2007-2008 AMA Survey
Comments on Design and Weighting

The 2007-2008 AMA Survey is intended to provide estimates of expense per physician hour, estimates of the distribution of expenses by source (also referred to as the Medicare Economic Index), and estimates of ancillary variables at the national level by physician specialty and for physicians overall. The estimates are derived from a sample survey of physicians/healthcare professionals selected from the AMA Masterfile and masterfiles from the Lewin Group in which data were collected in 2007 and 2008 via a variety of collection modes (Web, Fax, CATI)

The survey was implemented as a stratified (by 51 physician specialty/healthcare professional category) design. Samples were selected in anticipation of response rates expected to range between roughly 7% and 14%. Due to lower than expected participation (final response rates for 35 of the 51 groups are expected to be less than 7%), supplemental samples were selected for many of the specialty/health care professional groups.

A. Survey Weighting

At this point, it is useful to frame the discussion in terms of standard survey weighting processes. The objective of survey weights are to allow estimates to be generated based on data collected from the survey respondents that are as precise as possible in relative to the true value for the full population. Survey weighting is typically carried out in several stages:

*Base Weights (to reflect probability of selection)

*Screener Completion Adjustment (to account for presence of ineligibles in the sampling frame)

*Nonresponse Adjustment (to adjust for differences between respondents and nonrespondents)

*Post-stratification Ratio Adjustment (to adjust for differences between the distributions of the sample respondents and the population)

1. Base Weights

Base weights are used to reflect the probability of selection for the units selected into the sample (regardless of whether they responded or not, or were eligible or not). The base weight is defined as the inverse of the probability of selection. Assuming a stratified simple random sample was selected, the base weight for sample unit j can be defined as:

$$W_{0j} = \frac{N_s}{n_s}, \qquad j \in s$$

where

N_s = the number of eligible units in stratum s

n_s = the number of sampled units from stratum s

It can be seen that multiplying the base weight for a stratum by the sample size selected for the stratum yields the population size for the stratum. However, this will no longer be the case when the sample is restricted to eligible respondents, nor is it necessarily true that weighted counts within a stratum will equal the population totals for subgroups of the population within the stratum.

2. Adjustment for Screener Completion

Often, it is necessary to screen the sample to identify sampling units that are eligible for the survey. Ideally, each sample unit would at least be able to be classified as eligible for the survey or not. Unfortunately, making contact with all sample cases to make that determination is not possible. As a result, estimates of the total number of eligibles in the population can be derived are available from only a portion of the sample. Screener completion adjustment involves adjusting the weights for sample cases which have been screened as to eligibility so as to represent the distribution of eligibles and noneligibles in the full sample. Adjustment is typically performed within cells defined by characteristics known for the sample (although possibly also known for the population) and associated with the screener response rate and the proportion eligible.

Let:

$E =$ the set of sample units of screened for the survey and determined to be eligible

$IE =$ the set of sample units of screened for the survey and determined to be ineligible

If we assume screener completion adjustment cells, c_1, within each stratum, s, then the weights following screener completion adjustment are:

$$W_{1j} = \frac{W_{0j}}{A_{1s,c_1}}, \qquad j \in s, c_1, E \cup IE$$

where

$$A_{1s,c_1} = \frac{\sum_{k \in E,s,c_1} W_{0k} + \sum_{k \in IE,s,c_1} W_{0k}}{\sum_{k \in s,c} W_{0k}} = \text{ screener completion rate for sample units in adjustment cell } c_1$$

from stratum s

Applying the weights following screener completion adjustment to sample cases by elgibility status yields:

$$\hat{X}_{Es} = \sum_{c_1} \sum_{k \in E,s,c_1} W_{1k} = \text{estimated number of eligible units on the sample frame for stratum } s$$

$$\hat{X}_{IEs} = \sum_{c_1} \sum_{k \in IE,s,c_1} W_{1k} = \text{estimated number of ineligible units on the sample frame for stratum } s$$

Again, it can be seen that the sum of $\hat{X}_{Es}$ and $\hat{X}_{IEs}$ within a stratum yields the population size for the stratum.

