“Quality and Safe Respiratory Care: Does it Work in a Productivity Model?”

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American Association for Respiratory Care
Adjunct Faculty, Assistant Professor
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Case Western Reserve University
Healthcare is Getting Serious About Safety, Benchmarks & Productivity

HealthGrades
Guiding America to Better Healthcare

Solucient
Insight to Better Healthcare

The Leapfrog Group

100k lives Campaign
Some is not a number. Soon is not a time.

ABHC
Association for Benchmarking Health Care
Why Benchmark?

In a 2006 AARC survey of managers that drew over 200 respondents:

• Within the past two years 64% had been asked by their administrators to compare their department to other hospitals.
• 71% expected their administrator to ask them to make this comparison within the coming year!
• The next round of consultants and cost cutting is here…
What is Benchmarking?

• Definition
  – Process of comparing performance against other groups (or self over time) for the purpose of improving performance

• Process
  – Define metrics (measured values)
  – Select compare group and see how you rank

• Purpose
  – Identify best performers
  – Describe and emulate best practices
CONSULTING

If you're not a part of the solution, there's good money to be made in prolonging the problem.
What “performance” do we measure?

• Quality of care
  – Difficult to define
  – Expensive to track (labor intensive data collection)

• Efficiency and productivity
  – Easy to define
  – Data available from billing records (CPT)
The United States is worse on key measures

<table>
<thead>
<tr>
<th>Country Rankings</th>
<th>Australia</th>
<th>Canada</th>
<th>Germany</th>
<th>New Zealand</th>
<th>United Kingdom</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00-2.66</td>
<td>3.5</td>
<td>5</td>
<td>2</td>
<td>3.5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>2.67-4.33</td>
<td>4</td>
<td>6</td>
<td>2.5</td>
<td>2.5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4.34-6.00</td>
<td>5</td>
<td>6</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Overall Ranking (2007)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Care</td>
<td>4</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Right Care</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Safe Care</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Coordinated Care</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Patient-Centered Care</td>
<td>3</td>
<td>6</td>
<td>4</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Access</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Efficiency</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Equity</td>
<td>2</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Healthy Lives</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>4.5</td>
<td>4.5</td>
<td>6</td>
</tr>
<tr>
<td>Health Expenditures per Capita, 2004</td>
<td>$2876*</td>
<td>$3165</td>
<td>$3005*</td>
<td>$2083</td>
<td>$2546</td>
<td>$6102</td>
</tr>
</tbody>
</table>

Definitions

\[
efficiency = \frac{output}{input}
\]

Example:
# billed procedures / variable labor hour

Problem:
• not all procedures take the same time
• efficiency depends on mix of procedures not how well they are performed
Where do we get standard times?

\[
earned\ hours = \frac{\text{standard time}}{\text{procedure}} \times \text{number of procedures}
\]

\[
\text{efficiency} = \frac{earned\ hours}{\text{variable clinical labor hours}}
\]
Definitions (productivity vs efficiency)

$\text{utilization} = \frac{\text{variable labor hours}}{\text{fixed} + \text{variable labor hours}}$

$\text{productivity} = \text{efficiency} \times \text{utilization}$

Highest clinical productivity comes from the highest treatment efficiency combined with the leanest organizational structure.

Problem: we don’t know how productivity is related to quality.
Take-Home Message

- Increase clinical **productivity** by:
  - Increasing **efficiency** (less time to do the job)
    - Use nebulizers that give unit dose in shorter time
    - Q8 vs Q2 hour vent checks
    - Vest or IPV instead of manual chest physiotherapy
  - Increasing **utilization** (more focus on clinical)
    - Decrease number of non-clinical activities
    - Decrease number of non-clinical FTEs
So How Do YOU Measure It?
The AARC Benchmarking Service

• Designed by respiratory therapy managers for respiratory therapy departments
• Allows you to compare your operations with any hospital currently enrolled in the service
• Provides you with complete access to
  – operational characteristics and
  – data entered by all subscribed hospitals
Purpose of Website

• Collect & report data
  – compare departments on productivity
  – identify outstanding performance
• Explain best practices supporting outstanding performance
• Provide a network & forum for discussion of benchmarking issues
• Provide education on benchmarking
Desirable Workload Data

- Represent majority of workload
  - Not practical to report all workload
- Common to all respiratory care departments
- Raw data easily obtainable
  - Do not require reliance on finance department
  - Based on billing volume by CPT codes
Raw Data Used by AARC

