Why was MICI created?

The MarkeTech Group and AHRA collaborated on the creation of MICI based on the belief that measuring the confidence of US medical imaging administrators on a regular basis would provide a valuable index for those having an interest in this industry.

The MICI panel consists of a select group of imagePRO™ panel members from around the U.S. representing different hospital sizes and geographic locations to capture a true “industry outlook”: how imaging administrators see the future of medical imaging in regard to revenues, costs, purchasing, and growth.

This exciting initiative captures the “mood” of imaging administrators on a quarterly basis regarding the state of medical imaging in the U.S. It also provides a unique statistical index that is likely to attract a lot of attention from those following this industry.

What is imagePRO™ and why is it important?

imagePRO™ was created by The MarkeTech Group to provide a professional community for imaging administrators to participate in studies aimed at advancing the development of medical imaging technology.

The imagePRO™ panel is a true community of industry professionals and is the leading opt-in panel of this industry. Members are subjected to strict enrollment requirements to represent the voice of their peers and to be part of a group of professionals whose knowledge and input is important.
154 imaging directors/managers of hospitals completed the 3-minute Web survey regarding their perception of medical imaging trends for the fourth quarter of 2019.

Scores
measure the level of confidence, and range between 0 to 200. The score interpretation follows:
- Below 50 is extremely low confidence
- 50 to 69 is very low confidence
- 70 to 89 is low confidence
- 90 to 110 reflect an ambivalent score (Neutral)
- 111 to 130 is high confidence
- 131 to 150 is very high confidence
- Anything above 150 is extremely high confidence

Hospital bed size:
- 53% Under 100
- 32% 100-299
- 15% 300 or more
Index Methodology

Results
are reflective of national trends because of the manner in which participants were invited to participate.

- Participants were recruited by region and number of beds to reflect known AHA incidence.
- Once the final counts were confirmed there were some statistical adjustment—weighting—to ensure the index reflects the U.S. hospital imaging market. This type of adjustment is common when estimating overall market share, trends, and attitudes.

Recruitment
accounts for about 90% of correct hospitals and regions to reflect the U.S. hospital market.

- While relatively minor in magnitude, the weighting accounts for the final 10% to refine the estimates and ensure they represent the U.S. hospital market.
- This refinement is necessary to create an index that truly represents how radiology departments view the economic outlook for the current quarter and will ensure that subsequent MICI results are valid.
Index Methodology

Regions

- Mountain: 6%
- West North Central: 19%
- East North Central: 21%
- Mid-Atlantic: 15%
- South Atlantic: 17%
- Pacific: 8%
- West South Central: 8%
- East South Central: 6%

(THE MARKET GROUP)

ahra: the association for medical imaging management
Results for Q4 2019
Staff costs to remain constant, growth in volume and profit

<table>
<thead>
<tr>
<th>Topic</th>
<th>Score Mean</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will grow monthly in diagnostic and interventional radiology</td>
<td>124</td>
<td>High confidence</td>
</tr>
<tr>
<td>Receive adequate reimbursement from Medicare for diagnostic and interventional imaging</td>
<td>85</td>
<td>Low confidence</td>
</tr>
<tr>
<td>Internal operating and staff costs will remain constant</td>
<td>138</td>
<td>Very high confidence</td>
</tr>
<tr>
<td>Will have access to capital for imaging equipment and IT needs</td>
<td>100</td>
<td>Neutral</td>
</tr>
<tr>
<td>Will maintain/grow as a profit center</td>
<td>141</td>
<td>Very high confidence</td>
</tr>
<tr>
<td>Composite score across all areas</td>
<td>116</td>
<td>High confidence</td>
</tr>
</tbody>
</table>

There is concern about receiving adequate reimbursement from Medicare.
Hospitals with **100 or more beds are more confident in growth in diagnostic / interventional radiology.** Hospitals with **under 100 beds are more confident that cost will remain constant.** Hospitals with **100 to 299 beds are more confident that growth as profit center will occur more than hospitals with less than 100 beds.**