Determination of characteristics appropriate for use in screener completion adjustment can be made by examining screener completion rates and eligibility rates within each specialty, by levels of the characteristic. In other words, look for characteristics, *c*, within each stratum, *s*, for which

1) screener completion rates for sample units with the same characteristic within a stratum, $SCR_{s,c} = \frac{n_{E,s,c} + n_{IE,s,c}}{n_{s,c}}$, differ noticeably across different values of *c*

   where

   $n_{E,s,c}$ = number of eligible screened units from stratum *s* with characteristic *c*

   $n_{IE,s,c}$ = number of ineligible screened units from stratum *s* with characteristic *c*

   $n_{s,c}$ = number of sample units from stratum *s* with characteristic *c*

and

2) eligibility rates for screened sample with the same characteristic within a stratum, $ER_{s,c} = \frac{n_{E,s,c}}{n_{E,s,c} + n_{IE,s,c}}$, differ noticeably across different values of *c*

3. Adjustment for Nonresponse

Unfortunately, not all sample cases provide a response. As a result, data from which estimates of interest can be derived are available from only a portion of the sample. Nonresponse adjustment involves adjusting the weights for eligible respondents so as to represent the eligibles in the full sample. Adjustment is typically performed within cells defined by characteristics known for the sample and associated with the response rate and the variable of interest. While the characteristics are often known for the population as well, they may be known for only the sample (e.g., in a random digit dial telephone survey, one could define cells by telephone listed status).

Let:

R = the set of eligible sample units responding to the survey

NR = the set of eligible sample units not responding to the survey

If we assume nonresponse adjustment cells, c_2, within each stratum, *s*, then the weights following nonresponse adjustment are:

$$W_{2j} = \frac{W_{1j}}{A_{2s,c_2}}, \qquad j \in s, c_2, R$$

where

$$A_{2s,c_2} = \frac{\sum_{k \in R,s,c_2} W_{1k}}{\sum_{k \in R \cup NR,s,c_2} W_{1k}} = \text{ response rate for sample units from stratum } s \text{ in adjustment cell } c$$

Here again the population size for the stratum can be derived from the nonresponse adjusted weights, by multiplying the nonresponse adjusted weight for a stratum/adjustment cell by the reporting sample size within the stratum/adjustment cell and summing across adjustment cells within the stratum and then adding the weighted counts of ineligibles for the stratum (from step 2).

Determination of characteristics appropriate for use in nonresponse adjustment can be made by examining nonresponse rates and averages within each specialty, by levels of the characteristic. In other words, look for characteristics, *c*, within each stratum, *s*, for which

1) nonresponse rates for sample units with the same characteristic within a stratum, $NR_{s,c} = \frac{n_{R,s,c}}{n_{E,s,c}}$, differ noticeably across different values of *c*

   where

   $n_{R,s,c}$ = number of respondents from stratum *s* with characteristic *c*

   and

2) means for sample respondents with the same characteristic within a stratum, $\bar{y}_{s,c} = \frac{\sum_{k \in R,s,c} y_k}{n_{R,s,c}}$, differ noticeably across different values of *c*

4. Ratio Adjustment to Population Controls

Even though the weighted counts of respondents may sum to the total population for each stratum, weighted counts will likely not sum to subgroups within stratum that are associated with the variable of interest.

If we assume ratio adjustment cells, *r*, within each stratum, *s*, then the weights assigned to sample respondents following ratio adjustment are:

$$W_{3j} = \frac{W_{2j}}{A_{3s,r}}, \qquad j \in s, r, R$$

where

$$A_{2s,r} = \frac{\sum_{k \in R,s,r} W_{2k} + \sum_{k \in IE,s,r} W_{1k}}{N_{s,r}}$$ = coverage rate for stratum s in adjustment cell r

$N_{s,r}$ = the population size for stratum s in adjustment cell r

As a side note, the weights for the units screened and determined to be ineligible following ratio adjustment are:

$$W_{3j} = \frac{W_{1j}}{A_{3s,r}}, \qquad j \in s, r, IE$$

Note that if multiple characteristics (e.g., age, gender) are determined appropriate for use in ratio adjustment, and cell sizes resulting from using all characteristics would be too small (<20), ratio adjustment can be implemented as an iterative process. In this case, adjustment would be carried out for each characteristic in turn, with each adjustment using the weights from the prior stage of ratio adjustment. Adjustment is iterated until all weighted counts converge to the population controls. (This iterative weighting is what DMRK referred to as a nonnegative regression weighting algorithm.)

