# MEASURING POST ACUTE CARE OUTCOMES IN SNFS

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# Principles Guiding Measure Selection

- PAC quality measures need to
  - Reflect the primary goals for the population receiving care,
  - Be meaningful to the consumer and provider,
  - Risk adjust for differences in patient populations and acuity,
  - Be more heavily weighted for patient outcome measures than structure or process measures, and
  - Help achieve better outcomes (e.g. are timely and can be used in quality improvement efforts)
  - Be readily available for use now or under development to be used in the near future.

# Primary Purpose of PAC Care

- Assist individuals return to their prior living situation as quickly as possible
- Avoid rehospitalization
- Improve the individual's function related to mobility, self-care (e.g. ADLs), and speech
- Improve their clinical condition (e.g. wounds)
- Complete course of skilled nursing medical care
  - (e.g. IV medications such as antibiotics),
- Learn to manage their disease illness better
  - (e.g. how to administer medications)

# Framework for Measure Portfolio

- Grouped measures into those that apply to
  - "short stay" individuals seeking post-acute care
  - "long stay" individuals requiring long term care
- Classify measures using Donabedian's classic framework
  - Structure (e.g. staffing, equipment, etc)
  - Processes (e.g. treatments, meds, tests, etc)
  - Outcomes (function, disease, satisfaction, etc)

# Short Stay: **Structural** Measures

- CMS-State Survey Inspection score

- Staffing component on CMS Five Star

- Baldrige recipient
  - e.g. AHCA Quality Award silver/gold recipients

- Nurse Staff turnover

- Nursing presence
  - e.g., 24 hr RN or Nurse Practitioner available

- Staff satisfaction

# Short Stay: **Process** Measures

- CMS nursing home compare QMs
  - % immunized for both influenza and pneumovax
  - Antipsychotics started during first 100 days
- Transitions of care measure
  - modified version for SNF use of the CTM-3 patient interview measure on three items: provider addressed post-discharge needs, understand health instructions; understand purpose of medications)

# Short Stay: **Outcome** Measures

- 30d risk-adjusted rehospitalization following admission
- Risk-adjusted % discharged to community
- Improved function in:
  - self-care and mobility – risk adjusted (based on CARE tool)
  - speech/communication based on NOMs
- CMS nursing home compare QMs
  - % new pressure ulcers
  - % with untreated pain
- Resident/Family Satisfaction

# Commonly Used PAC Measures

- Five Star
  - Compliance with Medicare requirement of participation (3 yr avg)
  - Staffing levels
    - Total nursing hours per resident day (RN + LPN + nurse aide hours)
    - RN hours per resident day
  - Quality measures (9 measures; 2 apply to PAC population)
    - Pain (rated moderate or severe)
    - Pressure ulcer (new or worse)
- Nursing Home Compare
  - Quality measures (13 long stay; 5 PAC; 3 not included in five star)
    - Influenza vaccination
    - Pneumococcal vaccination
    - Antipsychotic use (newly prescribed following admission)

# Data Sources in PAC setting

- Medicare claims (SNF part A, B or D or Hospital part A)
- Minimum Data Set (MDS)
  - >500 clinical, functional, treatment or demographic data elements collected at admission, and regular intervals thereafter for anyone admitted to a nursing home from anywhere.
- Medical Record Review
- Patient interview/survey
- CMS survey inspection results
- Medicare Cost reports

# Sample size

- NQF & CMS and basic statistics requires a minimum denominator size for most measures of 25-30 people
  - Smaller sample sizes result in large fluctuations over time due to sample size and patient population rather than changes in care delivery
- Sample size precludes most measures being stratified by
  - Diagnoses
  - Payor
  - Patient characteristics

# # of Facilities vs # of Part A Admissions

| | 2009 | | 2010 | | 2011 | |
|---|---|---|---|---|---|---|
| | Number of Facilities | % of Total | Number of Facilities | % of Total | Number of Facilities | % of Total |
| TOTAL | 15,453 | | 15,449 | | 15,395 | |
| Low volume (≤ 100 stays/ year) | 6,766 | 44% | 6,744 | 44% | 7,773 | 50% |
| Moderate volume (101-200 stays/ year) | 4,678 | 30% | 4,591 | 30% | 4,449 | 29% |
| High volume (201-300 stays/ year) | 2,061 | 13% | 2,103 | 14% | 1,784 | 12% |
| Very high volume (>300 stays/ year) | 1,948 | 13% | 2,011 | 13% | 1,389 | 9% |

