports used for identifying eligible and excluded patients, patient demographic information, and unplanned hospitalization events, reasons, and outcomes.)
   - Identifies procedures for training employees on the standard definitions.
   - Identifies procedures for internal review and validation of data.

5. Inclusion Criteria:
   - Any patient that was active to the infusion provider for four (4) or more days and received at least one infusion treatment at home or in the infusion suite/clinic. Infusion treatment means the administration of a drug or nutrition product using a venous access device or subcutaneous access device.
   - The inclusion of enteral patients is optional.

6. Exclusion Criteria:
   - Catheter care patients
   - Patients using self-injectable medications that do not require an access device for administration
   - Hospice patients

7. Agree to submit data for all eligible patients.

8. Sign the NHIF participation agreements as applicable.
**Benchmarking Process**

1. **Apply to Participate**
   - Complete electronic application and submit to NHIF

2. **Evaluate Participation**
   - 1. Requirements
   - 2. SOPs
   - 3. Training and education

3. **Signed Agreement**

4. **DPC Code Assigned**
   - Code sent to participant

5. **Portal registration**
   - Users created in the portal
   - Portal instructions sent to participants

6. **Data Submission to Portal**
   - 1. Collect data
   - 2. Upload spreadsheet data to portal

7. **Data Retrieval from Portal**
   - Report generated by date span
   - Master data files
   - 2 days

8. **Data Analysis**
   - Statistical, cross-tabulation
   - Validate and review for flaws
   - Individual analyses for each provider
   - 4 days

9. **Provider Report Created**
   - 1. Summary report
   - 2. Individual
   - 10 days

10. **Individual Reports Distributed**
    - Participants notified to view their reports in the portal
    - 2 days

11. **Requirements**
    - 1 - 3 months

12. **SOPs**
    - 1 - 3 months

13. **Training and education**
    - 1 - 3 months

14. **Agreement**
    - 1 - 3 months
### NHIF Benchmarking Data Submission Timeline

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Enrollment Deadlines</th>
<th>Sample Months</th>
<th>Data Collection Deadlines</th>
<th>Data Submission Deadlines</th>
<th>Report Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>Dec 15</td>
<td>January</td>
<td>Feb 15</td>
<td>Apr 30</td>
<td>May 31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>February</td>
<td>Mar 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>March</td>
<td>Apr 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2</td>
<td>Mar 15</td>
<td>April</td>
<td>May 15</td>
<td>Jul 30</td>
<td>Aug 31</td>
</tr>
<tr>
<td></td>
<td></td>
<td>May</td>
<td>Jun 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>June</td>
<td>Jul 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q3</td>
<td>Jun 15</td>
<td>July</td>
<td>Aug 15</td>
<td>Oct 31</td>
<td>Nov 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>August</td>
<td>Sep 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>September</td>
<td>Oct 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q4</td>
<td>Sep 15</td>
<td>October</td>
<td>Nov 15</td>
<td>Jan 31</td>
<td>Feb 28</td>
</tr>
<tr>
<td></td>
<td></td>
<td>November</td>
<td>Dec 15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>December</td>
<td>Jan 15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Data Collection and Reporting

1. Required Data Elements (Table 1) will be coded and entered in an Excel® spreadsheet. A formatted spreadsheet is provided and includes the data elements listed in Table 1. In addition to this table providing the data elements it provides information on how the data will be coded. In most cases, a number, that refers to a given response, will be entered into the data cell.

2. Data Portal Instructions for Use (Appendix D)
   a. Register for an online account.
   b. Access the portal website to register.
   c. Enter the assigned DPC code as the Username
   d. Registered DPC accounts require approval through NHIF and become available for access within 1-2 business days.

3. Each DPC account is linked to a portal folder containing any individual reports that have been created for that DPC code.

4. Use Data Collection and Submission Tool (Excel®) for collecting data to submit to the portal (see Table 1 and Appendix C).

5. File Naming Convention: DPC#monthyearDC Example: DPC is 123456, the file name for the July Status at Discharge would be 123456july2021DC.