<table>
<thead>
<tr>
<th>Topic</th>
<th>Under 100 beds</th>
<th>100 to 299 beds</th>
<th>300 or more beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will grow monthly in diagnostic and interventional radiology</td>
<td>113</td>
<td>133</td>
<td>146</td>
</tr>
<tr>
<td>Receive adequate reimbursement from Medicare for diagnostic and interventional imaging</td>
<td>85</td>
<td>81</td>
<td>93</td>
</tr>
<tr>
<td><strong>Internal operating and staff costs will remain constant</strong></td>
<td><strong>151</strong></td>
<td>127</td>
<td>117</td>
</tr>
<tr>
<td>Will have access to capital for imaging equipment and IT needs</td>
<td>98</td>
<td>92</td>
<td>125</td>
</tr>
<tr>
<td><strong>Will maintain/grow as a profit center</strong></td>
<td><strong>132</strong></td>
<td><strong>154</strong></td>
<td>145</td>
</tr>
<tr>
<td>Composite score across all areas</td>
<td>114</td>
<td>115</td>
<td>125</td>
</tr>
</tbody>
</table>
Regional differences: although not statistically different

**South Atlantic and Mountain regions** have **very high confidence** in **growth in diagnostic / interventional radiology**.

**West North Central region** has **extremely high confidence** that **internal operating and staff costs will remain constant**.

**South Atlantic, Mountain, and Pacific regions** have **extremely high confidence** in **growing as a profit center**.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Score Mean</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Mid-Atlantic</td>
</tr>
<tr>
<td>Will grow monthly in diagnostic and interventional radiology</td>
<td>119</td>
</tr>
<tr>
<td>Receive adequate reimbursement from Medicare for diagnostic and interventional imaging</td>
<td>92</td>
</tr>
<tr>
<td>Internal operating and staff costs will remain constant</td>
<td>119</td>
</tr>
<tr>
<td>Will have access to capital for imaging equipment and IT needs</td>
<td>107</td>
</tr>
<tr>
<td>Will maintain/grow as a profit center</td>
<td>141</td>
</tr>
<tr>
<td>Composite score across all areas</td>
<td>115</td>
</tr>
</tbody>
</table>
There is **very high confidence** in the **facility growing as a profit center** and **staff costs remaining constant**; and **high confidence** in the **growth of diagnostic and interventional radiology**.

There is **concern** about receiving **adequate reimbursement from Medicare**.

Hospitals with **100 or more beds** are **more confident** in growth of diagnostic / interventional radiology. Hospitals with **under 100 beds** are **more confident** that internal operating and staff costs will remain constant. Hospitals with **100 to 299 beds** are **more confident** that growth as profit center will occur more than hospitals with less than 100 beds.

All regions have at least **high confidence** in growth of diagnostic / interventional radiology, growth as a profit center, and staff costs remaining constant. **West North** region has **extremely high confidence** that staff costs will remain constant. The **South Atlantic, Mountain, and Pacific** regions have **extremely high confidence** in growing as a profit center.

**East South Central** and **Mountain** regions have **very low confidence** about receiving adequate reimbursement from Medicare. The **West North Central** and **West South Central** regions have **low confidence** in access to capital for equipment.
Q4-2019 Member comments about the outlook

Study volume increase / planned growth:
- As we enter fall/winter months, there is usually an increase in volumes due to increases in illnesses.
- Volume is expected to rise with no additional staffing or supplies needed.
- As more imaging services get pushed to outpatient centers (dictated by insurance) we may see outpatient imaging volumes in the hospital departments decrease in the future.
- Volumes overall have been flat but we are experiencing a resurgence of patient volume in our area.
- Volumes continue to grow in our region. In fact, demand is starting to exceed capacity in some modalities.

Uncertainty / complaints about healthcare policy and reimbursement:
- We will continue to perform more procedures but reimbursement is not adequate.
- Reimbursement challenges with CMS with Interventional Radiology procedures.
- Volumes are increasing while reimbursement is decreasing. We are opening ICCs to channel more volume into the organization to offset the decreased reimbursement.
- Reimbursements continue to decrease but patients will be looking at getting their testing done prior to the end of the year before the deductibles start over in January 2020.

