Study & report have been conducted & brought to you courtesy of:

Q1 Report:
1st Quarter 2020 Outlook
January-March

Prepared for: AHRA
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.
190 imaging directors/managers of hospitals completed the 3-minute Web survey regarding their perception of medical imaging trends for the first quarter of 2020.

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:
- 55% Under 100
- 31% 100-299
- 14% 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.
Regions

- Pacific: 11%
- Mountain: 8%
- West North Central: 16%
- East North Central: 19%
- Mid-Atlantic: 14%
- South Atlantic: 16%
- West South Central: 11%
- East South Central: 6%
Results for Q1 2020
Staff costs to remain constant, growth in volume and profit

<table>
<thead>
<tr>
<th>Topic</th>
<th>Score Mean</th>
<th>Interpretation</th>
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</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>128</td>
<td>High confidence</td>
</tr>
<tr>
<td>Will have access to capital for imaging equipment and IT needs</td>
<td>107</td>
<td>Neutral</td>
</tr>
<tr>
<td>Will maintain/grow as a profit center</td>
<td>138</td>
<td>Very high confidence</td>
</tr>
<tr>
<td>Composite score across all areas</td>
<td>116</td>
<td>High confidence</td>
</tr>
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</table>

There is concern about receiving adequate reimbursement from Medicare.
Hospital bed size differences: Mixed high confidence

Hospitals with **300 or more beds are more confident** in the **growth of volume and profit** compared to 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>
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<tbody>
<tr>
<td>Will grow monthly in diagnostic and interventional radiology</td>
<td>117</td>
<td>128</td>
<td><strong>144</strong></td>
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<tr>
<td>Receive adequate reimbursement from Medicare for diagnostic and interventional imaging</td>
<td>82</td>
<td>86</td>
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<tr>
<td>Internal operating and staff costs will remain constant</td>
<td>133</td>
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<td>118</td>
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<td>100</td>
<td>113</td>
<td>123</td>
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<tr>
<td>Will maintain/grow as a profit center</td>
<td>133</td>
<td>140</td>
<td><strong>154</strong></td>
</tr>
<tr>
<td>Composite score across all areas</td>
<td><strong>112</strong></td>
<td><strong>118</strong></td>
<td><strong>127</strong></td>
</tr>
</tbody>
</table>
Regional differences*: Pacific region has extremely high confidence in growing as a profit center.

South Atlantic, West South Central, and Pacific regions have **very high confidence in growth in diagnostic / interventional radiology.**

East South Central region has **very low confidence** about **receiving adequate reimbursement from Medicare.**

West North Central, West South Central, and Mountain regions have **very high confidence** that internal operating and staff costs will remain constant.

West North Central and East South Central regions have **low confidence** in **access to capital for equipment.**

*No statistically significant differences among regions

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<thead>
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<tr>
<td></td>
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<tr>
<td>Will grow monthly in diagnostic and interventional radiology</td>
<td>127</td>
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<tr>
<td>Receive adequate reimbursement from Medicare for diagnostic and interventional imaging</td>
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<tr>
<td>Internal operating and staff costs will remain constant</td>
<td>118</td>
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<tr>
<td>Will have access to capital for imaging equipment and IT needs</td>
<td>91</td>
</tr>
<tr>
<td>Will maintain/grow as a profit center</td>
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*No statistically significant differences among regions
East South Central region has very low confidence about receiving adequate reimbursement from Medicare. The West North Central and East South Central regions have low confidence in access to capital for equipment.

Hospitals with 300 or more beds are more confident in growth of diagnostic / interventional radiology and in growth as a profit center than hospitals with less than 100 beds.

Pacific region has extremely high confidence in growth as a profit center; while all other regions have at least high confidence. West North Central, West South Central, and Mountain regions have very high confidence that staff costs will remain constant. The South Atlantic, West South Central, and Pacific regions have very high confidence in growth of diagnostic and interventional radiology.

Summary

1. There is very high confidence in the facility growing as a profit center; and high confidence in the growth of diagnostic and interventional radiology and staff costs remaining constant.

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

3. Hospitals with 300 or more beds are more confident in growth of diagnostic / interventional radiology and in growth as a profit center than hospitals with less than 100 beds.

4. Pacific region has extremely high confidence in growth as a profit center; while all other regions have at least high confidence. West North Central, West South Central, and Mountain regions have very high confidence that staff costs will remain constant. The South Atlantic, West South Central, and Pacific regions have very high confidence in growth of diagnostic and interventional radiology.

5. East South Central region has very low confidence about receiving adequate reimbursement from Medicare. The West North Central and East South Central regions have low confidence in access to capital for equipment.
Study volume increase / planned growth:
- Funding for PACS upgrade and server upgrades will be granted in the first calendar quarter. Expect interventional volume to increase slightly. Expect non-interventional volume to decrease due to seasonal factors as well as implementation of Clinical Decision Support software.
- Demand continues to grow in my region. I believe this is mostly due to smaller institutions cutting back on offerings and we are picking up procedures and studies that they have limitations on. Our greatest challenge is filling open positions so that we can meet demand.
- Very optimistic about first quarter 2020. Should see increased volumes and ability to purchase new radiology equipment if budgeted.
- With a strong economy, volumes will continue to grow. I firmly believe we will continue on this course.