6. Provider Report Access
   a. Located in the NHIF Benchmarking Data Portal (See Appendix A: Sample Provider Report and Appendix D: NHIF Benchmarking Data Portal Instructions)
<table>
<thead>
<tr>
<th>Patient Data</th>
<th>Field Description and Data Codes</th>
<th>Data Collection Column (for use with Excel®)</th>
<th>Excel® Column Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Participation</td>
<td>This field is the Data Participation Code (DPC) that was assigned to each participating location. Data analysis will be linked to this code. Data from multiple participating locations can be included in the same file as long as the DPC code for each location is entered into Column A.</td>
<td>dpc</td>
<td>A</td>
</tr>
<tr>
<td>Code</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient ID</td>
<td>This field is the unique ID assigned by the home infusion provider. Patient names should not be entered</td>
<td>patid</td>
<td>B</td>
</tr>
<tr>
<td>Sample Month</td>
<td>This field should be set to the first day of the sample month for submitting patient data. The format for date is MM/DD/YYYY. Example: If entering data for a patient that was discharged on October 7, 2021, the sample month would be entered as 10/01/2021.</td>
<td>sammon</td>
<td>C</td>
</tr>
<tr>
<td>Patient Age</td>
<td>This field should contain the patient’s age in years, in digit format, on the date of initiation of services. Do not submit the patient date of birth in this column.</td>
<td>ptage</td>
<td>D</td>
</tr>
<tr>
<td>Patient Gender</td>
<td>This field contains patient gender. Valid values for this field are: 1 - Male 2 - Female M - Missing/Unknown</td>
<td>ptgen</td>
<td>E</td>
</tr>
<tr>
<td>Site of Care</td>
<td>This field contains the patient’s site of care Valid values for this field are: 1. Home 2. Infusion Suite/Clinic</td>
<td>siteoc</td>
<td>F</td>
</tr>
</tbody>
</table>
### Table 1: Required Data Elements (continued)

<table>
<thead>
<tr>
<th>Patient Data</th>
<th>Field Description and Data Codes</th>
<th>Data Collection Column (for use with Excel®)</th>
<th>Excel® Column Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Access Device</strong></td>
<td>This field contains the type of access device used for the home infusion therapy (for patients with multiple access devices, report the primary access device for the therapy provided). Valid values for this field are: 1. Central Venous Catheter (CVC), tunneled, cuffed 2. Central Venous Catheter (CVC), non-tunneled 3. Implanted port 4. Intrathecal 5. Epidural 6. Peripheral (PIV) 7. Peripherally inserted central catheter (PICC) 8. Midline 9. Subcutaneous 10. Other (The write-in response will be in column &quot;I&quot;)</td>
<td>acdevice</td>
<td>H</td>
</tr>
<tr>
<td><strong>Access Device Other</strong></td>
<td>This field contains the &quot;other&quot; write-in response for the type of access device used. Leave this column blank if there was no write-in response.</td>
<td>otherg</td>
<td>I</td>
</tr>
<tr>
<td><strong>Enteral Access Device</strong></td>
<td>If 3 (ENTERAL NUTRITION) was indicated as the therapy type in Column G of the Excel data entry file, indicate the type of access device that was used. Leave the data cell empty if enteral nutrition was not the therapy type. Valid values for this field are: 1. Nasogastric tubes (NGT) 2. Nasojejunal tube (NJT) 3. Percutaneous endoscopic either/or jejunostomy, gastrostomy (PEG) 4. Jejunostomy tube 5. Gastrostomy tube 6. Other</td>
<td>entaccd</td>
<td>J</td>
</tr>
<tr>
<td><strong>Discharge Reason</strong></td>
<td>This field contains the reason the patient was discharged. Valid values for this field are: 1. Therapy completed 2. Unexpected death 3. Unplanned hospitalization 4. Change in eligibility 5. Insufficient response/complication 6. Adverse drug reaction (ADR) 7. Access device related 8. Change infusion provider Other: (If this option is chosen, you must write-in column L what the &quot;other&quot; is)</td>
<td>dischrea</td>
<td>K</td>
</tr>
</tbody>
</table>
### Table 1: Required Data Elements (continued)

<table>
<thead>
<tr>
<th>Patient Data</th>
<th>Field Description and Data Codes</th>
<th>Data Collection Column (for use with Excel®)</th>
<th>Excel® Column Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Discharge Reason Other</strong></td>
<td>This field contains the “other” write-in response for the reason the patient was discharged. Leave this column blank if there was no write-in response.</td>
<td>otherj</td>
<td>L</td>
</tr>
</tbody>
</table>
| **Adverse Drug Reaction Severity** | If the reason for patient discharge was “6” (Adverse drug reaction) for Column K, select the severity of the ADR. If the reason for discharge was not ADR leave this data cell blank. Valid values for this field are:  
1. Mild (An experience that is usually transient and requires no special treatment or intervention.)  
2. Moderate (An experience that is alleviated with simple therapeutic treatments.)  
3. Severe (An experience that requires therapeutic intervention. If hospitalization is required for treatment it becomes a serious adverse event.)  
4. Serious (Any adverse event resulting in any of the following outcomes: Death, a life-threatening condition, inpatient hospitalization or prolongation of existing hospitalization, persistent or significant disability/incapacity, or a congenital anomaly/birth defect.) | adrtype                  | M                    |

