

**Medical Media Study**

**Technical Appendix  
- MMS 2009 -**

**Presented to:**

PMB Print Measurement Bureau

**Presented by:**

Synovate Research Inc.

Disponible en français sur le site [www.pmb.ca](http://www.pmb.ca)

**July 2009**

## Table of Contents

	<u>Page</u>
<b>1.0 Introduction</b> .....	<b>1</b>
<b>2.0 Questionnaire Design</b> .....	<b>3</b>
2.1 Questionnaire Layout.....	<b>3</b>
2.2 Topics Covered.....	<b>7</b>
<b>3.0 Sample Design</b> .....	<b>8</b>
3.1 Universe .....	<b>8</b>
3.2 Lists .....	<b>8</b>
3.3 Sample Selection.....	<b>8</b>
<b>4.0 Data Collection</b> .....	<b>16</b>
4.1 Mailing Schedule.....	<b>16</b>
<b>5.0 Response Rates</b> .....	<b>17</b>
<b>6.0 Coding and Editing</b> .....	<b>18</b>
<b>7.0 Ascription of Missing Data</b> .....	<b>19</b>
<b>8.0 Weighting</b> .....	<b>20</b>
<b>9.0 Special Circumstances</b> .....	<b>24</b>
<b>10.0 Definitions</b> .....	<b>26</b>
<b>11.0 Statistical Significance</b> .....	<b>33</b>

# 1.0 INTRODUCTION

---

In 2006, PMB Print Measurement Bureau, contracted with Synovate to conduct the Medical Media Study (MMS) to measure physicians' readership of selected publications. PMB is a tri-partite organization representing publishers, advertisers, and advertising agencies.

A target of 2,900 completed questionnaires distributed over two years (1,500 in 2007/ 2008 plus 1,400 in 2008/ 2009) for MMS 2009 is based on combining the two data sets of fieldwork for 2007/ 2008 and 2008/ 2009. Note: Surgeons were not included in the 2008/ 2009 fieldwork. To ensure coverage of all specialties, 104 Surgeons from the 2006/ 2007 MMS were combined with 122 Surgeons from the 2007/ 2008 MMS in the 2009 report.

A total of 29 publications were measured in the study. The publications included,

- general publications (7);
- specialty publications (16);
- regional publications (4); and,
- reference publications (2).

The regional publications were all published in French. The reference publication was published in both French and English. Therefore, in total, the study covered 24 English publications and 5 French publications.

The overall response rate target was approximately 45%; the desired response rate for each specialty was also 45%. To encourage participation, doctors were offered incentives in the form of personalized cheques varying in value from \$35 to \$125.

For Surgeons from the 2006/ 2007 MMS, a total of 250 questionnaires were mailed between July 5<sup>th</sup> 2006 and April 17<sup>th</sup>, 2007. A total of 104 completed questionnaires were received from Surgeons by June 4<sup>th</sup>, 2007 and 5 were returned as undeliverable. This represents a response rate of 42.4%.

For the 2007/ 2008 fieldwork, a total of 3,333 questionnaires were mailed between July, 9<sup>th</sup>, 2007 and April 16<sup>th</sup>, 2008. Of the 3,333 questionnaires mailed, 1,442 completed questionnaires were received and 56 were returned as undeliverable (a response rate of 44.0%). Since the publication of the MMS 2008 study in July 2008, an additional 18 completed questionnaires were received and added to the data file. This increases the response rate for this mailing to 44.6%.

A total of 3,082 questionnaires were mailed for the 2008/ 2009 fieldwork. The questionnaires were mailed over 11 waves with the first wave mailed July 23<sup>rd</sup>, 2008 and the last on April 16<sup>th</sup>, 2009. A total of 1,225 completed questionnaires had been received by the cut-off date of June 12<sup>th</sup>, 2009. With 58 returned as undeliverable, this represents a response rate of 40.5%.

The overall combined response rate for the two fieldwork periods including Surgeons from the 2006/ 2007 MMS was 42.6%.

Previous to 2005/ 2006, resident physicians aged 65 or over were excluded from the sample. Since 2005/ 2006, the age criterion was increased to 70 for GP/ FM's. A total of 61 completed questionnaires were received from GP/ FM's aged 65 to 70.

The purpose of this Technical Appendix is to report on the execution of the study. This includes questionnaire design and layout, sampling, response rates, coding and editing rules, weighting, and ascription of missing data.

## 2.0 QUESTIONNAIRE DESIGN

---

The questionnaire was designed to present representative covers of all the publications being measured together with a series of questions related to readership of each publication. A copy of the final questionnaire is presented under the “Questionnaire” tab.

Questions in the survey covered not only readership but also other topics such as prescribing data, medical conference attendance/continuing education, policy on prescribing new drugs, attitudes towards pharmaceutical representatives, use of computers and the Internet, and the average number of patients attended in a typical day.