It can be seen that multiplying the weight following ratio adjustment for a stratum/ratio adjustment cell by the respondent sample size for the stratum/ratio adjustment cell yields the population size for the stratum/ratio adjustment cell. Further, if the nonresponse adjustment cells have the same definition as the ratio adjustment cells (e.g., if gender were used to define both sets of cells) or if the nonresponse adjustment cells were a subset of the ratio adjustment cells (e.g., if gender was used to define nonresponse adjustment cells and gender/age was used to define ratio adjustment cells), then the nonresponse adjustment step could have been eliminated, with the ratio adjustment accounting for both nonresponse and population controls, with the same resulting final survey weights.

Determination of characteristics appropriate for use in ratio adjustment can be made by examining averages and standard deviations of averages within each specialty, by levels of the characteristic. In other words, look for characteristics, c, within each stratum, s, for which

1) means for sample respondents with the same characteristic within a stratum, $\bar{y}_{s,c} = \frac{\sum_{k \in R,s,c} y_k}{n_{R,s,c}}$, differ noticeably across different values of c

   where

   y_k = reported value of variable Y for respondent k

   $n_{R,s,c}$ = number of respondents from stratum s with characteristic c

and/or

2) variances for sample respondents with the same characteristic within a stratum, $\mathrm{var}(\bar{y}_{s,c}) = \frac{\sum_{k \in R,s,c} (y_k - \bar{y}_{s,c})^2}{n_{R,s,c} - 1}$, differ noticeably across different values of *c*

5. Estimation

Estimates are derived by applying the weights following ratio adjustment. For a variable, *Y*, the estimates would be

$$\hat{Y}_s = \sum_{k \in R,s} (W_{3k} * y_k) = \text{Estimate of } Y \text{ within stratum } s$$

B. AMA Survey Weighting

Based upon the information provided by DMRK in the November 6 meeting, it appears the survey weighting plan involved deriving weights based upon universe (adjusted for survey ineligibles) over sample (respondents) by selected characteristics known for the population within each specialty/healthcare professional group. Characteristics mentioned for possible use in the weighting included years since medical degree, years in practice, gender, board certification, and AMA membership status. Weights would be derived in either one step (i.e., at the cell level defined by the cross-classification of all defined weighting variables) or iteratively (i.e., for each weighting variable in turn, iterating until convergence is achieved).

The DMRK approach essentially folds into one step what is typically carried out in the four weighting steps discussed above. If it is determined that screener completion adjustment is not required (which is not the case for the AMA Survey) and that nonresponse adjustment is not desired (which could be the case for the AMA Survey), then the DMRK approach is equivalent to the standard weighting approach, as the two-step approach (Base Weights plus Ratio Adjustment) can be collapsed into one-step (Ratio Adjustment).

Further discussion of the DMRK approach in a December 18 call identified the need for developing population controls adjusted for screener eligibility outside the weighting process. These adjusted population controls would then be used in the DMRK one-step weighting process.

The survey weighting process is now discussed from the perspective of the AMA Survey. The weighting plan is a modified version of that presented previously, but accommodating the survey implementation and the needs of the DMRK system. The sample weighting will be carried out in a two-step process. First, adjusted population controls are derived, to appropriately estimate the population on the sample frame (the "cleaned" AMA Masterfile) that meets the eligibility requirements for the survey. This first step itself consists of a two level eligibility adjustment. The first adjustment takes into account information on physician retirement, death, and practicing and resident status that is obtained once contact has been made but prior to the start of the survey proper. The second adjustment accounts for part time work hours and federal employment, information that is only learned once a physician enters the survey.

Second, sample weights are calculated through ratio adjustment of the reporting sample to the adjusted population controls. Finally, an illustration is given. From this point forward, only physicians are discussed, for ease of presentation.

0. Nomenclature

In the AMA Survey, the following are definitions for the survey outcomes:

$N_s =$ the number of eligible physicians of specialty s on the "cleaned" AMA Masterfile (including only office/hospital-based, and excluding: a) 70+ years old, b) working <20 hours per week, c) resident/intern, d) retired, e) deceased, f) outside the 50 states + DC, as determined from information on the AMA Masterfile)

$n_s =$ the number of physicians of specialty s selected from the "cleaned" AMA Masterfile (NOTE: n_s represents the combined total sample for specialty s)

$L_1 =$ the set of sample physicians determined to be a level 1 contact (even if no usable survey data were collected for the survey), consisting of $n_{L_1,s}$ physicians in each specialty, from disposition categories Completed Interviews, Disqualified, Refused, Schedule Callback, Viable Sample, and Other Problems.

