STROKE COORDINATOR

RETURN ON INVESTMENT

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WHAT WE KNOW

STROKE COORDINATOR ROLE

- Primary Stroke Center (PSC) development spurred the creation of the "stroke coordinator" role in hospitals

- Myriad "stroke coordinator" models exist:
  - Stroke data management/measure performance
  - Stroke program management and oversight
  - Standards compliance
  - Education and outreach
  - Facilitation of stroke patient care

- Hospitals struggle to determine the best approach to stroke center development and expansion

- The cost of dedicated resources is often at the root of debate on how to best deliver stroke care
RETURN ON INVESTMENT STUDY

PURPOSE

STROKE COORDINATOR ROLE

• To compare four different “stroke coordinator” models applicable to Primary and Comprehensive Stroke Centers

• To identify revenue streams and cost efficiencies needed to rationalize the direct cost incurred for each model
  • Incremental inpatient stroke-related volume
  • Inpatient length-of-stay improvements
STROKE COORDINATOR ROLE

- Primary responsibilities include:
  - Stroke measure data coordination
  - Stroke Center standards compliance
  - Staff education and community outreach
  - Interdisciplinary team facilitation
  - Varying degrees of direct patient care
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4 MODELS

STROKE COORDINATOR ROLE

- **Shared** Position/**Partial** Coverage (M-F, 8 hrs/day)
- **Dedicated** Position/**Partial** Coverage (M-F, 8 hrs/day)
- **Shared** Position/**Full** Coverage (24/7/365)
- **Dedicated** Position/**Full** Coverage (24/7/365)
### RETURN ON INVESTMENT STUDY

#### 4 MODELS

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<tr>
<th>Role</th>
<th>Coverage</th>
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RETURN ON INVESTMENT STUDY

“TALK THE TALK”

EXECUTIVES / “THE C-SUITE”

• **Pro forma**
  • A projection of what might be

• **New, Incremental Volume**
  • Volume over and above what you have

• Revenue
  • Total amounts charged on patient bills

• Net Revenue
  • Total amounts collected

• **Direct Cost**
  • Generally, costs that vary with volume

• **Contribution Margin**
  • Amount collected minus “direct costs

• Fixed costs
  • Costs that don’t fluctuate with volume

• Operating Margin
  • Net revenue minus all operating expenses

• **Return on Investment (ROI)**
  • What is gained on the investment made, i.e., in a program
RETURN ON INVESTMENT STUDY

FORMULATE ASSUMPTIONS

HISTORICAL EXPERIENCE

- Baseline volume
- Mix of current cases
  - Ischemic stroke
  - Hemorrhagic stroke
  - TIA
  - Endovascular procedures
  - Neurovascular surgery
- Payer mix
- Contribution margin
- Average length-of-stay
- Care needs
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FORMULATE ASSUMPTIONS

THE OPPORTUNITY

- Generate new volume
- Community need
- Regional need
- Clinical developments that will result in increased demand
- Increasing competition
- Improve efficiency/throughput
- Improve outcomes/measures
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METHODS

ASSUMPTIONS DEFINED

- Estimates:
  - Direct costs
    - Recruitment
    - Salaries and benefits
    - Equipment
    - Support staff, etc
  - Payer mix
  - Payment/Contribution Margin
- Volume Growth:
  - Stroke/TIA
    - MS-DRGs: 61-72
  - Endovascular/Neurovascular Surgery
    - MS-DRGs 21-27
- Cost-per-inpatient day
FINANCIAL ASSUMPTIONS

STROKE COORDINATOR(S)

- Salary and Benefits

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- FTE Cost

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Year 1 includes one-time expenses such as recruitment expenses: relocation, equipment, etc.
FINANCIAL ASSUMPTIONS

OTHER

• Payer Mix
  • 65% Medicare
  • 5% Medicaid
  • 25% Managed Care/Commercial
  • 4% Self Pay
  • 2% Other

• Contribution Margin and Direct Cost/Day
  • Stroke/TIA
    • Contribution Margin $ 3,092/case¹
    • Direct Cost $ 1,102 per day¹
    • Baseline ALOS¹ 5.5 days
  • Endovascular/Neurovascular Surgery
    • Contribution Margin $ 12,729/case¹
    • Direct Cost $ 2,000² per day¹
    • Baseline ALOS¹ 10.0 days

¹ Source: NeuStrategy, Inc. proprietary database
² Direct costs are loaded at the beginning of the stay; reductions in LOS occur during the less costly portion of the stay; $1,102 used for both Stroke/TIA and Endov/Neuro Surg
SCENARIOS