# # Part A admissions for Top 15 Hospital DRGs by Facility annual volume of Part A admissions

| DRG Categories | Low Vol (<100/yr) | | Mod Vol (100-200/yr) | | High Vol (200-300/yr) | | Very High Vol >300/yr | |
|---|---|---|---|---|---|---|---|---|
| | SNF stays 2009 | % of All SNF Stays | SNF stays 2009 | % of All SNF Stays | SNF stays 2009 | % of All SNF Stays | SNF stays 2009 | % of All SNF Stays |
| TOTAL | 451,119 | 2,230,389 | 637,920 | 2,230,389 | 437,273 | 2,230,389 | 704,077 | 2,230,389 |
| 1. Orthopedic surgery on lower extremity | 55,309 | 2.5% | 81,156 | 3.6% | 65,495 | 2.9% | 135,074 | 6.1% |
| 2. Respiratory | 67,714 | 3.0% | 83,695 | 3.8% | 50,532 | 2.3% | 67,725 | 3.0% |
| 3. Cardiac surgery | 9,884 | 0.4% | 15,817 | 0.7% | 12,679 | 0.6% | 25,233 | 1.1% |
| 4. Cardiac medical management | 37,728 | 1.7% | 54,067 | 2.4% | 35,906 | 1.6% | 54,766 | 2.5% |
| 5. GI hospitalizations (surgical and medical) | 31,422 | 1.4% | 44,580 | 2.0% | 30,825 | 1.4% | 48,380 | 2.2% |
| 6. Renal failure | 11,820 | 0.5% | 17,963 | 0.8% | 11,627 | 0.5% | 16,826 | 0.8% |
| 7. Amputations | 3,704 | 0.2% | 5,228 | 0.2% | 3,346 | 0.2% | 4,973 | 0.2% |
| 8. Spinal surgery | 2,663 | 0.1% | 4,258 | 0.2% | 3,880 | 0.2% | 8,484 | 0.4% |
| 9. Other major musculoskeletal surgery | 4,916 | 0.2% | 8,181 | 0.4% | 6,811 | 0.3% | 13,105 | 0.6% |
| 10. Other musculoskeletal medical mgmt | 23,126 | 1.0% | 34,940 | 1.6% | 25,768 | 1.2% | 44,136 | 2.0% |
| 11. Multiple significant trauma | 1,242 | 0.1% | 1,797 | 0.1% | 1,226 | 0.1% | 1,977 | 0.1% |
| 12. Infections & parasitic dis. (plus sepsis) | 52,428 | 2.4% | 74,247 | 3.3% | 47,122 | 2.1% | 64,947 | 2.9% |
| 13. Psychiatric | 6,146 | 0.3% | 7,509 | 0.3% | 4,233 | 0.2% | 5,298 | 0.2% |
| 14. Stroke and related conditions | 18,863 | 0.8% | 26,840 | 1.2% | 17,522 | 0.8% | 25,819 | 1.2% |
| 15. Other | 124,154 | 5.6% | 177,642 | 8.0% | 120,301 | 5.4% | 187,334 | 8.4% |

# Average volume Medicare Admissions per SNF for #1 Admitted diagnosis

| | Low Vol (<100/yr) | | Mod Vol (100-200/yr) | | High Vol (200-300/yr) | | Very High Vol >300/yr | |
|---|---|---|---|---|---|---|---|---|
| **# of SNFs (%)** | 7,773 (50%) | | 4,449 (29%) | | 1,784 (12%) | | 1,389 (9%) | |
| **DRG Categories** | SNF stays 2009 | % of All SNF Stays | SNF stays 2009 | % of All SNF Stays | SNF stays 2009 | % of All SNF Stays | SNF stays 2009 | % of All SNF Stays |
| **TOTAL** | 451,119 | 2,230,389 | 637,920 | 2,230,389 | 437,273 | 2,230,389 | 704,077 | 2,230,389 |
| **1. Orthopedic surgery on lower extremity** | 55,309 | 2.5% | 81,156 | 3.6% | 65,495 | 2.9% | 135,074 | 6.1% |
| **Avg # of Medicare Admissions per year** | 7.1 | | 18.2 | | 36.7 | | 96.6 | |

# AHCA DEVELOPED PAC QUALITY MEASURES

# AHCA Developed PAC Measures

- PointRight Pro 30 Rehospitalization     (now available)
- Discharge Back to the Community     (now available)
- Length of Stay     (Feb 2015)
- Improvement in Functional Status*     (Jan 2015)
  - Mobility (based on CARE tool)
  - Self-Care (based on CARE tool)
- Customer Satisfaction**     (Jan 2015)

\*     Requires use of CARE tool linked with MDS admission data
\*\*     Requires use of AHCA CoreQ satisfaction questionnaire

# Use of AHCA PAC Measures

- AHCA PointRight Pro 30 Rehospitalization measure endorsed by NQF Dec 2014
- ACOs/MCOs currently using this measure
  - 3 MA Pioneer ACOs (Rehosp & Satisfaction)
  - 1 MA dual-eligible MCO (Rehosp)
  - 1 NJ ACO (Rehosp & DC back to Community & LOS)
  - 1 SC Care Management Co (Rehosp)
  - 1 large national PAC management co (Rehosp & DC to Community)

# WHERE DO I GET MY DATA?

# MEASURING HOSPITAL READMISSIONS

# PointRight® Pro 30™ Day SNF Rehospitalization

- **Readmissions** = all patients admitted to a SNF from a hospital for SNF Part A services who are sent back to <u>any</u> hospital for <u>any</u> reasons within the next 30 days for either inpatient admission or observation status