$IE_1 =$ the set of sample physicians screened for the survey and determined to be level 1 ineligible (disposition codes 15-retired, 16-deceased, 17-no longer practicing in U.S., 18-resident, 19-not practicing) , consisting of $n_{IE_1,s}$ physicians in each specialty

$L_2 =$ the set of sample physicians determined to be a level 2 contact (even if no usable survey data were collected for the survey), consisting of $n_{L_2,s}$ physicians in each specialty, from disposition category Completed Interviews and disposition codes 24-<20 hours per week, 32-federal, and 35–midpoint terminate

$IE_2 =$ the set of sample physicians screened for the survey and determined to be level 2 ineligible (disposition codes 24-<20 hours per week, 32-federal), consisting of $n_{IE_2,s}$ physicians in each specialty

$R =$ the set of eligible sample units reporting data used for one or more of the three uses for the survey, consisting of $n_{R,s}$ physicians in each specialty)

$R_{E/H} =$ responding to the survey, with data usable for estimating Expenses per Hour (referred to here as E/H), consisting of $n_{R_{E/H},s}$ physicians in each specialty)

R_{MEI} = responding to the survey, with data usable for estimating the distribution of expenses by source (also referred to as the Medicare Economic Index, or MEI) , consisting of $n_{R_{MEI},s}$ physicians in each specialty)

R_A = responding to the survey, with data usable for estimating ancillary variables, consisting of $n_{R_A,s}$ physicians in each specialty)

NR = the set of sample units screened for the survey and determined eligible, but not reporting data used in any of the three uses for the survey, consisting of $n_{NR,s}$ physicians in each specialty)

1. Definition of Estimation Cells

Estimation cells will be defined by specialty along with other physician characteristics determined to be associated with the variables of interest (E/H, MEI), eligibility rates, and/or response rates.

Determination of characteristics appropriate for use in ratio adjustment can be made by examining averages and standard deviations of averages within each specialty, by levels of the characteristic. In other words, look for characteristics, *c*, within each stratum, *s*, for which

1) means for sample respondents with the same characteristic within a stratum, $\bar{y}_{s,c} = \frac{\sum_{k \in R,s,c} y_k}{n_{R,s,c}}$, differ noticeably across different values of *c*

   where

   y_k = reported value of variable *Y* for respondent *k*

   $n_{R,s,c}$ = number of sample reporters from stratum *s* with characteristic *c*

and/or

2) variances for sample respondents with the same characteristic within a stratum, $\text{var}(\bar{y}_{s,c}) = \frac{\sum_{k \in R,s,c} (y_k - \bar{y}_{s,c})^2}{n_{R,s,c} - 1}$, differ noticeably across different values of *c*

Assume there are *h* sets of characteristics $(C_1, C_2, \ldots, C_h)$, each with i_l values, selected for use in weighting within each stratum, *s*. (for example, AMA membership, years in practice)

2. Population Controls Adjusted for Eligibility

For each specialty, s, estimate the eligible population for each value, v, within each characteristic set, C_i.

Level 1 Survey Eligibility Rate for value v within characteristic set C_i

$$E1\%_{s,C_{iv}} = \frac{n_{L_1,s,C_{iv}} - n_{IE_1,s,C_{iv}}}{n_{L_1,s,C_{iv}}}$$

Level 2 Survey Eligibility Rate for value v within characteristic set C_i

$$E2\%_{s,C_{iv}} = \frac{n_{L_2,s,C_{iv}} - n_{IE_2,s,C_{iv}}}{n_{L_2,s,C_{iv}}}$$

Overall Eligibility Rate for value v within characteristic set C_i

$$E\%_{s,C_{iv}} = E1\%_{s,C_{iv}} \times E2\%_{s,C_{iv}}$$

Estimated Survey Eligible Population for value v within characteristic set C_i

$$N^E_{s,C_{iv}} = E\%_{s,C_{iv}} \times N_{s,C_{iv}}$$

where

$N_{s,C_{iv}}$ = the number of eligible physicians of specialty s for value v within characteristic set C_i on the "cleaned" AMA Masterfile (including only office/hospital-based, and excluding: a) 70+ years old, b) working <20 hours per week, c) resident/intern, d) retired, e) deceased, f) outside the 50 states + DC, as determined from information on the AMA Masterfile)