### 2.1 Questionnaire Layout

In addition to the cover representation, the title of each publication is presented together with the publishing frequency. Publications are grouped in the questionnaire according to the type of publication (general, specialty, region, and reference).

The questions pertaining to readership appear on the left-hand side of each page. Other questions covering areas such as the type of practice, patient load, views towards the use of new drugs and treatments, attitudes towards pharmaceutical representatives, and use of computers and the Internet are placed at the back of the questionnaire.

A separate questionnaire is included to collect the prescribing data for each doctor. A copy of the single page questionnaire used to collect the prescribing data is presented under the “Questionnaire” tab.

Three types of questionnaire are used. Respondents in French Canada and English Quebec received a questionnaire that included all French and English publications. A French translation was prepared for this version of the questionnaire. The French version of the questionnaire was sent to any doctor in the sample who had requested correspondence in French. Respondents in other areas of Canada received a questionnaire that covered only English publications.

In order to avoid bias, six different versions of the questionnaire used in French Canada and English Quebec were prepared in each language. Four different versions of the questionnaire used in other areas of Canada were prepared. These versions present the groups of publications in different orders and also rotate the presentation of the publications within each group. The reference publications are placed either at the front or back of the questionnaire. The other three groups of publications were rotated so that each group appeared equally in 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> position (for the French Canada/English Quebec versions) or equally in 1<sup>st</sup>, or 2<sup>nd</sup> position (for the balance of Canada). The publications in each of the versions were presented in alphabetical and reverse-alphabetical order.

For all publications that had the title appearing in both English and French on the cover, the title was presented in French in all questionnaire versions printed in French.

A total of 29 publications (including the reference publication in English and French) were included in both the 2008 and 2009 mailings.

The list of publications that appeared in the mailings, and the order in which they appear in each version of the questionnaire, is presented in Table 2.1.1.

**Table 2.1.1**  
**Order of Publications by Rotation**  
*(including French publications)*

<u>Publication</u>	<u>ROTATION A</u>	<u>ROTATION B</u>	<u>ROTATION C</u>	<u>ROTATION D</u>	<u>ROTATION E</u>	<u>ROTATION F</u>
Canadian Family Physician	1	21	5	27	7	23
Canadian Medical Association Journal	2	22	6	26	6	22
Doctor's Review	3	23	7	25	5	21
Parkhurst Exchange	4	24	8	24	4	20
The Canadian Journal of Continuing Medical Education	5	25	9	23	3	19
The Canadian Journal of Diagnosis	6	26	10	22	2	18
The Medical Post	7	27	11	21	1	17
Canadian Journal of Rural Medicine	8	1	12	20	27	16
Canadian Journal of Surgery	9	2	13	19	26	15
Canadian Psychiatry Aujourd'hui	10	3	14	18	25	14
Canadian Respiratory Journal	11	4	15	17	24	13
Geriatrics & Aging	12	5	16	16	23	12
Journal of Obstetrics and Gynaecology Canada	13	6	17	15	22	11
Journal of Psychiatry & Neuroscience	14	7	18	14	21	10
Ontario Medical Review	15	8	19	13	20	9
Paediatrics & Child Health	16	9	20	12	19	8
Pain Research & Management	17	10	21	11	18	7
Perspectives in Cardiology	18	11	22	10	17	6
The Canadian Journal of Cardiology	19	12	23	9	16	5
The Canadian Journal of Gastroenterology	20	13	24	8	15	4
The Canadian Journal of Infectious Diseases & Medical Microbiology	21	14	25	7	14	3
The Canadian Journal of Psychiatry	22	15	26	6	13	2
The New England Journal of Medicine	23	16	27	5	12	1
L'Actualité Médicale	24	17	1	4	11	27
Le Clinicien	25	18	2	3	10	26
Le Médecin du Québec	26	19	3	2	9	25
Magazine Santé inc.	27	20	4	1	8	24
Compendium of Pharmaceuticals and Specialties	F1	F2	F1	L2	L1	L2
Compendium des Produits et Spécialités Pharmaceutiques	F2	F1	F2	L1	L2	L1