$$\left( \frac{\text{Actual Rehospitalization}}{\text{Expected Rehospitalization}} \right) \times \text{National Average} = \text{Risk Adjusted Rate}$$
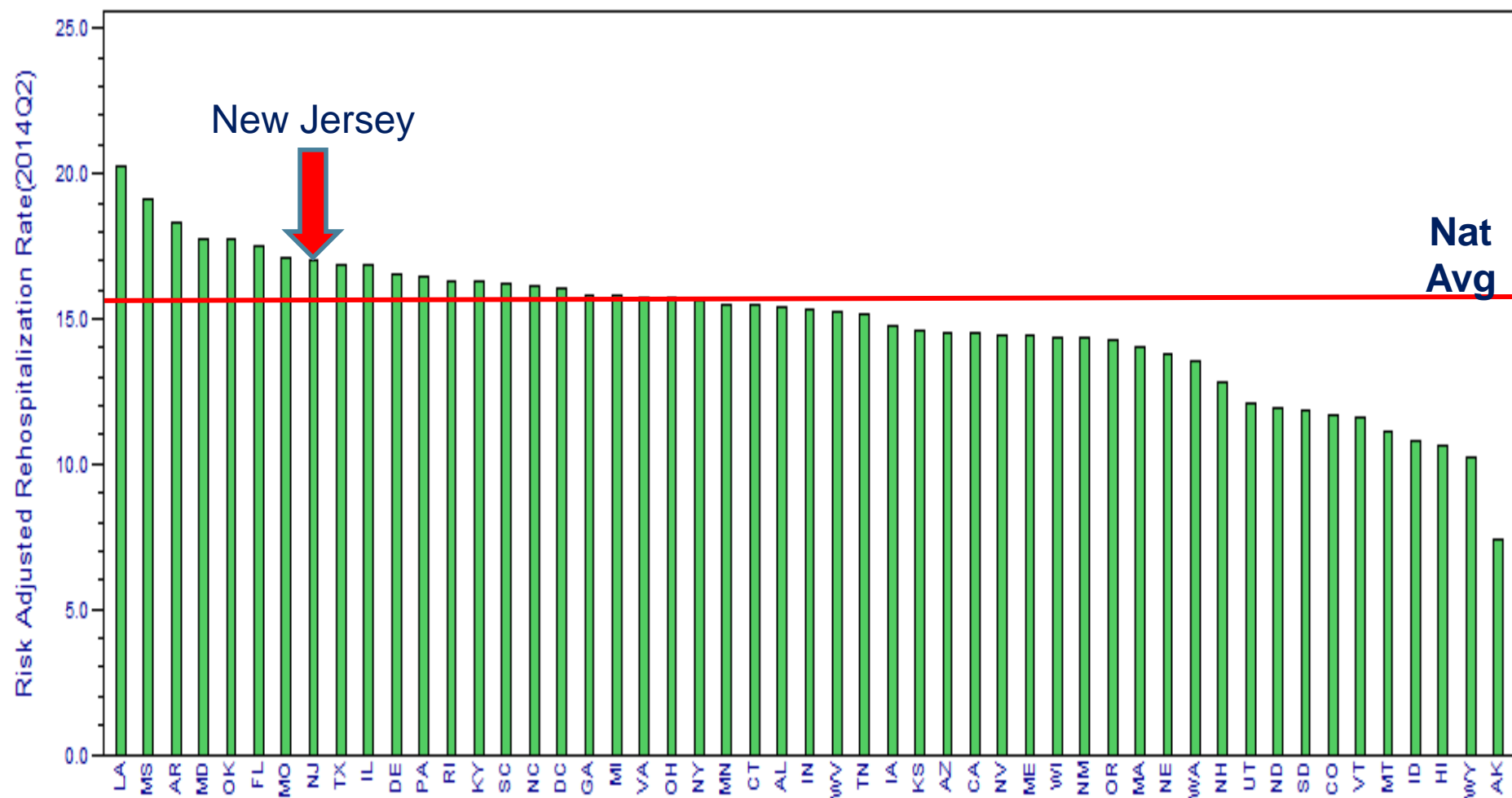
Actual to Expected Ratio is key
Ratio is >1 you rehospitalized more people than expected

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# How to interpret your results

|  | Jun-13 | Sep-13 | Dec-13 | Mar-14 | Jun-14 |
|---|---|---|---|---|---|
| Actual Rehospitalization | 21.10% | 21.00% | 23.60% | 22.60% | 20.90% |
| Expected Rehospitalization | 22.10% | 22.30% | 23.50% | 22.70% | 22.10% |
| Ratio (actual/expected) | 0.95 | 0.94 | 1.00 | 1.00 | 0.95 |
| Risk Adjusted Rehospitalization | 18.60% | 18.40% | 17.90% | 17.70% | 16.70% |

- How do I compare to others? – look at risk adjusted results
- Are you getting better? – look at your actual results
- Are you admitting sicker patients? – look at your expected
- Are you admitting more or less than expected? – look at your actual to expected ratio

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# State Avg SNF Rehospitalizations 2014 Q2

# SNF NJ AHCA Members Rehospitalization Rates



**National Average 15.6%**

**At risk for**
- **2% payment penalty;**
- **Dropped from MCO/ACO Networks**

58

37

22

2

2

1

Number of facilities

60 50 40 30 20 10 0

05 to <10    10 to <15    15 to <20    20 to <25    25 to <30    30 to <35

**Risk Adjusted Rehospitalization Rate Range(2014Q2)**

PointRight® Pro30™ Rehospitalization

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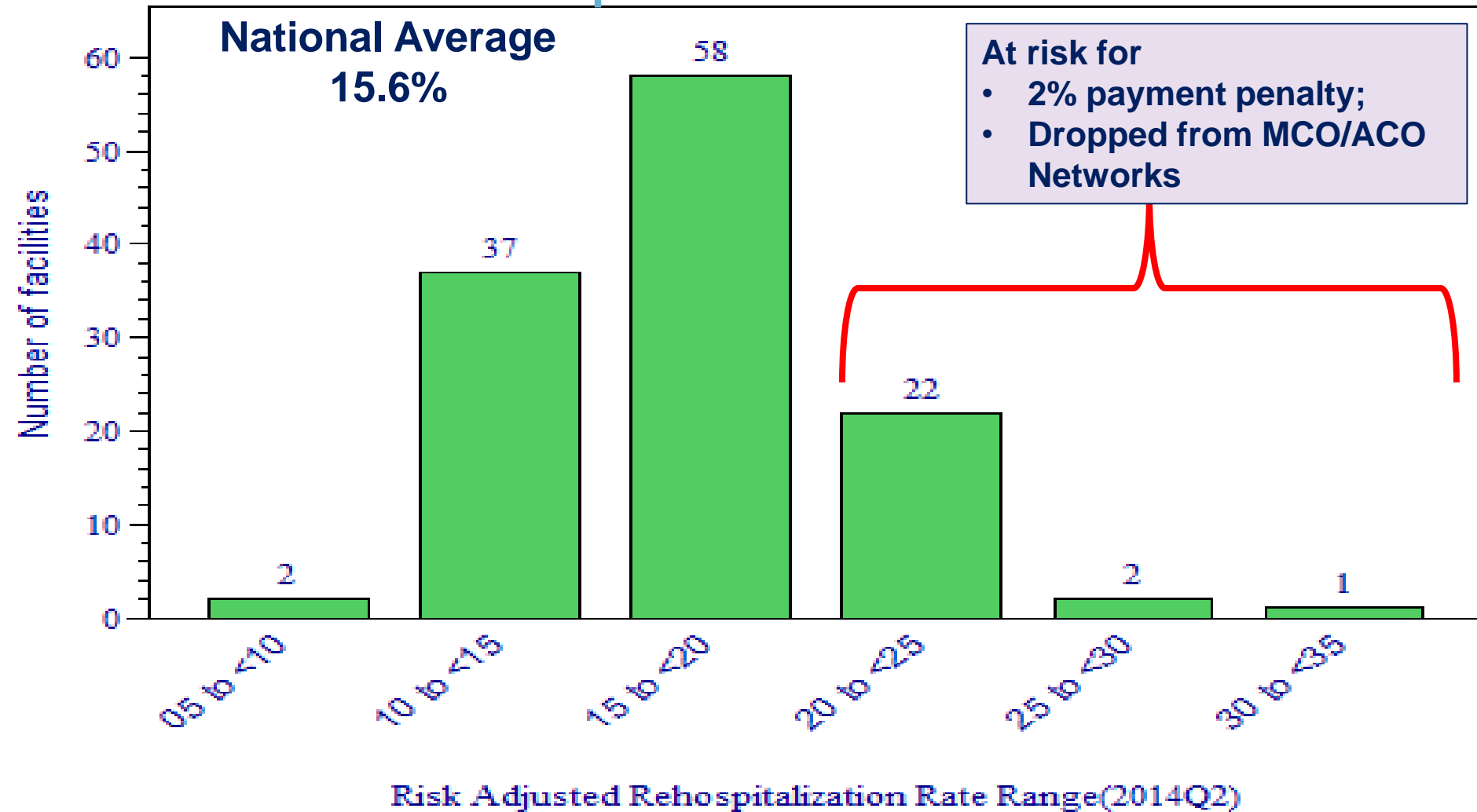
# MEASURING DISCHARGE BACK TO COMMUNITY