3. Ratio Adjustment to Population Controls

For the AMA Survey, ratio adjustment to population controls must be carried out separately for each use. Given the survey discovered additional ineligibles beyond those excluded in the "cleaned" AMA Masterfile, the population controls used will be the estimated survey eligible population derived in the previous step. If we assume ratio adjustment cells defined by levels of characteristics, C_{iv}, within each specialty, s, then the weights following ratio adjustment are (this assumes only one characteristic used within each specialty; if more than one characteristics is used within each specialty, then the weights will be derived via iteration of this process):

a. E/H

$$W_{E/H,j} = \frac{N^E_{s,C_{iv}}}{n_{R_{E/H},s,C_{iv}}}, \qquad j \in s, C_{iv}, R_{E/H}$$

where

$N^{E}_{s,C_{iv}}$ = estimated number of survey eligible physicians of specialty s for value v within characteristic set C_i

$n_{R_{E/H},s,C_{iv}}$ = the number of physicians of specialty s for value v within characteristic set C_i reporting usable data for E/H

b. MEI

$$W_{MEI,j} = \frac{N^{E}_{s,C_{iv}}}{n_{R_{MEI},s,C_{iv}}}, \qquad j \in s, C_{iv}, R_{MEI}$$

where

$N^{E}_{s,C_{iv}}$ = estimated number of survey eligible physicians of specialty s for value v within characteristic set C_i

$n_{R_{MEI},s,C_{iv}}$ = the number of physicians of specialty s for value v within characteristic set C_i reporting usable data for MEI

c. Ancillary Variables

$$W_{A,j} = \frac{N^{E}_{s,C_{iv}}}{n_{R_A,s,C_{iv}}}, \quad j \in s, C_{iv}, R_A$$

where

$N^{E}_{s,C_{iv}}$ = estimated number of survey eligible physicians of specialty s for value v within characteristic set C_i

$n_{R_A,s,C_{iv}}$ = the number of physicians of specialty s for value v within characteristic set C_i reporting usable data for Ancillary Variables

Determination of characteristics appropriate for use in ratio adjustment for the AMA Survey is to be made from variables available on the AMA Masterfile, and as described in Section A.4. It would be possible to define separate adjustment cells for each use. Candidate characteristics discussed for which examination of means and variances within specialty should be carried out include:

*Office/hospital-based employment

*AMA Membership

*Years in Practice

*MD/DO

*Board Certification

*Size of Practice (Solo, Two-physician, Group, Other)

*Age

*Urban/rural

*Major Professional Activity

4. Estimation

a. E/H

To determine the average expenses per hour within a specialty:

$$E/H_s = \frac{\sum_{k \in R_{E/H,s}} \left(W_{E/H,k} * E/H_k\right)}{\sum_{k \in R_{E/H,s}} \left(W_{E/H,k}\right)} = \text{Exp/Hr for physicians of specialty } s$$

where

E/H_k = expenses per hour for reporting physician k

Determination of the average expenses across all specialties (assuming expenses are equal to the sum across source i):

$$E/H = \frac{\sum_s \sum_i \sum_{k \in R_{E/H,s}} \left(W_{E/H,k} * E_{ik}\right)}{\sum_s \sum_{k \in R_{E/H,s}} \left(W_{E/H,k} * H_k\right)} = \text{Exp/Hr across all physicians}$$

where

H_k = hours for reporting physician k

b. MEI

To determine the MEI within a specialty:

$$MEI_{i,s} = \frac{\sum_{k \in k \in R_{MEI,s}} \left(W_{MEI,k} * E_{ik}\right)}{\sum_i \sum_{k \in R_{MEI,s}} \left(W_{MEI,k} * E_{ik}\right)} = \text{MEI corresponding to source } i \text{ for physicians of specialty } s$$

where

E_{ik} = expenses of source i for reporting physician k

Determination of MEI across all specialties:

$$MEI_i = \frac{\sum_s \sum_{k \in R_{MEI},s} \left(W_{MEI,k} * E_{ik}\right)}{\sum_s \sum_i \sum_{k \in R_{MEI},s} \left(W_{MEI,k} * E_{ik}\right)}$$ = MEI corresponding to source i across all physicians