### Revision History

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>02/28/2023</td>
<td>Revision for change in program sponsor. Minor editorial changes.</td>
</tr>
<tr>
<td>12/31/2021</td>
<td>Content reorganized. Table of Contents added. Gender added to the data collection. Removed catheter care therapy from the data collection. New column added to the data collection to provide a free text option for “other” as a discharge reason. Enteral access devices updated to incorporate “percutaneous endoscopic either/or jejunostomy, gastrostomy (PEG).” Data collection and reporting instructions incorporated.</td>
</tr>
<tr>
<td>1/1/2020</td>
<td>Updated</td>
</tr>
<tr>
<td>11/1/2019</td>
<td>New</td>
</tr>
</tbody>
</table>
## Appendix A: Sample Provider Report

### Quarter 2 2021 Results: 4/1/2021 - 6/30/2021
Location results: DPC

### I. Benchmark for % of Patients Receiving Anti-infective Therapies Achieving “Therapy Completed” Status at Discharge

<table>
<thead>
<tr>
<th>Status at Discharge Benchmark Metric</th>
<th>Aggregate %</th>
<th>Your Location %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapy Completed (%): Anti-infectives</td>
<td>92.81%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

**Therapy Completed Anti-infective**

<table>
<thead>
<tr>
<th>Aggregate %</th>
<th>Your Location %</th>
</tr>
</thead>
<tbody>
<tr>
<td>92.8%</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

### II. Benchmark for % of Patients Discharged Due to an Adverse Drug Reaction (all therapies)

<table>
<thead>
<tr>
<th>Status at Discharge Benchmark Metric</th>
<th>Aggregate %</th>
<th>Your Location %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients Discharged Due to an Adverse Reaction (all therapies)</td>
<td>0.32</td>
<td>0.00</td>
</tr>
</tbody>
</table>

**Adverse Drug Reaction**

<table>
<thead>
<tr>
<th>Aggregate %</th>
<th>Your Location %</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.32%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>
III. Benchmark for % of Patients Discharged Due to an Unplanned Hospitalization (all therapies)

<table>
<thead>
<tr>
<th>Status at Discharge Benchmark Metric</th>
<th>Aggregate %</th>
<th>Your Location %</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPC Sample Size</td>
<td>1,239</td>
<td>70</td>
</tr>
<tr>
<td>Unplanned Hospitalization</td>
<td>4.84%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Appendix B: Discharge Reasons and Standard Definitions for Patient Outcome Data Elements

1. Therapy Complete applies to any patient who is discharged from services because they no longer require infusion therapy. This discharge status is applied to patients when the physician has ordered discontinuation of the infusion therapy because the patient has achieved sufficient clinical improvement and/or has met the goals in the plan of care.

The following are examples of patients who are considered “Therapy Complete” at the time of discharge:
A patient for whom a physician order is received to end infusion treatment.
   a. A hospice or palliative care patient who expires expectedly and under ordinary circumstances.
   b. An anti-infective patient completes a course of IV therapy and then switches to oral medication.
   c. A parenteral nutrition patient that converts to an oral diet. A patient, who during the infusion episode of care experienced a “Serious” ADR, but resumed treatment and completes the prescribed regimen

2. Unexpected Death

3. Unplanned Hospitalization

4. Change in Eligibility includes, but is not limited to:
   a. An unsafe home environment, lack of caregiver support, reimbursement challenges, lack of desire for home treatment, or noncompliant with home treatment orders.
   b. A patient who changes insurance plans requires infusions in another care site such as an outpatient clinic or physician’s office.
   c. A patient who transfers to a skilled facility due to a lack of caregiver support in the home setting.

5. Insufficient Response/Complication includes a worsening of the condition or symptoms being treated with infusion therapy.
   a. A patient with osteomyelitis requires amputation after receiving several weeks of treatment with parenteral antimicrobials without improvement.

6. Adverse Drug Reaction (ADR)

7. Access Device Related

8. Changed Infusion Provider refers primarily to situations where the current infusion provider is unable to meet the patient’s needs.
   a. The patient requires a drug that cannot be acquired due to sole source distribution or shortages.
   b. A patient who moves outside of the infusion provider’s service area.
   a. The patient elects to use a different infusion provider or infusion care setting.