# New Measure Available

## Discharge Back to Community

**Numerator**:     # of admissions who were discharged back to the community and remained out of any SNF for at least 30 days.

**Denominator**: # of all individuals admitted to a center from a hospital (regardless of payor or diagnosis) and who were not in a center in the prior 100 days

# National Discharge to Community Rates Among AHCA members



Distribution of rate_adj

Mean 60.64369
Median 62.2
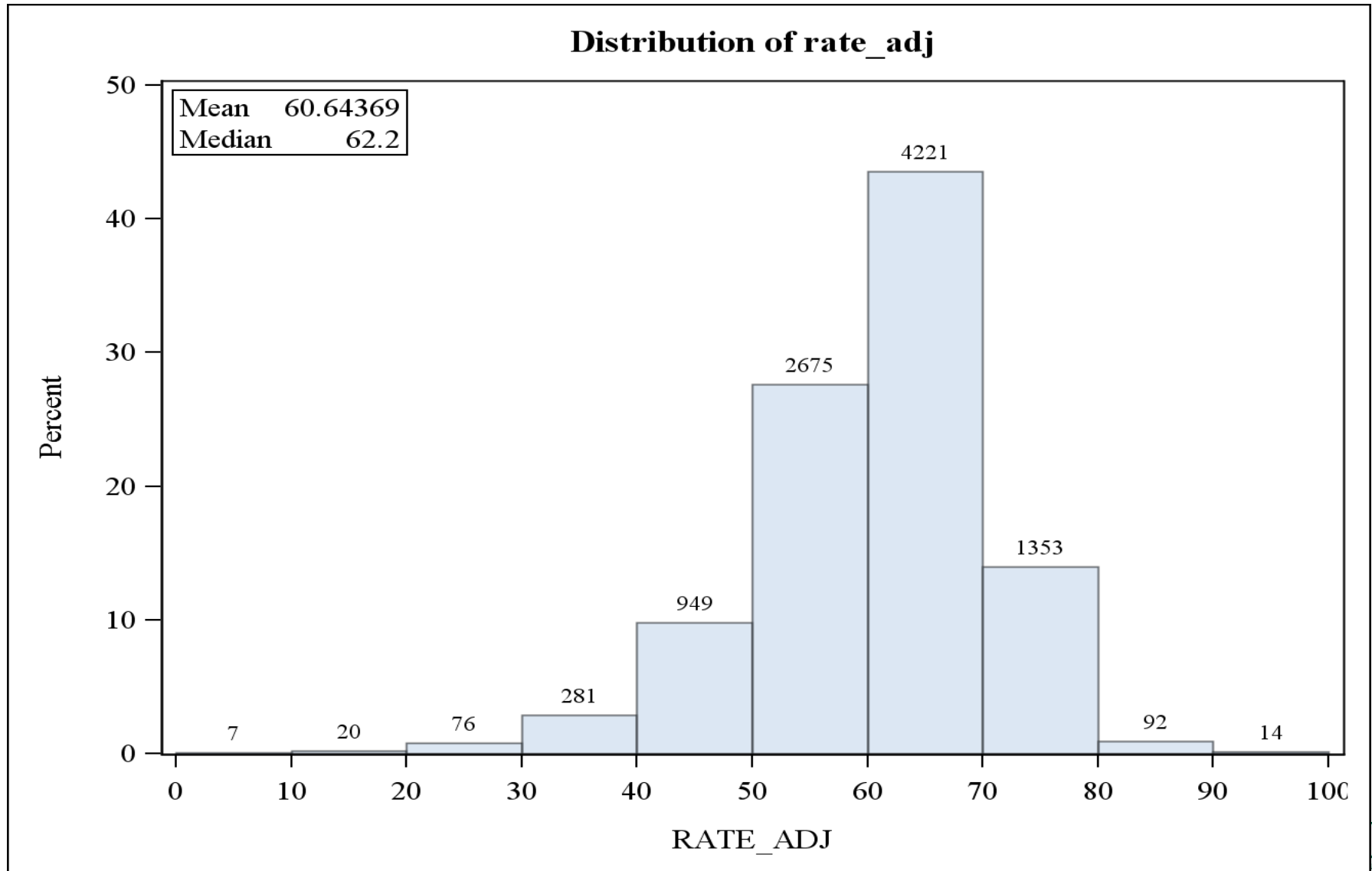
# State Avg DC Back to Community Rate
## (risk-adjusted)