**Table 2.1.1 (cont'd)**  
**Order of Publications by Rotation**  
*(excluding French publications)*

<b>Publication</b>	<b>ROTATION K</b>	<b>ROTATION L</b>	<b>ROTATION M</b>	<b>ROTATION N</b>
Canadian Family Physician	1	17	23	7
Canadian Medical Association Journal	2	18	22	6
Doctor's Review	3	19	21	5
Parkhurst Exchange	4	20	20	4
The Canadian Journal of Continuing Medical Education	5	21	19	3
The Canadian Journal of Diagnosis	6	22	18	2
The Medical Post	7	23	17	1
Canadian Journal of Rural Medicine	8	1	16	23
Canadian Journal of Surgery	9	2	15	22
Canadian Psychiatry Aujourd'hui	10	3	14	21
Canadian Respiratory Journal	11	4	13	20
Geriatrics & Aging	12	5	12	19
Journal of Obstetrics & Gynaecology of Canada	13	6	11	18
Journal of Psychiatry & Neuroscience	14	7	10	17
Ontario Medical Review	15	8	9	16
Paediatrics & Child Health	16	9	8	15
Pain Research & Management	17	10	7	14
Perspectives in Cardiology	18	11	6	13
The Canadian Journal of Cardiology	19	12	5	12
The Canadian Journal of Gastroenterology	20	13	4	11
The Canadian Journal of Infectious Diseases & Medical Microbiology	21	14	3	10
The Canadian Journal of Psychiatry	22	15	2	9
The New England Journal of Medicine	23	16	1	8
Compendium of Pharmaceuticals and Specialties	F1	F1	L1	L1

## 2.2 Topics Covered

The readership segment of the questionnaire covered a number of different topics. These included:

- out of every four issues, number usually read or look through
- how much of the last issue read
- amount of time read or looked into the last issue
- rating of the publication on two elements (“valuable information resource” and “I enjoy reading this publication”)

In addition to the readership questions, the questionnaire also covered a number of other topics. These included,

- type of practice
- medical specialty, and other areas worked in
- years in current field of practice
- usual number of patients seen in a day
- average number of prescription items written per day
- age
- attendance at medical/ continuing education courses or conferences
- policy on prescribing new drugs
- policy on seeing pharmaceutical representatives
- frequency of seeing reps per month - in person, detailing by phone and e-Detailing
- use of electronic technology
- frequency of visiting medical/ pharmaceutical web sites

The questionnaire also included a separate page to collect data on the number of prescriptions written in an average day for each of a number of selected drug categories.

## 3.0 SAMPLE DESIGN

---

### 3.1 Universe

Prior to the 2005/ 2006 fieldwork, the universe for the Medical Media Study (MMS) was defined as resident physicians, excluding those aged 65 or over, non-prescribing specialties, and those serving in military establishments. Since 2005/ 2006, the specifications of the universe were changed to include GP/ FM's aged 65 to 70.

### 3.2 Lists

As in the previous study, the sample was drawn from the IMS Canada Findr physician database. This list was also used to define the universe. For mailings to Surgeons from the 2006/ 2007 MMS, the list provided on June 2006 was used. For mailings commencing in 2007, the list supplied in June 2007 was used and mailings in July 2008 were based on the May 2008 list.

### 3.3 Sample Selection

The survey specifications were based on a random sample disproportionately allocated by three factors:

- medical function, or specialty, of the doctor (7)\*
- region (5)
- CMA (Census Metropolitan Areas)/ non-CMA (2)

The objective of the sampling plan was to ensure that a sufficient number of physicians were interviewed in each of the reporting cells to allow for reasonable statistical stability.

The study required that data be presented in large urban centres (CMA) and small and rural centres (non-CMA) in each of five geographic regions and by seven\* designated specialties. [Note: For reporting purposes, the non-CMA data is further divided into 'Urban populations of 50,000 or more' and "Less than 50,000 including rural areas'.]

\* 6 specialties in 2008/ 2009.

The regions are:

- British Columbia
- Prairies (Alberta, Saskatchewan and Manitoba)
- Ontario
- Quebec
- Atlantic

The specialties included:

- GP/FM - general practitioners and family medicine
- Surgery\* - general, orthopaedic, thoracic, neuro, plastic and paediatric surgeons
- Internal medicine - internal medicine, geriatrics, nephrology, clinical immunology/ allergy, infectious disease, gastroenterology, endocrinology, rheumatology
- Psychiatry - psychiatry and neurology
- OB/GYN - obstetrics and gynaecology
- Paediatrics - paediatrics and neonatology
- Cardiologists

\* Note: Surgeons were not included in the 2008/ 2009 MMS.

The sample was selected so that reports, or user access, by medical function (specialties) within the following regions are possible: Atlantic, Quebec - Total, Quebec - French, Ontario, Prairies, and British Columbia. This level of detail required that 70<sup>†</sup> separate cells be established (2 x 5 x 7)<sup>†</sup> and separate samples drawn for each. Further separating Quebec into French and English populations proved difficult since the number of active Anglophone physicians is very small and would not have yielded usable samples. Therefore Quebec was sampled in total and the data subsequently reported for French and Total (incorporating both French and English) populations.

Eligible physicians for the 2008/2009 mailing were those under 65 years of age for all specialties except GP/ FM's (where those 65 to 70 were also included), living in one of the five regions identified (that is, eliminating the Territories) and with an active practice treating patients. The number of such physicians in Canada, based on the May, 2008 list, was established at 47,223.