Access to capital for imaging equipment / IT needs:
- We are one of thirteen hospitals and the most recent acquisition. There is very little funding given to our facility.
- We have approved capital funds for the next quarter for mammography, CT, and Interventional Radiology.
- Internal capital resources continue to be less than adequate.
- Capital funds are hard to get approved with all the IT needs. Safety is becoming an issue in Hospitals and funds are also being allotted for that area.
- In radiology our volumes are up, but in other areas of the hospital volumes are down so I don't think we will receive any funding for projects. Authorization wait times are slowing down our scheduled patients.
Quarter-to-Quarter analysis

**Results** are now shown for Q1 2018 through Q4 2019.

- Comparisons are presented to show any trending of the data over a one year period.

**Analyses** are based on between group analysis of variance (ANOVA) where participant’s scores are compared over time to determine if changes occur.
### Quarter-to-Quarter analysis Q3-2019 through Q4-2019

#### Higher confidence in Q4 2019 on “Internal operating cost remain constant”

<table>
<thead>
<tr>
<th>Topic</th>
<th>Score Mean</th>
<th>Q3 2019</th>
<th>Q4 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will grow monthly in diagnostic and interventional radiology</td>
<td></td>
<td>119</td>
<td>124</td>
</tr>
<tr>
<td>Receive adequate reimbursement from Medicare for diagnostic and interventional imaging</td>
<td>87</td>
<td>85</td>
<td></td>
</tr>
<tr>
<td><strong>Internal operating and staff costs will remain constant</strong></td>
<td>130</td>
<td>138</td>
<td></td>
</tr>
<tr>
<td>Will have access to capital for imaging equipment and IT needs</td>
<td>95</td>
<td>100</td>
<td></td>
</tr>
<tr>
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<td>112</td>
<td>116</td>
<td></td>
</tr>
</tbody>
</table>
Quarter-to-Quarter analysis
Q1-2018 through Q4-2019

TRENDING:
Overall, higher confidence in growing as a profit center in Q4 2019 compared to Q1 2018 thru Q2 2019. Higher confidence in Internal operating cost will remain constant in MICI Q4 2019 compared to Q3 2019.
Quarter-to-Quarter analysis
Q1-2019 through Q4-2019

For details on MICI scores by bed size – please click on underlined links, or go to Appendix B.

Margin of error: ±8 percentage points
Quarter-to-Quarter analysis
Trend Summary

**Overall:**
Higher confidence in *growth as profit center* and in *Internal operating cost remain constant*

**Under 100 beds:**
Higher confidence in *growth as profit center* and in *Internal operating cost remain constant*

**100 to 299 beds:**
Higher confidence in *growth as profit center* and less confidence in *Internal operating cost remain constant*

**300 or more beds:**
Higher confidence in *growth of diagnostic and interventional radiology*

In aggregate, **Higher confidence** in growing as a profit center in Q4 2019 compared to Q1 2018 through Q2 2019. **Higher confidence** in Internal operating cost remaining constant in Q4 2019 compared to Q3 2019.

**Higher confidence** in growing as a profit center in Q4 2019 compared to all previous quarters. **Higher confidence** in Internal operating cost remaining constant in Q4 2019 compared to Q4 2018.

**Higher confidence** in growing as a profit center in Q4 2019 compared to Q2 2019 and Q1/Q2/Q3 2018 and **higher confidence** in Internal operating cost remaining constant in Q4 2019 compared to Q3 2019.

**Higher confidence** in growth of diagnostic and interventional radiology in Q4 2019 compared to Q1/Q2 2018.
Appendix: October to December 2019 results

APPENDIX A - Questionnaire

Grow monthly in diagnostic and interventional imaging
Over the next three months, I am very optimistic that our department:

S1Q1. will grow monthly study volumes in Diagnostic imaging modalities (X-ray, Ultrasound, MRI, CT and NM).
S1Q2. will grow monthly study volumes in Interventional imaging modalities (biopsy, angio cath lab, etc.).

Receive adequate reimbursement from Medicare for diagnostic and interventional imaging
Over the next three months, I am very optimistic that our department:

S1Q3. will receive adequate reimbursement from Medicare for Diagnostic imaging studies.
S1Q4. will receive adequate reimbursement from Medicare for Interventional imaging procedures.