c. Ancillary Variables

To determine the average per physician within a specialty for ancillary variables:

$$Y_{i,s} = \frac{\sum_{k \in R_{A},s} \left(W_{A,k} * Y_{ik}\right)}{\sum_i \sum_{k \in R_{A},s} \left(W_{A,k}\right)}$$ = average value of Y per physician in specialty s

where

Y_{ik} = value of ancillary variable Y for reporting physician k

5. Illustration

To illustrate the weighting methodology for the AMA Survey, assume two specialties, Internal Medicine (IM) and Medical Oncology (MO), with subgroups used in adjustment being defined by office/hospital-based physicians within specialty, and with sample and reporting distributions as indicated below. Data from recent disposition reports were used as the basis for the counts at the specialty level, and data were created to represent potential distributions by office/hospital-based physicians within specialty.

Population, selected sample distribution by specialty

Specialty	N_s	n_s
IM	99,010	4,415
MO	8,490	3,159

Population, sample distribution by office/hospital-based within specialty

Specialty	Classification	$N_{s,Civ}$	$n_{s,Civ}$
IM	Office-based	70,000	3,000
	Hospital-based	29,010	1,415
MO	Office-based	5,000	2,500
	Hospital-based	3,490	659

Sample distribution by contact level, eligibility status

Level 1 Contact Outcome

Specialty	Classification	$n_{L1,s,,Civ}$	$n_{IE1,s,,Civ}$	$E1\%_{s,,Civ}$
IM	Office-based	2,000	90	95.50%
	Hospital-based	1,175	39	96.68%
MO	Office-based	2,000	80	96.00%
	Hospital-based	416	34	91.83%

Level 2 Contact Outcome

Specialty	Classification	$n_{L2,s,Civ}$	$n_{IE2,s,Civ}$	$E2\%_{s,Civ}$
IM	Office-based	150	25	83.33%
	Hospital-based	59	11	81.36%
MO	Office-based	57	17	70.18%
	Hospital-based	9	2	77.78%

Overall Eligibility Rate

Specialty	Classification	$E1\%_{s,Civ}$	$E2\%_{s,Civ}$	$E\%_{s,Civ}$
IM	Office-based	95.50%	83.33%	79.58%
	Hospital-based	96.68%	81.36%	78.66%
MO	Office-based	96.00%	70.18%	67.37%
	Hospital-based	91.83%	77.78%	71.42%

Sample distribution by reporting status

Specialty	Classification	$n_{R,s,Civ}$	$n_{E/H,s,Civ}$	$n_{MEI,s,Civ}$	$n_{A,s,Civ}$
IM	Office-based	125	70	80	110
	Hospital-based	47	30	35	45
MO	Office-based	40	20	27	33
	Hospital-based	7	4	5	7

Weighting would then proceed as below:

Derive Adjusted Population Controls

Specialty	Classification	$N_{s,Civ}$	$E\%_{s,Civ}$	$N(E)_{s,Civ}$
IM	Office-based	70,000	79.58%	55,708
	Hospital-based	29,010	78.66%	22,818
MO	Office-based	5,000	67.37%	3,368
	Hospital-based	3,490	71.42%	2,493

Derive Sample Weights – for each variable of interest

Sample Weights - E/H

Specialty	Classification	$N(E)_{s,Civ}$	$n_{E/H,s,Civ}$	$W_{E/H,s,Civ}$
IM	Office-based	55,708	70	795.83
	Hospital-based	22,818	30	760.60
MO	Office-based	3,368	20	168.42
	Hospital-based	2,493	4	623.15

Sample Weights - MEI

Specialty	Classification	$N(E)_{s,Civ}$	$n_{MEI,s,Civ}$	$W_{MEI,s,Civ}$
IM	Office-based	55,708	80	696.35
	Hospital-based	22,818	35	651.94
MO	Office-based	3,368	27	124.76
	Hospital-based	2,493	5	498.52

Sample Weights - Ancillary Measures

Specialty	Classification	$N(E)_{s,Civ}$	$n_{A,s,Civ}$	$W_{A,s,Civ}$
IM	Office-based	55,708	110	506.44
	Hospital-based	22,818	45	507.07
MO	Office-based	3,368	33	102.07
	Hospital-based	2,493	7	356.08