The universe of physicians in each of the cells was derived from lists supplied by IMS Canada and is shown in Table 3.3.1.

<sup>†</sup>60 cells (2 x 5 x 6) in 2008/ 2009 MMS.

Two general principles were established initially - that no physician would be sent a questionnaire in two successive years, and that a minimum sampling level for each specialty should not be less than 500. This combination proved to be impossible to achieve for Cardiologists since there were only 960 listed nationally. In this instance, it was decided that the minimum sample level of 500 would be retained. As a result, some Cardiologists received questionnaires in successive years. The universe for sampling excluding those selected for the 2007/ 2008 MMS is shown in Table 3.3.2.

Two critical factors determined the way in which the sample was selected to accomplish all of the stated goals. These are the distribution of the specialties across the regions (and across the CMA and non-CMA strata), and the likely response rate to be achieved within each specialization and region.

A matrix was created in which the selected list was distributed by CMA and non-CMA within region, and by the various specialties. Based on the distribution of doctors across the cells, the in-tab numbers required for each column and row of the matrix, and the target of a 45% response rate by specialty, a sample size for each cell was determined. The total number of doctors in each cell of the matrix, and the sample size, provided a sampling interval for that cell. A random starting point was determined for each cell, and every  $n^{\text{th}}$  name after that selected.

Since a goal of the study was to maximize returns by July, 2009 it was necessary to generate a sample of 3,082 eligible physicians for the 2008/ 2009 mailings.

Table 3.3.3 shows the final mail-out sample by cell. The sample of 3,082 was further divided into eleven replicates. This means that each replicate included an equal number of each specialty designated from each geographic region.

The sample and mailing for the 2006/ 2007, 2007/ 2008 and 2008/ 2009 fieldwork periods included GP/ FM's aged 65 to 70. For the purposes of weighting, the universe including GP/ FM's 65 to 70 is presented in Table 3.3.4.

In addition, the website visit results are produced on a one-year base excluding Surgeons. The universe for weighting excluding Surgeons is shown on Table 3.3.5.

**Table 3.3.1 (based on list provided by IMS)  
Universe of Doctors**

REGION		Grand Total	Specialty						
			GP/FM	SURGERY	INTERNAL MEDICINE	PSYCHIATRY	OB/GYN	PEDIATRICS	CARDIOLOGY
British Columbia	<b>CMA</b>	4263	2838	242	356	471	113	167	76
	<b>Non-CMA</b>	2345	1870	147	101	123	54	43	7
	<b>Total</b>	<b>6608</b>	<b>4708</b>	<b>389</b>	<b>457</b>	<b>594</b>	<b>167</b>	<b>210</b>	<b>83</b>
Prairies	<b>CMA</b>	6041	3866	401	604	512	178	354	126
	<b>Non-CMA</b>	1883	1637	76	48	61	33	26	2
	<b>Total</b>	<b>7924</b>	<b>5503</b>	<b>477</b>	<b>652</b>	<b>573</b>	<b>211</b>	<b>380</b>	<b>128</b>
Ontario	<b>CMA</b>	13447	8369	845	1337	1433	481	654	328
	<b>Non-CMA</b>	3413	2577	219	204	202	102	77	32
	<b>Total</b>	<b>16860</b>	<b>10946</b>	<b>1064</b>	<b>1541</b>	<b>1635</b>	<b>583</b>	<b>731</b>	<b>360</b>
Quebec - Other	<b>Total</b>	<b>1797</b>	<b>972</b>	<b>178</b>	<b>232</b>	<b>176</b>	<b>60</b>	<b>120</b>	<b>59</b>
Quebec - French	<b>CMA</b>	7578	5132	458	582	683	203	272	248
	<b>Non-CMA</b>	2830	2204	173	135	144	78	73	23
	<b>Total</b>	<b>10408</b>	<b>7336</b>	<b>631</b>	<b>717</b>	<b>827</b>	<b>281</b>	<b>345</b>	<b>271</b>
Atlantic	<b>CMA</b>	1517	909	112	144	158	51	100	43
	<b>Non-CMA</b>	2109	1584	142	129	122	62	54	16
	<b>Total</b>	<b>3626</b>	<b>2493</b>	<b>254</b>	<b>273</b>	<b>280</b>	<b>113</b>	<b>154</b>	<b>59</b>
	<b>Total</b>	<b>47223</b>	<b>31958</b>	<b>2993</b>	<b>3872</b>	<b>4085</b>	<b>1415</b>	<b>1940</b>	<b>960</b>