• Mechanical ventilation days (including CPAP)
  – 94002 (first day)
  – 94003 (subsequent day)
  – 94660 (CPAP)
• Aerosol treatments
  – 94640 (nebulizer, MDI, IPPB treatment)
  – 94664 (nebulizer, MDI, IPPB instruction)
• Airway clearance
  – 94667 (chest PT – initial)
  – 94668 (chest PT – subsequent)
Percentage of Total Workload Captured by AARC Benchmarking System
Benchmarking Metrics

• Primary
  – standard hours/variable hour (efficiency)
  – variable hours/unit of service (efficiency)
  – fixed hours/total hour (administrative load)

• Secondary
  – PRN hours/variable hour (staffing flexibility)
  – agency hours/variable hour (staffing cost)
  – missed aerosol treatments (quality)
  – annual units of service (total workload)
Purpose of Metrics

• Identify leaders in compare group
• Guide secondary analysis
  – (“drill down”) into profile of benchmark department to identify best practices
• Allow “data mining” to support future research
Interpretation Issues

• Low values for productivity metrics due to:
  – **low** efficiency
  – **high** percentage of total workload made up of non-benchmarked procedures

• Essential that benchmark group be comparable departments
  – comparable quality and scope of practice
  – procedures not included in metrics are similar
Hospital Profile

Instructions:
The hospital profile is intended to capture information related to key contacts, demographics, organizational structure, and other descriptive information that may be used for general comparisons and defining benchmark groups. The information requested should be entered by the Director/Manager of Respiratory Care Services. It is recognized that some data will be obtained from sources outside the RC department. Some information represents "year end" counts and should include only actual data from the close of the last fiscal year, rather than projections based on YTD actual. The hospital profile should be updated annually.

Profile Menu
1. Hospital Demographics
2. Department Structure
3. Department Staffing
4. Department Budget
5. Clinical Practice
6. Department Operations

Profile Date Completed
11/4/2005

Note:
All questions must be answered prior to obtaining reports

Hospital Demographics

<table>
<thead>
<tr>
<th>Robert, Chatburn</th>
<th>Contact Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>Title</td>
</tr>
<tr>
<td>Respiratory Care</td>
<td>Department Name</td>
</tr>
</tbody>
</table>
### Worked Hours Data

Click on name of data metric to view definition

<table>
<thead>
<tr>
<th>Metric</th>
<th>Hours Per Quarter</th>
<th>Annualized</th>
<th>Average Salary Per Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Variable Labor</td>
<td>23524</td>
<td>95403</td>
<td>23.14</td>
</tr>
<tr>
<td>PRN Labor</td>
<td>1922</td>
<td>7795</td>
<td>25.00</td>
</tr>
<tr>
<td>Agency Labor</td>
<td>224</td>
<td>908</td>
<td>42.41</td>
</tr>
<tr>
<td>Total Variable Labor</td>
<td>25670</td>
<td>104106</td>
<td></td>
</tr>
<tr>
<td>Fixed Labor</td>
<td>1828</td>
<td>7414</td>
<td></td>
</tr>
<tr>
<td>Total Worked Hours</td>
<td>27498</td>
<td>111520</td>
<td></td>
</tr>
<tr>
<td>Total Paid Hours</td>
<td>30572</td>
<td>123986</td>
<td></td>
</tr>
</tbody>
</table>

### Units of Service Data

**Aerosol treatments ordered**

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Volume</th>
<th>Annualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>94640</td>
<td>17372</td>
<td>70453</td>
</tr>
<tr>
<td>94664</td>
<td>276</td>
<td>1119</td>
</tr>
</tbody>
</table>

### Missed Treatments

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Missed Treatments</td>
<td>0</td>
</tr>
</tbody>
</table>

### Percent of total aerosol treatments given as MDI and SVN

<table>
<thead>
<tr>
<th>MDI</th>
<th>SVN</th>
</tr>
</thead>
<tbody>
<tr>
<td>25.00</td>
<td>75.00</td>
</tr>
</tbody>
</table>

If you distinguish initial from subsequent aerosol treatments, which code do you use for initial treatment?