National Avg = 60.6%

New Jersey
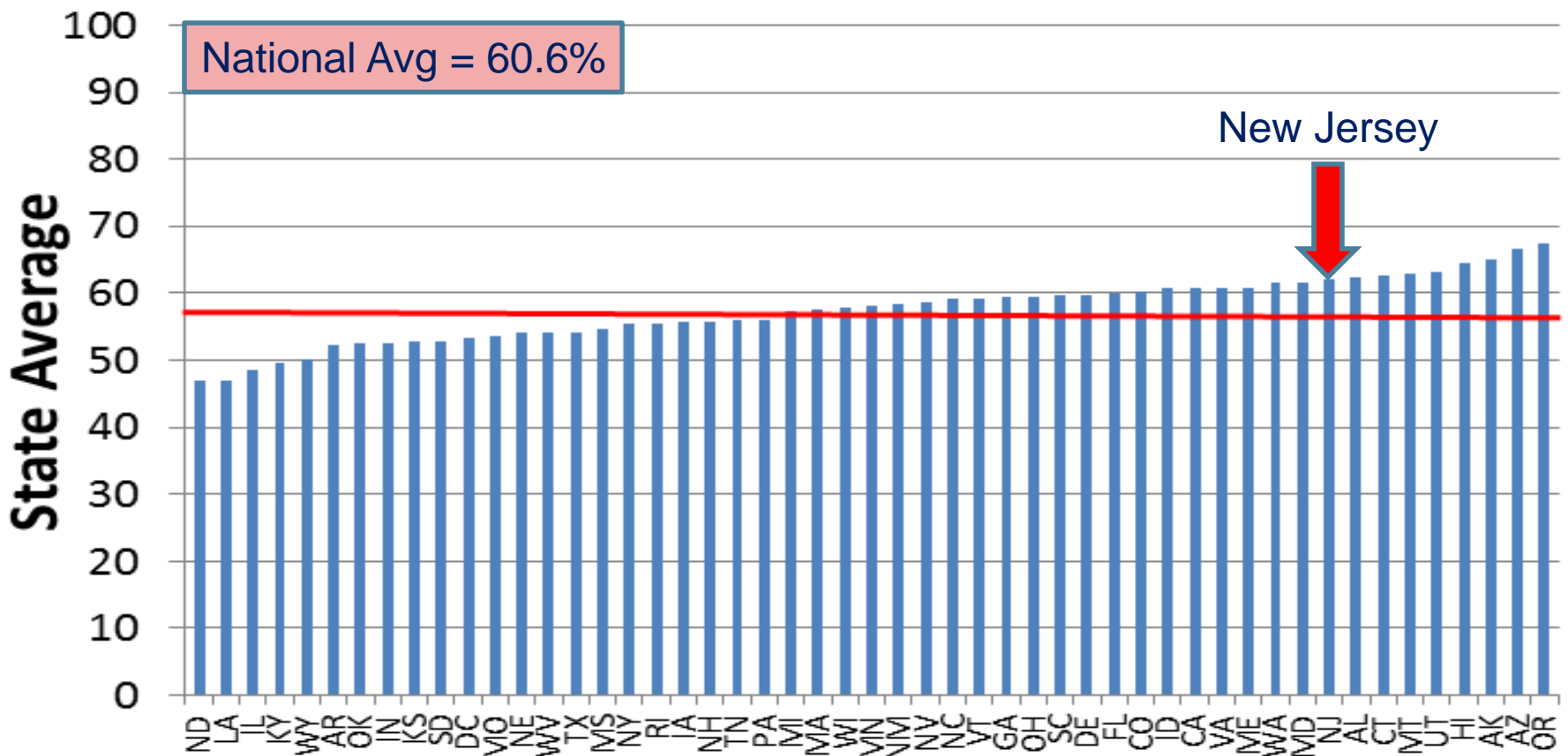
# CUSTOMER SATISFACTION

# CoreQ Questionnaire: Short Stay Discharges

Identified set of core questions that can provide enough information for an aggregate measure to assess satisfaction

**CoreQ Short Stay Discharges**

1. In recommending this facility to your friends and family, how would you rate it overall?

   ① Poor ② Average ③ Good ④ Very Good ⑤ Excellent

2. Overall, how would you rate the staff?

   ① Poor ② Average ③ Good ④ Very Good ⑤ Excellent

3. How would you rate the care you receive?

   ① Poor ② Average ③ Good ④ Very Good ⑤ Excellent

4. How would you rate how well your discharge needs were met?

   ① Poor ② Average ③ Good ④ Very Good ⑤ Excellent

# CoreQ Short Stay Administration & Quality Measure

- Within 2 weeks of discharge

- Need minimum # of respondents (>30 respondents)

- Need minimum response rate >25%

- Can be added to existing survey vendor's questionnaire

- CoreQ: Quality Measure Specifications
  - Aggregate each person's responses to 4 questions
  - Transform to 0-100 scale
  - Calculate the average rating
  - Count all respondents with a rating = satisfied (e.g. 3, 4 or 5)
  - Divide by number of respondents
  - Percent overall satisfaction