9. Other (free text entry field)
Appendix C: Sample Data Collection and Submission Tool (Excel®)

Sample Data Collection Tool

<table>
<thead>
<tr>
<th>dpc</th>
<th>patid</th>
<th>sammon</th>
<th>ptage</th>
<th>ptgend</th>
<th>siteoc</th>
<th>therapy</th>
<th>acdevice</th>
<th>otherg</th>
<th>entaccd</th>
<th>dischrea</th>
<th>otherj</th>
<th>adrtype</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456</td>
<td>65579</td>
<td>09/01/2021</td>
<td>75</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

Appendix D: Creating and Accessing the NHIF Portal

Creating/Accessing Your NHIF Portal Account

Use the link below to create and access your NHIF Portal account.
** If you have already registered for your account skip to page 3.

NHIF Benchmarking Portal

Login

Username

Password

Remember Me

Sign in

Register

Forgot your password?
If this is the first time accessing the NHIF Portal you will need to register for an account. Click the Register link, your **Username** must be the personalized **DPC Code** that has been provided to you. **NOTE: If your company has multiple locations/DPC codes participating in a NHIF program you will need to register each code separately.**

The email address & password you enter when registering is your choice, that password will be required every time you log into your account.

**Register**

**Username**

123456

**Email**

jennifer.lyons@nhia.org

**Password**


**Confirm Password**


**Register**

**Sign in**

**Forgot your password?**

Once you have registered a DPC account we will approve it on our end and link each DPC account to a folder that will contain all individual reports that have been created for that DPC code. All reports will be placed in this file; you will be able to log-in and access that folder and your reports anytime using the same portal link.

**NHIF Benchmarking Portal**

**Login**

**Username**


**Password**


**Sign in**

**Remember Me**
Effective 3/1/2021 we will ask you to start using the portal to both access reports and to submit your data for any of the NHIF Benchmarking and Research programs.

Each DPC account will have a folder structure created by NHIF for Reports and Data Submissions, you only need to use the folders for the programs you are participating in.

**NHIF Portal Folder Structure**

<table>
<thead>
<tr>
<th>DPC Folder 123456</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NHIF Reports</strong></td>
</tr>
<tr>
<td>30 Day HRA Reports</td>
</tr>
<tr>
<td>2021 30 Day HRA Reports</td>
</tr>
<tr>
<td>Patient Satisfaction Reports</td>
</tr>
<tr>
<td>2021 Pt Satisfaction Reports</td>
</tr>
<tr>
<td>Status at Discharge Reports</td>
</tr>
<tr>
<td>2021 Status at Discharge Reports</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DPC Data Uploads</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Day HRA Reports – Data Upload Files (HRA = Hospital Re-Admission)</td>
</tr>
<tr>
<td>2021 30 Day HRA – Data Upload Files</td>
</tr>
<tr>
<td>Pt Satisfaction – Data Upload Files</td>
</tr>
<tr>
<td>2021 Pt Satisfaction – Data Upload Files</td>
</tr>
<tr>
<td>Status at Discharge – Data Upload Files</td>
</tr>
<tr>
<td>2021 Status at Discharge – Data Upload Files</td>
</tr>
<tr>
<td>Clinical Services Study – Data Upload Files</td>
</tr>
<tr>
<td>2021 Clinical Services Study – Data Upload Files</td>
</tr>
<tr>
<td>Telehealth Study – Data Upload Files</td>
</tr>
<tr>
<td>2021 Telehealth Study – Data Upload Files</td>
</tr>
</tbody>
</table>
Document Listing

Click on “DPC Data Uploads”

Click on the folder for the program for which you are submitting data – *ie: Pt*

Previous folder

- 30 Day HRA – Data Upload Files
- Clinical Services Study – Data Upload Files
- Pt Satisfaction – Data Upload Files
- Status at Discharge – Data Upload Files
- Telehealth Study – Data Upload Files
Document Listing

Click on Folder for the Year/Otr you are submitting for

Previous folder

2021 Pt Satisfaction – Data Upload Files

2021 Pt Satisfaction – Data Upload Files

Document Listing

Previous folder

Qtr 1 2021

Qtr 2 2021

Once you have chosen the folder where you want to put your data click the + “Add your file”

Manage Uploads

Start > DPC Data Uploads > Pt Satisfaction - Data Upload Files > 2021 Pt Satisfaction - Data Upload Files > Qtr 2021

Previous folder

Add your file
Select the files you want to upload, you will see them populate in the portal.

Manage Uploads

NHIF Portal File Structure.docx

May 12, 2021 8:59pm 66 KB

Once you have uploaded all of your file you log out of the Portal.