**Table 3.3.2**  
**2009 MMS Universe of Doctors for Sampling - Excluding 2008 MMS Sample**

REGION		Specialty							
		Grand Total	GP/FM	SURGERY	INTERNAL MEDICINE	PSYCHIATRY	OB/GYN	PEDIATRICS	CARDIOLOGY
British Columbia	CMA	3975	2677	224	334	444	92	145	59
	Non-CMA	2196	1762	137	94	116	46	37	4
	<b>Total</b>	<b>6171</b>	<b>4439</b>	<b>361</b>	<b>428</b>	<b>560</b>	<b>138</b>	<b>182</b>	<b>63</b>
Prairies	CMA	5618	3650	369	565	480	149	309	96
	Non-CMA	1778	1550	70	46	57	29	24	2
	<b>Total</b>	<b>7396</b>	<b>5200</b>	<b>439</b>	<b>611</b>	<b>537</b>	<b>178</b>	<b>333</b>	<b>98</b>
Ontario	CMA	12529	7918	780	1260	1350	402	576	243
	Non-CMA	3187	2432	201	190	192	83	66	23
	<b>Total</b>	<b>15716</b>	<b>10350</b>	<b>981</b>	<b>1450</b>	<b>1542</b>	<b>485</b>	<b>642</b>	<b>266</b>
Quebec - Other	<b>Total</b>	<b>1666</b>	<b>916</b>	<b>163</b>	<b>218</b>	<b>167</b>	<b>50</b>	<b>106</b>	<b>46</b>
Quebec - French	CMA	7035	4841	416	545	643	170	237	183
	Non-CMA	2645	2077	161	126	135	65	63	18
	<b>Total</b>	<b>9680</b>	<b>6918</b>	<b>577</b>	<b>671</b>	<b>778</b>	<b>235</b>	<b>300</b>	<b>201</b>
Atlantic	CMA	1412	861	104	135	148	42	88	34
	Non-CMA	1982	1503	130	122	115	51	47	14
	<b>Total</b>	<b>3394</b>	<b>2364</b>	<b>234</b>	<b>257</b>	<b>263</b>	<b>93</b>	<b>135</b>	<b>48</b>
	<b>Total</b>	<b>44023</b>	<b>30187</b>	<b>2755</b>	<b>3635</b>	<b>3847</b>	<b>1179</b>	<b>1698</b>	<b>722</b>

**Table 3.3.3**  
**Mail-out Sample Excluding Surgeons (Fall 2008/Spring 2009)**

REGION		Grand Total	Specialty					
			GP/FM	INTERNAL MEDICINE	PSYCHIATRY	OB/GYN	PEDIATRICS	CARDIOLOGY
British Columbia	CMA	276	163	23	29	19	22	20
	Non-CMA	136	107	6	7	10	5	1
	<b>Total</b>	<b>412</b>	<b>270</b>	<b>29</b>	<b>36</b>	<b>29</b>	<b>27</b>	<b>21</b>
Prairies	CMA	401	221	38	32	31	45	34
	Non-CMA	110	93	4	3	6	3	1
	<b>Total</b>	<b>511</b>	<b>314</b>	<b>42</b>	<b>35</b>	<b>37</b>	<b>48</b>	<b>35</b>
Ontario	CMA	909	480	87	87	86	85	84
	Non-CMA	208	148	13	13	17	9	8
	<b>Total</b>	<b>1117</b>	<b>628</b>	<b>100</b>	<b>100</b>	<b>103</b>	<b>94</b>	<b>92</b>
Quebec	CMA	623	344	51	53	46	50	79
	Non-CMA	184	132	10	9	15	11	7
	<b>Total</b>	<b>807</b>	<b>476</b>	<b>61</b>	<b>62</b>	<b>61</b>	<b>61</b>	<b>86</b>
Atlantic	CMA	103	51	9	10	9	13	11
	Non-CMA	132	93	9	7	11	7	5
	<b>Total</b>	<b>235</b>	<b>144</b>	<b>18</b>	<b>17</b>	<b>20</b>	<b>20</b>	<b>16</b>
<b>Grand Total</b>		<b>3082</b>	<b>1832</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>	<b>250</b>