“BOOK-ENDS”

- Primary Stroke Center (PSC)
  - Conservative Scenario
    - 3 Year Growth Target – 5.8% - CAGR
    - ALOS Target - 5.5 to 4.5 days
  - Aggressive Scenario
    - Telestroke Hub
    - 3 Year Growth Target – 10.8% - CAGR
    - ALOS Target - 5.5 to 4.5 days

1Compounded Annual Growth Rate (CAGR)
RETURN ON INVESTMENT STUDY

SCENARIOS

“BOOK-ENDS”

- Comprehensive Stroke Center (CSC)
  - Conservative Scenario
    - Growth Target – 5.8% - CAGR\(^1\)
    - ALOS Target – 5.5 to 4.5 days Med
      ALOS Target - 10.0 to 8.5 days Endo/Surg
    - Med to Endo/Surg Ratio Target-10% to 12%
  - Aggressive Scenario
    - Telestroke Hub
    - Growth Target – 10.8% - CAGR\(^1\)
    - ALOS Target – 5.5 to 4.5 days Med
      ALOS Target - 10.0 to 8.5 days Endo/Surg
    - Med to Endo/Surg Ratio Target-10% to 20%

\(^1\)Compounded Annual Growth Rate (CAGR)
RETURN ON INVESTMENT STUDY

**PSC – Conservative Scenario**
3 Year Growth Target – **5.8% - CAGR**
ALOS Target - **5.5 to 4.5 days**

**PSC – Aggressive Scenario**
Telestroke Hub
3 Year Growth Target – **10.8% - CAGR**
ALOS Target - **5.5 to 4.5 days**

1 Compounded Annual Growth Rate (CAGR)
RETURN ON INVESTMENT STUDY

**CSC – Conservative Scenario**
- Growth Target – 5.8% - CAGR\(^1\)
- ALOS Target – 5.5 to 4.5 days Med
- ALOS Target - 10.0 to 8.5 days Endo/Surg
- Med to Endo/Surg Ratio Target - 10% to 12%

**CSC – Aggressive Scenario**
- Telestroke Hub
- Growth Target – 10.8% - CAGR\(^1\)
- ALOS Target – 5.5 to 4.5 days Med
- ALOS Target - 10.0 to 8.5 days Endo/Surg
- Med to Endo/Surg Ratio Target - 10% to 20%

\(^1\)Compounded Annual Growth Rate (CAGR)
RETURN ON INVESTMENT STUDY

WHAT TO KNOW

STROKE COORDINATOR ROI

- Learn about your own organization

  - What is your program’s contribution margin for stroke cases?
  - How is ROI measured/defined in your organization?
  - What is your organization’s “cost per day” that would be used to illustrate cost savings if reductions in length-of-stay were achieved?
  - What is your current payer mix for stroke patients and will it change?

- Be able to articulate how added resources can/will generate new volume
OTHER ROI OPPORTUNITIES

STROKE COORDINATOR ROI

• Quality
  • Reduction in practice variation
  • Improvement in door to intervention time
  • Increase in the rate of intervention
  • Prevention of complications
  • Reduced mortality and disability
  • Reduced readmissions
  • Improved patient satisfaction
  • More informed public

• Efficiencies in care/operations
  • Complex patient care
  • Length-of-stay
  • Bed utilization
  • Timely and efficient transitions of care
  • Device standardization
CONCLUSION

STROKE COORDINATOR ROI

• Projecting new, incremental patient volume and/or operational improvements that are achievable can help rationalize the financial return on investment of new, dedicated coordinator resources

• This type of future return should be realistic and presented in addition to the less quantifiable, yet equally important benefits associated with stroke care coordination
RETURN ON INVESTMENT STUDY

“The only source of knowledge is experience.”

ALBERT EINSTEIN, PHYSICIST

QUESTIONS

For more information, contact:

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debbie@lombardihill.com
407-222-6106

Or visit: www.lombardihill.com
REFERENCES

## Building a Pro Forma: Volume Growth Only

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<sup>1</sup> Stroke/TIA – MS DRGs 61-71; growth rate projected at 10% per year; revenue 3% incr per year
<sup>2</sup> Endovascular/Cerebrovascular - MS DRGs 21-27; growth rate projected at 12% per year
<sup>3</sup> Includes $10,000 in year one for recruitment, relocation, and computer/desk/phone expense