Uncertainty / complaints about healthcare policy and reimbursement:
- Reimbursement rates continue to decline. We have found that hiring top talent and cross-training has stabilized and somewhat reduced our costs (when considering turnover).
- Reimbursement is down and imaging is up. High-cost imaging is down because of pre-authorizations.
- Reimbursement for all imaging remains inadequate but will be worse in [my state] due to budget cuts and political fallout surrounding Medicaid costs.
- In this environment we are working toward enhancing reimbursement as much as possible and maintaining quality to ensure we are awarded as much reimbursement as we can

Internal operating and staff costs remaining constant:
- Limited available resources for capital improvements. Qualified staff in short supply for this geographic area. I see increasing wages to retain and attract staff.
- Ability to hire staff is getting harder, so rate of pay is increasing to entice future hires.
- With reimbursement decreasing, staff costs increasing and insurance guiding to non hospital imaging facilities, it will become increasingly difficult to provide lower pricing to our patients with large hospital overhead. Profits will be impacted.
Quarter-to-Quarter analysis

**Results** are now shown for Q2 2018 through Q1 2020.
- 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  
Q4-2019 through Q1-2020

No statistically significant differences in confidence for any of the MICI scores between Q4 2019 and Q1 2020.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Score Mean</th>
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<td>Q4 2019</td>
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<td>Will grow monthly in diagnostic and interventional radiology</td>
<td>124</td>
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<td><strong>Composite score across all areas</strong></td>
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</table>
TRENDING:

Overall, higher confidence in growing as a profit center in Q1 2020 compared to Q2-Q3 2018. Higher confidence in Internal operating cost will remain constant in MICI Q2 2019 compared to Q1 2020.

Margin of error: ±8 percentage points
Quarter-to-Quarter analysis
Q2-2019 through Q1-2020

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 less confidence in *Internal operating cost remain constant*.

Under 100 beds:
Higher confidence in access to capital, growth in volume, and growth as profit center; while less confidence in Internal operating cost remain constant.

100 to 299 beds:
Higher confidence in access to capital and less confidence in Internal operating cost remain constant.

300 or more beds:
No change in confidence.

In aggregate, **Higher confidence** in growing as a profit center in Q1 2020 compared to Q2-Q3 2018. **Higher confidence** in Internal operating cost remaining constant in Q2 2019 compared to Q1 2020.

Higher confidence in access to capital in Q1 2020 compared to Q3 2018. **Higher confidence** in growth of diagnostic and interventional radiology in Q1 2020 compared to Q1 2019. **Higher confidence** in growing as a profit center in Q1 2020 compared to Q2 2018 through Q2 2019. **Higher confidence** in Internal operating cost remaining constant in Q2 and Q4 2019 compared to Q1 2020.

Higher confidence in growing as a profit center in Q1 2020 compared to Q1 2019 and **higher confidence** in Internal operating cost remaining constant in Q4 2018 compared to Q1 2020.

No changes in MICI among Q1 2020 and all previous quarters starting on Q2 2018.
Appendix
Appendix: January to March 2020 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: January to March 2020 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: Q2-2018 through Q1-2020 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
### Q2-2018 through Q1-2020 results

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Average MICI Scores</th>
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<tr>
<td>2nd quarter</td>
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<td>3rd quarter</td>
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<td>4th quarter</td>
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<td>1st quarter</td>
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<tr>
<td>2nd quarter</td>
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<tr>
<td>3rd quarter</td>
<td>115</td>
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<tr>
<td>4th quarter</td>
<td>120</td>
</tr>
<tr>
<td>1st quarter</td>
<td>125</td>
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</table>

### Hospital bed size: Under 100 beds

- Will grow monthly in diagnostic and interventional radiology
- Receive adequate reimbursement from Medicare for diagnostic and interventional imaging
- Internal operating and staff costs will remain constant
- Will have access to capital for imaging equipment and IT needs
- Will maintain/grow as a profit center
- Composite score across all areas

Under 100 beds: Higher confidence in growing as a profit center in Q1 2020 compared to Q2-2019 through Q2-2018 quarters. Higher confidence in Internal operating cost will remain constant in MICI Q2 and Q4 2019 compared to Q1 2020. Higher confidence in growth of diagnostic and interventional radiology in MICI Q1 2020 compared to Q1 2019. Higher confidence in access to capital in MICI Q1 2020 compared to Q3 2018.
Appendix: 100 to 299 beds
Q2-2018 through Q1-2020 results

100 to 299 beds: Higher confidence in access to capital in Q1 2020 compared to Q1 2019. Higher confidence in internal operating and staff cost remaining constant in Q4 2018 compared to Q1 2020.
Appendix: 300 or more beds
Q2-2018 through Q1-2020 results

300 or more beds: No changes in MICI between MICI Q1 2020 and Q2 2018. No changes between Q1 2020 and Q4 2019.
### Appendix: Growth in diagnostic/interventional cardiology; Q2-2018 through Q1-2020 results

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

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<tr>
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<td>1st quarter</td>
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*Back to Hospital bed size summary*
## Receive adequate reimbursement Q2-2018 through Q1-2020 results

### Average MICI Scores

<table>
<thead>
<tr>
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**Receive adequate reimbursement from Medicare for diagnostic and interventional imaging: Hospital bed size**

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

Back to Hospital bed size summary
### Internal operating and staff costs will remain constant: Hospital bed size

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<tbody>
<tr>
<td>Under 100 beds</td>
<td>50</td>
<td>75</td>
<td>125</td>
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<td>175</td>
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**Back to Hospital bed size summary**
Appendix: Access to capital
Q2-2018 through Q1-2020 results

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

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

Back to Hospital bed size summary
Appendix: Growth as profit center
Q2-2018 through Q1-2020 results

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

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

Back to Hospital bed size summary