2023–2024 Physician Practice Information Survey
Sample Design and Survey Methodology

November 9, 2022
Overview

Mathematica will develop, field, and analyze data from a survey of physician practices and a survey of physicians in 2023–2024 for the American Medical Association (AMA).

- We will collect the data needed to calculate practice expenses per hour of patient care by physician specialty for up to 46 Medicare specialties.
  - The practice survey will provide the components of physician expense (numerator); the physician survey will provide the physician patient care hours (denominator).
Project process and timeline

Year 1
January 2023 to December 2023

- Survey design, programming, and testing
- Sample design, frame development, and sample selection
- Survey administration
- Data processing, weighting, and nonresponse analysis
- Analysis and reporting of survey results

Year 2
January 2024 to December 2024

- Survey design, programming, and testing
- Sample design, frame development, and sample selection
- Survey administration
- Data processing, weighting, and nonresponse analysis
- Analysis and reporting of survey results
## Survey design, programming, and testing

<table>
<thead>
<tr>
<th></th>
<th>Practice survey</th>
<th>Physician survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Survey design</strong></td>
<td>Mathematica will start with the AMA’s existing practice survey instrument and revise in collaboration with the AMA.</td>
<td>Mathematica will develop a physician survey instrument to collect information on hours spent in direct patient care by physicians.</td>
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<tr>
<td><strong>Programming</strong></td>
<td>Both surveys will be programmed online using Confirmit and tested by both Mathematica and the AMA.</td>
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<td><strong>Testing</strong></td>
<td>Mathematica will conduct a pre-test with a sample of AMA-identified practices and physicians (up to 10 pre-tests with each). Mathematica will review pre-test findings with the AMA and make modifications to surveys.</td>
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</table>

**Timing:** January to May 2023
Sample design and frame development

/ Sampling unit
- We will identify group practices using Taxpayer Identification Numbers (TINs); the TIN is our sampling unit.

/ Who will be sampled
- Practices: Individual ownership practices and those with more complex ownership structures
- Physicians affiliated with sampled practices that complete a practice survey

/ Data sources
- Medicare Data on Provider Practice and Specialty (MD-PPAS), OneKey data, and Medicare fee-for-service claims data

/ Sampling strategy
- Practices will be sampled based on size, specialty, ownership, and site-of-service

Timing: January to March 2023
## Sample selection

<table>
<thead>
<tr>
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<th>Practice survey</th>
<th>Physician survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size of survey sample (overall)</td>
<td>10,800 practices (3,400 complex-ownership practices and 7,400 individual-ownership practices) Sample will be released in two waves: the first wave of 3,000 practices and the second wave of 7,800 practices</td>
<td>Starting sample estimated to be 90,000 physicians from the 3,243 practices that complete the practice survey</td>
</tr>
<tr>
<td>Target number of survey completes</td>
<td>3,243 practice surveys (1,043 from complex-ownership practices and 2,200 from individual-ownership practices)</td>
<td>9,000 physicians</td>
</tr>
<tr>
<td>Anticipated response rate</td>
<td>30%</td>
<td>10%</td>
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**Timing:** April to May 2023
Survey fielding preparation

/ Key activities:
- Gather endorsements from medical specialty societies
- Draft personalized invitations, reminder letters, and mailing inserts
- Build a sample management system to manage the sample
- Prepare an adaptive design plan to guide survey fielding

Timing: January to May 2023
# Survey administration

<table>
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<tr>
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<th>Physician survey</th>
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</thead>
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<tr>
<td><strong>Mode and duration</strong></td>
<td>Single-mode, online survey fielded in two waves; each wave runs for seven months</td>
<td>Single mode, online survey fielded in three waves; each wave runs eight weeks</td>
</tr>
<tr>
<td><strong>First wave</strong></td>
<td>First wave will include a three-month pilot to assess procedures and initial response</td>
<td></td>
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<tr>
<td><strong>Contact strategy</strong></td>
<td>Practice contact information will come from OneKey (provided by IQVIA)</td>
<td>Practices that completed the practice survey will be asked to send the link to the survey to their physicians via email</td>
</tr>
<tr>
<td><strong>Mathematica contact</strong></td>
<td>Mathematica will contact practices by email and mail</td>
<td>Mathematica will survey physicians in practices that chose not to share the survey link</td>
</tr>
<tr>
<td><strong>Incentives</strong></td>
<td>Monetary incentive offered to individual-ownership practices that complete the survey</td>
<td>Physician emails will come from IQVIA. Mathematica will contact physicians by email and mail</td>
</tr>
<tr>
<td></td>
<td>Individual practice survey report showing practice-level data offered to all practices that complete the survey</td>
<td></td>
</tr>
<tr>
<td><strong>Monitoring and</strong></td>
<td>Mathematica will monitor progress and report responses weekly to the AMA</td>
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<tr>
<td><strong>reporting</strong></td>
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**Timing:** June 2023 to April 2024
Data processing, weighting, and nonresponse analysis

/ Data processing
- Mathematica will review early and interim survey data to prepare for analysis.
- Final data files will be processed to create analytic data file.

/ Weighting and nonresponse adjustments
- Mathematica will develop final analysis weights to adjust for probability of selection, practice eligibility, and cooperation, ensuring selected weighted totals match marginal population totals from the sample frame.
- Mathematica will evaluate the potential for nonresponse bias by conducting a nonresponse bias analysis.
- Mathematica will provide the AMA with a data file layout and a weighted analytic file of survey data, with one observation per practice per specialty.

Timing: May to July 2024
Analysis and reporting of survey results

/ Analysis
- To calculate estimates of practice expenses per patient care hour, Mathematica will divide estimates from the practice survey (expenses) by the physician survey (patient care hours) for sampled practices.

/ Reporting and documentation
For the AMA:
- Summary statistics report
- Summary practice expense report
- Survey methodology report

For practices that complete the survey:
- Individual practice survey reports

For medical specialty societies:
- Medical specialty reports

Timing: August to December 2024
Throughout the project, Mathematica will:
- Conduct regular check-in calls with the AMA (weekly or every other week)
- Communicate risks early and identify and discuss remediation plans
- Create and monitor data security plan
- Monitor budget and schedule

Timing: January 2023 to December 2024