**Table 3.3.4**  
**Universe of Doctors Including GP/ FM's 65-70 (for weighting)**

REGION		Grand Total	Specialty						
			GP/FM	SURGERY	INTERNAL MEDICINE	PSYCHIATRY	OB/GYN	PEDIATRICS	CARDIOLOGY
British Columbia	CMA	4263	2838	242	356	471	113	167	76
	Non-CMA	2345	1870	147	101	123	54	43	7
	<b>Total</b>	<b>6608</b>	<b>4708</b>	<b>389</b>	<b>457</b>	<b>594</b>	<b>167</b>	<b>210</b>	<b>83</b>
Prairies	CMA	6041	3866	401	604	512	178	354	126
	Non-CMA	1881	1637	76	48	61	33	26	-
	<b>Total</b>	<b>7922</b>	<b>5503</b>	<b>477</b>	<b>652</b>	<b>573</b>	<b>211</b>	<b>380</b>	<b>126</b>
Ontario	CMA	13447	8369	845	1337	1433	481	654	328
	Non-CMA	3413	2577	219	204	202	102	77	32
	<b>Total</b>	<b>16860</b>	<b>10946</b>	<b>1064</b>	<b>1541</b>	<b>1635</b>	<b>583</b>	<b>731</b>	<b>360</b>
Quebec - Other	<b>Total</b>	<b>1797</b>	<b>972</b>	<b>178</b>	<b>232</b>	<b>176</b>	<b>60</b>	<b>120</b>	<b>59</b>
Quebec - French	CMA	7578	5132	458	582	683	203	272	248
	Non-CMA	2830	2204	173	135	144	78	73	23
	<b>Total</b>	<b>10408</b>	<b>7336</b>	<b>631</b>	<b>717</b>	<b>827</b>	<b>281</b>	<b>345</b>	<b>271</b>
Atlantic	CMA	1517	909	112	144	158	51	100	43
	Non-CMA	2109	1584	142	129	122	62	54	16
	<b>Total</b>	<b>3626</b>	<b>2493</b>	<b>254</b>	<b>273</b>	<b>280</b>	<b>113</b>	<b>154</b>	<b>59</b>
	<b>Total</b>	<b>47221</b>	<b>31958</b>	<b>2993</b>	<b>3872</b>	<b>4085</b>	<b>1415</b>	<b>1940</b>	<b>958</b>

**Table 3.3.5**  
**2009 MMS Universe of Doctors Including GP/FM's 65-70 - Excluding Surgeons (for weighting)**

REGION		Grand Total	Specialty					
			GP/FM	INTERNAL MEDICINE	PSYCHIATRY	OB/GYN	PEDIATRICS	CARDIOLOGY
British Columbia	CMA	4021	2838	356	471	113	167	76
	Non-CMA	2191	1870	101	123	54	43	-
	<b>Total</b>	<b>6212</b>	<b>4708</b>	<b>457</b>	<b>594</b>	<b>167</b>	<b>210</b>	<b>76</b>
Prairies	CMA	5640	3866	604	512	178	354	126
	Non-CMA	1779	1637	48	61	33	-	-
	<b>Total</b>	<b>7419</b>	<b>5503</b>	<b>652</b>	<b>573</b>	<b>211</b>	<b>354</b>	<b>126</b>
Ontario	CMA	12602	8369	1337	1433	481	654	328
	Non-CMA	3194	2577	204	202	102	77	32
	<b>Total</b>	<b>15796</b>	<b>10946</b>	<b>1541</b>	<b>1635</b>	<b>583</b>	<b>731</b>	<b>360</b>
Quebec - Other	Total	1619	972	232	176	60	120	59
Quebec - French	CMA	7120	5132	582	683	203	272	248
	Non-CMA	2657	2204	135	144	78	73	23
	<b>Total</b>	<b>9777</b>	<b>7336</b>	<b>717</b>	<b>827</b>	<b>281</b>	<b>345</b>	<b>271</b>
Atlantic	CMA	1405	909	144	158	51	100	43
	Non-CMA	1967	1584	129	122	62	54	16
	<b>Total</b>	<b>3372</b>	<b>2493</b>	<b>273</b>	<b>280</b>	<b>113</b>	<b>154</b>	<b>59</b>
	<b>Total</b>	<b>44195</b>	<b>31958</b>	<b>3872</b>	<b>4085</b>	<b>1415</b>	<b>1914</b>	<b>951</b>

## 4.0 DATA COLLECTION

---

Prior to the initial mailings in each year, publishers were requested to provide cover representations in electronic format. After applying the representations to the questionnaire, each publisher was asked to verify the representation and indicate any changes that should be made. Requested revisions were made and new proofs sent back to the publishers for approval. Each quarter, publishers were able to update the covers represented in the questionnaire.

The mailing of the questionnaire was designed to appear attractive to the doctor, or receptionist. Each package contained,

- a die cut envelope embossed with the logo in red
- personalized introductory letter
- questionnaire printed in four colours
- separate form for the prescribing data
- personalized cheque
- pre-paid postage return envelope
- gold seal embossed with “*Your Opinion Counts*” to close the package
- commemorative stamp

### 4.1 Mailing Schedule

The Fall 2006/ Spring 2007 mailings to Surgeons commenced on July 5<sup>th</sup> and continued to April 17<sup>th</sup>, 2007. The Fall 2007/ Spring 2008 mailings commenced on July 9<sup>th</sup> 2007 and continued through to April 16<sup>th</sup>, 2008. The Fall 2008/ Spring 2009 mailings commenced on July 23<sup>rd</sup>, 2008 and continued to April 16<sup>th</sup>, 2009.

Returns for both the one-year and two-year reports were closed June 12, 2009.