Internal operating and staff costs will remain constant
Over the next three months, I am very optimistic that the imaging department:

S2Q1. internal operating expenses (not including staff costs) will remain constant.
S2Q2. internal staff costs will remain constant.
Appendix: October to December 2019 results

APPENDIX A - Questionnaire

Will have access to capital for imaging equipment and IT needs
Over the next three months, I am very optimistic that our department:

**S3Q1.** will have access to capital/credit to fund investments in new imaging equipment and the costs associated with Imaging capital projects (e.g. siting & construction costs).

**S3Q2.** will have access to capital/credit to fund investments in areas outside of imaging equipment, such as PACS, RIS, or other imaging-related IT needs.

**S3Q3.** will have access to capital/credit to fund investment in imaging facility expansion, if desired.

Will grow as a profit center
Over the next three months, I am very optimistic that our department:

**S4Q1.** will continue to maintain/grow Diagnostic imaging services as a profit center.

**S4Q2.** will continue to maintain/grow Interventional imaging services as a profit center.
Appendix: Q1-2018 through Q4-2019 results

APPENDIX B

Graphs are presented by number of beds to show MICI for all quarters.

Interpretation is by number of beds—any changes across quarters are identified as being significant.

If no changes are identified then differences that might appear are due to random fluctuation in responses over time and should not be considered real.
Appendix: Under 100 beds
Q1-2018 through Q4-2019 results

Under 100 beds: Higher confidence in growing as a profit center in Q4 2019 compared to all previous quarters. Higher confidence in Internal operating cost will remain constant in MICI Q4 2019 compared to Q4 2018.
Appendix: 100 to 299 beds
Q1-2018 through Q4-2019 results

100 to 299 beds: Higher confidence in growing as a profit center in Q4 2019 compared to Q2 2019 and Q1/Q2/Q3 2018. Higher confidence in internal operating and staff cost remaining constant in Q4 2019 compared to Q3 2019.
Appendix: 300 or more beds
Q1-2018 through Q4-2019 results

300 or more beds: Higher confidence in growth of diagnostic and interventional radiology in Q4 2019 compared to Q1/Q2 2018. No changes in MICI between MICI Q4 2019 and Q3 2019.
Appendix: Growth in diagnostic/interventional cardiology; Q1-2018 through Q4-2019 results

Will grow monthly in diagnostic and interventional radiology: Hospital bed size

Back to Hospital bed size summary
Receive adequate reimbursement from Medicare for diagnostic and interventional imaging: Hospital bed size

Quarter
Under 100 beds 100 to 299 beds 300 or more beds
1st quarter 2018

1st quarter 2019

Back to Hospital bed size summary
Appendix: Operating and staff cost Q1-2018 through Q4-2019 results

Internal operating and staff costs will remain constant: Hospital bed size

- Under 100 beds
- 100 to 299 beds
- 300 or more beds

Back to Hospital bed size summary
Appendix: Access to capital
Q1-2018 through Q4-2019 results

Will have access to capital for imaging equipment and IT needs: Hospital bed size

<table>
<thead>
<tr>
<th></th>
<th>1st quarter</th>
<th>2nd quarter</th>
<th>3rd quarter</th>
<th>4th quarter</th>
<th>1st quarter</th>
<th>2nd quarter</th>
<th>3rd quarter</th>
<th>4th quarter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 100 beds</td>
<td>80</td>
<td>85</td>
<td>82</td>
<td>88</td>
<td>90</td>
<td>95</td>
<td>92</td>
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<tr>
<td>100 to 299 beds</td>
<td>90</td>
<td>95</td>
<td>92</td>
<td>98</td>
<td>100</td>
<td>105</td>
<td>102</td>
<td>107</td>
</tr>
<tr>
<td>300 or more beds</td>
<td>100</td>
<td>105</td>
<td>102</td>
<td>108</td>
<td>110</td>
<td>115</td>
<td>112</td>
<td>117</td>
</tr>
</tbody>
</table>

Back to Hospital bed size summary
Appendix: Growth as profit center
Q1-2018 through Q4-2019 results

Average MICI Scores

Will maintain/grow as a profit center: Hospital bed size

Quarter
Under 100 beds 100 to 299 beds 300 or more beds

1st quarter 2nd quarter 3rd quarter 4th quarter 1st quarter 2nd quarter 3rd quarter 4th quarter

Back to Hospital bed size summary