94664
### Mechanical ventilator units of service

Units are recorded as:
- Vent-Days
- Vent-Hours
- Vent-Shifts (8 hour)
- Vent-Shifts (12 hour)

<table>
<thead>
<tr>
<th></th>
<th>CPT Code</th>
<th>Volume</th>
<th>Volume</th>
<th>Annualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>94656</td>
<td>658</td>
<td>658</td>
<td>2669</td>
</tr>
<tr>
<td>Subsequent</td>
<td>94657</td>
<td>2711</td>
<td>2711</td>
<td>10995</td>
</tr>
<tr>
<td>CPAP</td>
<td>94660</td>
<td>957</td>
<td>957</td>
<td>3881</td>
</tr>
<tr>
<td></td>
<td>18248</td>
<td></td>
<td></td>
<td>Standard Hours/Year</td>
</tr>
</tbody>
</table>

Equivalent VentDays = volume x URM standard time

### Airway clearance treatments

<table>
<thead>
<tr>
<th></th>
<th>CPT Code</th>
<th>Volume</th>
<th>Annualized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>94667</td>
<td>7069</td>
<td>28669</td>
</tr>
<tr>
<td>Subsequent</td>
<td>94668</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>9461</td>
<td></td>
<td>Standard Hours/Year</td>
</tr>
</tbody>
</table>
A New Paradigm

In God We Trust, All Others Must Bring Data

W. Edwards Deming
• Not based on department specific characteristics

• Based on hospital demographics:
  – Number of beds within 25%
  – Number of ICU beds within 50%
  – Organizational type must match
    • Academic, Childrens, Community
  – Classification type must match
    • Rural, Suburban, or Urban
# Current Summary Report

## Primary Performance Metrics

<table>
<thead>
<tr>
<th></th>
<th>Standard Hours per Variable Hour</th>
<th>Variable Hours per Unit</th>
<th>Fixed Hours per Total Hour</th>
<th>Total Hours per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Index Value</strong></td>
<td>0.3082</td>
<td>1.2216</td>
<td>0.0490</td>
<td>1.2845</td>
</tr>
<tr>
<td><strong>Percentile</strong></td>
<td>28.57</td>
<td>71.43</td>
<td>14.29</td>
<td>71.43</td>
</tr>
<tr>
<td><strong>Target Percentile</strong></td>
<td>50.00</td>
<td>50.00</td>
<td>10.00</td>
<td>71.43</td>
</tr>
<tr>
<td><strong>Target Index Value</strong></td>
<td>0.3590</td>
<td>1.0141</td>
<td>0.0343</td>
<td>1.2845</td>
</tr>
<tr>
<td><strong>Opportunity Dollars</strong></td>
<td>470,141.00</td>
<td>564,568.00</td>
<td>56,767.00</td>
<td>0.00</td>
</tr>
<tr>
<td><strong>Opportunity (FTEs)</strong></td>
<td>9.7</td>
<td>11.6</td>
<td>1.1</td>
<td>0.0</td>
</tr>
</tbody>
</table>

## Secondary Metrics

<table>
<thead>
<tr>
<th></th>
<th>PRN Hours per Variable Hour</th>
<th>Agency Hours per Variable Hour</th>
<th>Missed Treatment %</th>
<th>Annual Units of Service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Index Value</strong></td>
<td>0.0542</td>
<td>0.0063</td>
<td>0.00 %</td>
<td>116492</td>
</tr>
<tr>
<td><strong>Percentile</strong></td>
<td>42.86</td>
<td>71.43</td>
<td>28.57</td>
<td>85.71</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Aerosol</th>
<th>Vent</th>
<th>AwayClr</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of total units</td>
<td>60.76 %</td>
<td>14.90 %</td>
<td>24.34 %</td>
</tr>
</tbody>
</table>

[Update Values]
### Compare Group Results - Performance Metrics

**Export to Excel**

<table>
<thead>
<tr>
<th>Institution</th>
<th>Standard Hours per Variable Hour</th>
<th>Rank</th>
<th>Percentile</th>
<th>Variable Hours per Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duke Med Ctr</td>
<td>0.6773</td>
<td>1</td>
<td>100.00</td>
<td>0.5542</td>
</tr>
<tr>
<td>View Data</td>
<td>View Profile</td>
<td>0.6016</td>
<td>2</td>
<td>75.00</td>
</tr>
<tr>
<td>Rush University Medical Center</td>
<td>0.4000</td>
<td>3</td>
<td>50.00</td>
<td>0.9098</td>
</tr>
<tr>
<td>View Data</td>
<td>View Profile</td>
<td>0.3237</td>
<td>4</td>
<td>25.00</td>
</tr>
</tbody>
</table>

- Rank or percentile for each metric
- Link to raw data
- Link to profile data
University Hospitals of Cleveland  
Cleveland, OH  

Return to Reports

Please enter the Year/Quarter range for the report. Note: Date Range Is Limited to 8 Quarters. Data will only be displayed where there is data.