## 5.0 RESPONSE RATES

---

Of the 250 questionnaires mailed to Surgeons in the 2006/ 2007 MMS, 5 were returned undeliverable. A total of 104 completed interviews were received by the June 4<sup>th</sup> cut-off (a response rate of 42.4%).

From the 3,333 questionnaires mailed for the Fall 2007/ Spring 2008 waves, 56 were returned as undeliverable. A total of 1,442 completed questionnaires were received by June 6<sup>th</sup>, 2008 and included in the 2008 data file. An additional 18 completed questionnaires were received after the production of the 2008 data file. These have been added to the 2009 file. Together, the 1,460 completed questionnaires represent a response rate of 44.6%.

Of the 3,082 questionnaires mailed for the Fall 2008/ Spring 2009 waves, 58 were returned as undeliverable. A total of 1,225 completed questionnaires were received by June 12<sup>th</sup>, 2009. The 1,225 completed questionnaires represent a response rate of 40.5%.

Averaged over all of the mailings, the response rate for the data included in the MMS 2009 report is 42.6%.

Response rates differ by several factors including specialty.

Table 5.1.1 highlights the response rate by specialty.

**Table 5.1.1**  
**Response Rate by Specialty**

<b><u>Specialty</u></b>	<b><u>Mailed</u></b>	<b><u>Undelivered</u></b>	<b><u>Returned</u></b>	
	<b>#</b>	<b>#</b>	<b>#</b>	<b>%</b>
GP/ FM	3,665	72	1,531	42.6
Surgery*	500	10	226	46.1
Internal Medicine	500	5	198	40.0
Psychiatry	500	5	190	38.4
OB/ Gyn	500	10	220	44.9
Paediatrics	500	10	209	42.7
Cardiologists	500	7	215	43.6
<b>Total</b>	<b>6,665</b>	<b>119</b>	<b>2,789</b>	<b>42.6</b>

These results demonstrate a response rate of 42.6% overall and a range of 38.4% to 46.1% for the response rates for the individual specialties.

\* Note: Response rate calculations for Surgeons are based on returns from the 2006/ 2007 and 2007/ 2008 MMS.

## 6.0 CODING AND EDITING

---

As questionnaires were received, they were checked for completeness and the survey identification number scanned. This information was used to track the completed questionnaires in order to prepare weekly progress reports. A program was written for the data entry phase which covered the following validation areas:

- responses entered are within the valid range for the question;
- skip patterns are followed (e.g. if “no” to reading of a particular publication then there should be no subsequent questions answered); and,
- responses entered are logical in comparison with other responses.

The project manager reviewed any questionnaires that did not meet these criteria. The maximum error rate allowed for any data element is 0.5%.

Over the course of the study, a number of situations required modification to the data entry process. These adjustments were reviewed with the technical committee and, following approval, implemented.

### Question 3 (Publication Rating)

Doctors were asked to rate publications that they claimed to read on two attributes. Some of these attributes were missed and not rated. If missed, the response to the attribute was coded as “*not stated*”.

### Demographics

Some doctors provided multiple responses to the question “*what is your type of practice?*” As a result, multiple responses were allowed to this question.

### Prescribing Data

Some doctors did not return this single page. Those not returning this information were ascribed data from other respondents based on their specialty and average number of prescriptions written in an average day (information collected in the main questionnaire).

## 7.0 AScription OF MISSING DATA

---

Of the 1,460 completed questionnaires from the Fall 2007/ Spring 2008 waves, 1,319 returned the completed prescribing form. This represents a completion rate of 90.3%. A total of 1,225 completed questionnaires were returned from the 2008/ 2009 mailings. Of these, 1,135 completed the prescribing data form (a completion rate of 92.7%).

There are a number of options in survey research to handle missing data of this type. One of the most common methods is to assign a “not stated” value to all of the questions in the associated survey. This method assumes that those who did not return this part of the questionnaire are similar in the distribution of their attitudes and behaviour to those who responded.

In media research, a more common method of handling non-response to a section of a survey is to match a respondent who completed that part of the survey with a respondent who did not complete the section. The matching process is usually based on characteristics that everyone answers and which are related to the missing data.

For this survey, data for respondents who did not complete the prescribing data form were ascribed from a matching respondent who did provide responses. The matching process was based on the type of practice and the average number of prescription items written per day. If more than one “donor” was matched with an “acceptor” respondent then the “donor” was selected at random from the available candidates. As each donor was matched with an acceptor, the donor was tagged. If another respondent required a similar donor then the tagged donor was removed from the list of possible candidates before another random donor was selected from the list of matches.

## 8.0 WEIGHTING

---

A total of 2,789 completed questionnaires were received, entered through the data entry system, and used in the tabulations. Only those questionnaires received by June 12<sup>th</sup>, 2009 were included in the tabulations. Of the 2,789 completed questionnaires, 61 were from GP/ FM's aged 65 to 70. The distribution of the completed interviews within each of the cells in the sampling plan is presented in Table 8.1 (including GP/ FM's 65 to 70).