# CoreQ Long Stay Residents: Scores in Pilot
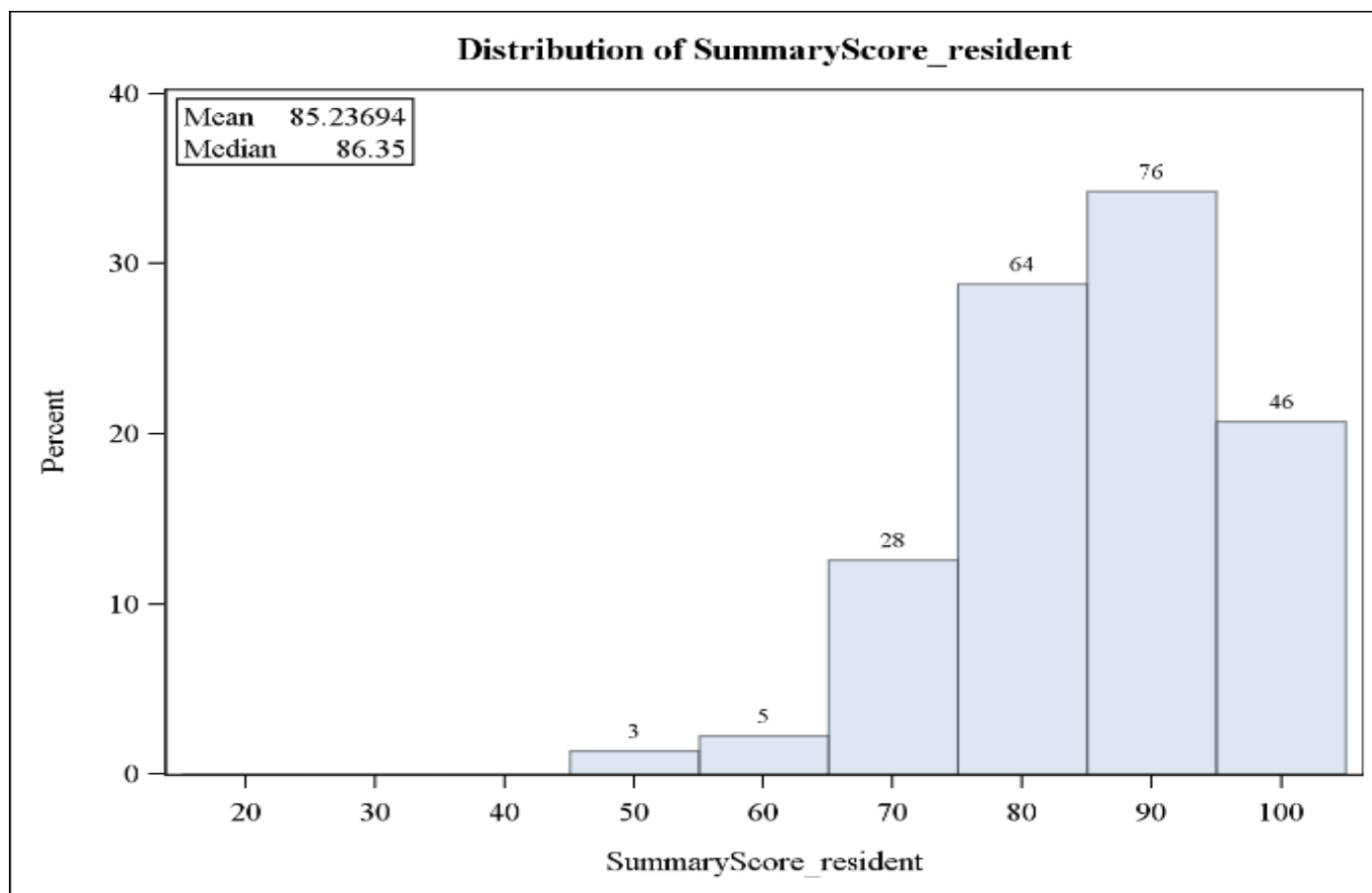
# MEASURING LENGTH OF STAY (LOS) IN SNF

# LOS Metric

- LOS is a popular measure, particularly among payors (e.g. MCOs) and in new payment models (e.g. ACOs)
- LOS is **not** a quality measure;
  - Rather, LOS can be used as an efficiency measure, which needs to be interpreted in the context of other quality measures, for example
    - You can lower your LOS by
      - Hospitalizing more patients
      - Discharging them home sooner, sicker and with less improvement
    - You can have higher LOS because
      - You do not hospitalize patients very often
      - You spend more time increasing their function so they have better outcomes and use less resources after discharge
- There are <u>multiple</u> ways to calculate LOS

# Issues to consider when measuring LOS

- What is end date?
  - What do you do with individuals who are rehospitalized?
  - Do you include individuals who die?
  - How do you count LOS for people who don't go home?
- How do you deal with patients who are an outlier with very long LOS that can skew the results?
- How many people must be included in the measure to have stable results over time?
- How do you risk adjust for differences in patient acuity?
  - "My patients are sicker than yours."

# *Calculating AHCA's Length of Stay (LOS)*

- Calculated only for <u>new</u> admissions to a nursing center from a hospital.
  - New admissions are defined as any admission from a hospital with no prior SNF stay in the 100 days prior to the admission MDS assessment. (this matches the discharge to community measure)
- Each person's LOS is calculated based on the number of days between their admission and "*final*" discharge from the Center.
  - Final discharge is defined as being discharged back to the community
  - If they are not discharged from the center within 120 days from admission they are assigned a LOS of 120 days no matter how long they stay past 120 days.

# What happens when a person is rehospitalized?

- When an individual has an interruption in service (e.g. rehospitalization) that is **10 days or less**, their LOS before <u>and</u> after rehospitalization are added together.

- When an individual has an interruption in service that is **<u>greater</u>** than 10 days; their LOS ends on the day of interruption (e.g. discharge to the hospital).

  - The LOS following their readmission is not counted in these cases.

# What happens when a person dies?

- When an individual dies during their SNF stay:
  - They are not counted in the LOS metrics

# Calculating LOS: 5 examples



|  | | LOS Count |
|---|---|---|
| Res 1 | 120 days — 15+ days | 120 |
| Res 2 | 20 days — hospital 6 days — 94 days — 15+ days | 114 |
| Res 3 | 35 days — DC to home | 35 |
| Res 4 | 10 days — hospital >10 days — 40 days — DC to home | 10[1] |
| Res 5 | 17 days — Died | Excluded |