Start  
2005 Year  
1 Quarter

Display Results As

○ Percentiles  ○ Metric Values

Stop  
2005 Year  
4 Quarter

Get Data
### Primary Performance Metrics

Click on the metric name to see graph of the compare group.

<table>
<thead>
<tr>
<th></th>
<th>2005 - Q1</th>
<th>2005 - Q2</th>
<th>2005 - Q3</th>
<th>2005 - Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Hours/Variable Hours</strong></td>
<td>0.4260</td>
<td>0.3082</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Variable Hour/Unit</strong></td>
<td>0.8839</td>
<td>1.2216</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Fixed Hours/Total Hour</strong></td>
<td>0.0665</td>
<td>0.0490</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Hours/Unit</strong></td>
<td>0.9468</td>
<td>1.2845</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Secondary Metrics

<table>
<thead>
<tr>
<th></th>
<th>2005 - Q1</th>
<th>2005 - Q2</th>
<th>2005 - Q3</th>
<th>2005 - Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PRN Hours/Variable Hour</strong></td>
<td>0.0749</td>
<td>0.0542</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Agency Hours/Variable Hour</strong></td>
<td>0.0087</td>
<td>0.0063</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Missed Treatments %</strong></td>
<td>0.00 %</td>
<td>0.00 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Annual Service Visits</strong></td>
<td>117786</td>
<td>116492</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Trend Report

limited data set

links to raw data
## Calculations

### Data Source

- **Data Entry Screen**
- **Data Entry Screen**
- **Data Entry Screen**

### Data Entry Calculations

- vent-days = -0.237 + 0.049 x vent-hours
- vent-days = -0.205 + 0.372 x vent-shifts (for 8 hour shifts)
- vent-days = -0.114 + 0.541 x vent-shifts (for 12 hour shifts)

### Primary Performance Metrics

- standard hours per variable hour = total standard hours / variable hours
- variable hours per unit = total variable hours / total service units
- fixed hours per total hour = fixed hours / total worked hours
- total hours per unit = (total variable hours + fixed hours) / total service units

### Secondary Performance Metrics

- PRN hours per variable hour = PRN hours / total variable hours
- agency hours per variable hour = agency hours / total variable hours
- missed treatments % = 100 x aerosol treatments missed / total aerosol treatments
- sum of annualized units of service = annualized aerosol volume + annualized vent days + annualized airway clearance
- percent of total units = 100 x annualized treatments (aerosol, vent days, or airway clearance) / sum of annualized units of service

### Intermediate Calculations

<table>
<thead>
<tr>
<th>Standard Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>total standard hours = ventilation hours + aerosol hours + airway clearance hours</td>
</tr>
<tr>
<td>ventilation hours = annual vent-days x (0.26 hours/assessment) x (assessments/day)</td>
</tr>
<tr>
<td>airway clearance hours = annual airway clearance treatments x 0.33 hours/treatment</td>
</tr>
</tbody>
</table>
Resources on the Website (tools)

• AARC Benchmarking Users Guide
• Data entry template (Excel spreadsheet)
• Benchmarking listserve
  – Automatic registration with membership
• CPT code URM crosswalk
Resources (AARTimes reprints)

• Overview of benchmarking service
• Setting up comparison groups
• Pitfalls of benchmarking
• Understanding the metrics
• Administrators point of view
• Frequently asked questions
• Case study
Resources (webcasts)

• Benchmarking for success
• Optimal staffing
• Data entry made easy
• Compare groups and reports
Why AARC Benchmarking?