Begin of SNF Admission

Max LOS >120 Days
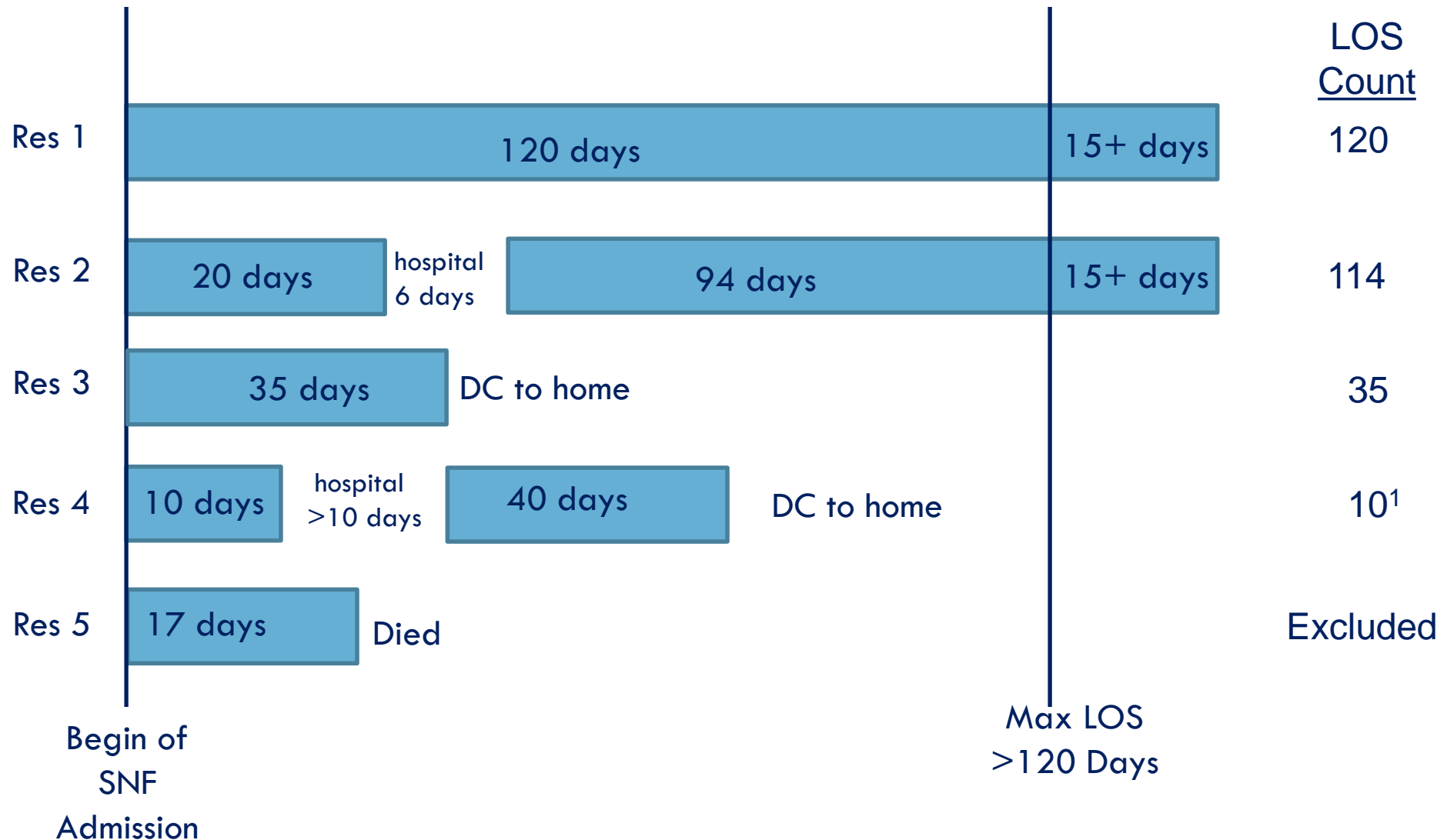
[1]*Second admission is excluded because the person has a prior SNF stay within 100 days of admission*

# How do you count LOS for people who don't go home?

- If you only count people who go home,
    - you make your LOS look shorter

- If you also count people who do not go home,
    - what is their end date for counting their LOS?
    - They will have a very long LOS that will skew your results

- Three ways to address this
    - Count all people but truncate LOS after a certain time for those who do not go home (e.g. after 120 days)
    - Calculate the Median LOS not the Average (or Mean) LOS
    - Calculate % of people who stay fewer than a certain number of days (e.g., % who stay 14 days or fewer)

# Median vs Average LOS

- When you have individuals with outlier LOS, they can skew the average.
  - Example:
  - You have 5 patients, with LOS of 8, 12, 20, 40, 120 days
    - **Average** is (8+12+20+40+120)/5 =  40 days
    - **Median**  is   8, 12, 20, 40, 120      ➔20 days

Midpoint value where half have a LOS less and half have a LOS greater

# AHCA LOS Metrics

#1 Total Median LOS in days for all admissions

#2 Another way to look at LOS besides calculating the total LOS in days is to look at how many people stay for certain periods of time

- How many have LOS of 7 or fewer days
- How many have LOS of 14 or fewer days
- How many have LOS of 20 or fewer days
- How many have LOS of 45 or fewer days
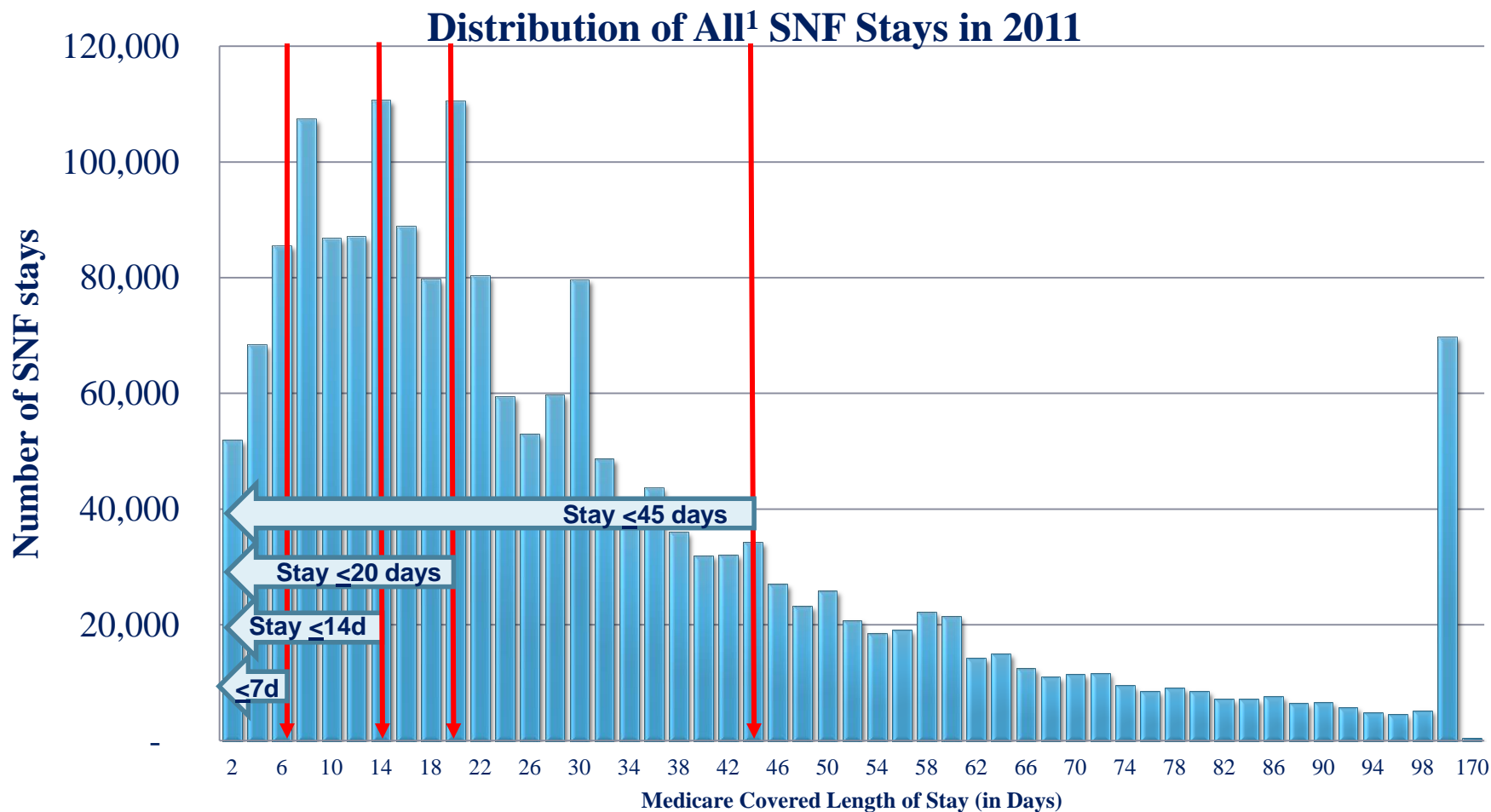
# *% Staying 7, 14, 20 or 45 days or fewer*

- Each metric [staying $\leq$7, $\leq$14, $\leq$20, and $\leq$45 days] is calculated by

**Numerator:**      *number of individuals with a LOS of XX days or fewer*

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**Denominator:**   *All residents admitted from an acute hospital to a center over the prior 12 months and who did not have a prior stay in a nursing center for the prior 100 days; and did not die before XX days following admission.*

- XX = either 7, 14, 20, or 45 days
- Example: The percentage staying 14 days or fewer is calculated by dividing the number of individuals with LOS 14 days or fewer by the total number of admissions from a hospital that did not have a prior stay in a SNF within the 100 days of admission and did not die before 14 days

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# % Admissions Staying "x" days of fewer



**Distribution of All[1] SNF Stays in 2011**

Number of SNF stays — Medicare Covered Length of Stay (in Days)

Stay <45 days
Stay <20 days
Stay <14d
<7d

[1]All Part A SNF admissions excluding those with hospitalization or death

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# Risk Adjustment

- The risk-adjusted LOS is calculated by…

$$\frac{Actual\ Rate}{Expected\ Rate}\ x\ National\ Observed\ Rate = Risk\ Adjusted\ Rate$$

  - Common formula that looks at the ratio of what is actually happening compared to the "expected" which is based on the experience similar patients have on average across the country.

# Data Available in LTC Trend Tracker

- Insert screen shot for drop down menu for creating report showing LOS report

# LOS Report in LTC Trend Tracker

| | Apr 2013 - Mar 2014 (1) | Jan 2013 - Dec 2013 | Oct 2012 - Sep 2013 | |
|---|---|---|---|---|
| **Length of Stay in Context with PAC Measures** | | | | |
| Median Length of Stay - Risk Adjusted | 25.2 | 25.4 | 24.7 | |
| | 22.0 | 21.4 | 21.1 | |
| Discharge to Community - Risk Adjusted | 61.2% | 60.5% | 60.0% | |
| | 70.0% | 69.9% | 68.9% | |
| 30 Day Rehospitalization (OnPoint 30) - Risk Adjusted | 15.7% | 15.9% | 17.5% | |
| | 14.2% | 14.4% | 16.2% | |
| **Summary of Risk Adjusted Length of Stay Metrics** | | | | |
| Number of Centers | 8,529 | 8,665 | 8,444 | |
| | 136 | 140 | 138 | |
| Overall Median Length of Stay | 25.2 | 25.4 | 24.7 | |
| | 22.0 | 21.4 | 21.1 | |
| % Staying for 7 or Fewer Days | 10.4% | 10.6% | 10.7% | |
| | 9.0% | 9.4% | 9.6% | |
| % Staying for 14 or Fewer Days | 22.7% | 23.2% | 23.4% | |
| | 21.9% | 22.4% | 23.2% | |
| % Staying for 20 or Fewer Days | 38.7% | 39.1% | 39.1% | |
| | 41.2% | 42.0% | 42.9% | |
| % Staying for 45 or Fewer Days | 68.6% | 68.7% | 68.7% | |
| | 78.2% | 78.7% | 78.9% | |

# Contact Information

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