Allows you to:

• Trend your own data from quarter to quarter
• Generate standard and custom reports
• Establish multiple comparison groups with other hospitals based on mutual operational characteristics, staffing and size
• Verify the accuracy of data through direct contact with the hospital that provided their data
• Most user friendly of any commercial system
Quality and Safety

• Quality and safety are in a sense inseparable

• Creating a culture of safety is part of building a system of continuous quality improvement
Emphasis on improving quality of health care

Focus on quality improvement in healthcare organizations

Improves patient care outcomes

Helps improve the work environment: people want to work in organizations that emphasize quality
The Institute of Medicine

To Err Is Human (1999)
Safety In Healthcare Delivery

The IOM report on safety opened the door to acknowledge there is a healthcare safety crisis, for example data indicated in 1999:

**Approximately 44,000 to nearly 100,000 patients die annually in U.S. hospitals due to error.**

What is your reaction to this?
Keynote Address
John Nance
“Why Hospitals Should Fly”
Saturday, Nov. 10, 2012
10:15 am – 10:55 am
Hall B-1

View the keynote address on the AARC’s YouTube channel
Key Terms

- Safety: Freedom from accidental injury
- Error: Failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim
Safe Care = Quality Care?

Just because care is considered safe does not mean that it is of a higher quality.

BUT

There is a greater chance that the care is of higher quality.
Quality and Safety Partnership - Guiding Principles

- **IOM 6 Aims for Improvement** - Patient care that:

  - **Safe** - avoidance of unintended pt. harm
  - **Effective** - evidence-based
  - **Patient-centered** - focused on needs and rights of the individual patient
  - **Timely** - avoidance of delays & barriers to patient care flow
  - **Efficient** - elimination of waste
  - **Equitable** - fair access to comparable health care services for all
Internal Benchmarking: Productivity & Safety
Rainbow Babies & Children’s Hospital Experience
Pediatric Respiratory Care Scorecard
Four Pillars of Excellence
Data: January - December 2008
Service Excellence

2008 Average
Non-Billable= 82% Target

2008 Average
Consult = 31% Target

2008 Average
Missed Tx= 82% Target

2008 Average
Service Time= 82% Target
Consult Service

Monthly Compliance %

Quarterly Compliance

<table>
<thead>
<tr>
<th></th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>70%</td>
<td>59%</td>
<td>75%</td>
</tr>
</tbody>
</table>

Consult Service

*overall QA audit score (pct)*

<table>
<thead>
<tr>
<th></th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>71%</td>
<td>&gt; 95%</td>
<td>95-85%</td>
<td>85-75%</td>
<td>75-70%</td>
<td>&lt; 70%</td>
</tr>
</tbody>
</table>
Productivity

Procedures x Operating Standard = Productive Hours

Productive Hours / Total Product Hrs = Productivity Index
Respiratory Care Productivity

- Procedures
- Actual Worked Hours:
- Total Target Worked Hours:
Supplemental Hours to Regular Hours

OT Average = 4.6%

PRN Average = 7.7%
Know your Financials

• How much Medicaid does your institution cover?
• What areas or diseases are potentially at financial risk?
• What is your average reimbursement per billing?
• What does your expense portfolio look like?
• What are the key service lines that generate a positive net income?
Rainbow Experience

- Medicaid has average 60-67% over last decade
  - Cardiac, NICU, Cystic Fibrosis, Complex Surgeries are positive financial service lines
  - Most other respiratory diseases are potential financial risks (asthma, pneumonia, RSV)
- Average “net billable” for Rainbow discharges was approximately 46% in 2011-12
  - Example: $100 charge (revenue) typically returned $46 dollars (Not including expenses)
Expense Portfolio

Expenses

- Labor: 48.7%
- Supply: 33.3%
- Communications: 7.6%
- Depreciation: 5.1%
- Other: 5.1%
Things to Worry About

- Consultants (con and insult)
  - Con your boss
  - Insult your intelligence
- Labor Shortage
  - The “global warming” of our profession
  - Lack of staff forced increased productivity
Why Benchmark?

• To document your efficiency
• Have real data from comparable departments to respond to recommendations of consultants who will recommend downsizing your staff
• To determine “best practice” in specific areas of operations by communicating directly with managers at benchmark facilities
What to Do When Consultants Come to YOUR HOSPITAL!!!

• Stay involved and informed
• Know your department and all it’s processes
• Lose the defensiveness!
• Be suspect of consultant data
• Know your data, identify opportunities
• Identify reason for variances
• Network with other RC directors
Social Media 2.0
Facebook

American Association for Respiratory Care
14,721 likes · 471 talking about this · 26 were here

American Respiratory Care Foundation
319 likes · 13 talking about this · 4 were here

Respiratory Care
1,330 likes · TV talking about this
Other Outlets

AARCconnect

LinkedIn

Find your friends on Twitter

YouTube

Pinterest