The data were weighted to match the original distribution of 47,223 doctors in the IMS Finder list (May 2008) from which the Fall 2008/ Spring 2009 sample was drawn. To achieve this distribution, the data were weighted by:

- specialty;
- region;
- CMA/ non CMA; and
- language (within the province of Quebec)

The total number of physicians covered by the study was 47,223. However, no interviews were completed among Cardiologists in the Prairies Non-CMA in which the universe reports physicians. The total number of physicians in this cell was 2. Therefore, the universe of physicians was set at 47,221.

Similarly, for the weighting universe excluding Surgeons, no interviews were completed among Cardiologists in BC Non-CMA or Prairies Non-CMA and Pediatricians in the Prairies Non-CMA. This represents a total of 35 physicians in these cells requiring the universe of physicians excluding Surgeons to be set at 44,195.

A distribution of the interviews by the major variables reported in the study is presented in Table 8.2 and in Table 8.3.

**Table 8.1**  
**Completed Interviews by Sample Cell**  
**(Including GP/FM's 65-70)**

		<b>Specialty</b>							
		<b>Total</b>	<b>GP/FM</b>	<b>Surgery</b>	<b>Internal Medicine</b>	<b>Psychiatry</b>	<b>OB/GYN</b>	<b>Paediatrics</b>	<b>Cardio- logists</b>
British Columbia	CMA	257	144	17	16	19	14	26	21
	Non-CMA	123	82	16	5	7	8	4	1
	<b>Total</b>	<b>380</b>	<b>226</b>	<b>33</b>	<b>21</b>	<b>26</b>	<b>22</b>	<b>30</b>	<b>22</b>
Prairies	CMA	329	172	28	29	22	28	34	16
	Non-CMA	92	73	4	3	5	6	1	0
	<b>Total</b>	<b>421</b>	<b>245</b>	<b>32</b>	<b>32</b>	<b>27</b>	<b>34</b>	<b>35</b>	<b>16</b>
Ontario	CMA	798	395	54	78	65	69	69	68
	Non-CMA	190	123	12	11	10	18	10	6
	<b>Total</b>	<b>988</b>	<b>518</b>	<b>66</b>	<b>89</b>	<b>75</b>	<b>87</b>	<b>79</b>	<b>74</b>
Quebec French	CMA	461	253	38	19	28	34	24	65
	Non-CMA	166	110	15	5	10	14	7	5
	<b>Total</b>	<b>627</b>	<b>363</b>	<b>53</b>	<b>24</b>	<b>38</b>	<b>48</b>	<b>31</b>	<b>70</b>
Quebec Other	CMA	122	39	17	17	10	10	15	14
	Non-CMA	7	6	1	0	0	0	0	0
	<b>Total</b>	<b>129</b>	<b>45</b>	<b>18</b>	<b>17</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>14</b>
Atlantic	CMA	107	50	12	8	4	6	11	16
	Non-CMA	137	84	12	7	10	13	8	3
	<b>Total</b>	<b>244</b>	<b>134</b>	<b>24</b>	<b>15</b>	<b>14</b>	<b>19</b>	<b>19</b>	<b>19</b>
<b>Total</b>		<b>2789</b>	<b>1531</b>	<b>226</b>	<b>198</b>	<b>190</b>	<b>220</b>	<b>209</b>	<b>215</b>

**Table 8.2**  
**Unweighted Interviews by Major Reporting Variables**

	<b><u>All Physicians</u></b> <b><u>Including</u></b> <b><u>GP/ FM's 65 - 70</u></b>
<b>PROFESSIONAL CHARACTERISTICS/CARACT.PROFES.</b>	
GP/FM-MG/famille	1531
Cardiology/Cardiologie	215
Internal Medicine/Médecine interne	198
OB/GYN	220
Paediatrics/Pédiatrie	209
Psychiatry/Psychiatrie	190
Surgery/Chirurgie*	226
BC/CB	380
Prairies	421
Ontario	988
Québec	756
Atlantic/Atlantique	244
CMA/RMR	2074
50,000+	251
<50,000	464
English/Anglais	2121
French/Français	668
Male/Homme	1781
Female/Femme	1008
Office/Clinic/Clinique	1956
Hospital/Hôpital	1159

\* Surgeons represent interviews from 2006/ 2007 and 2007/ 2008 fieldwork periods.

**Table 8.3**  
**Unweighted Interviews by Major Reporting Variables (1-Year)**

	<b><u>All Physicians</u></b> <b><u>Including</u></b> <b><u>GP/ FM's 65 - 70</u></b>
<b>PROFESSIONAL CHARACTERISTICS/CARACT. PROFES.</b>	
GP/FM-MG/famille	747
Cardiology/Cardiologie	100
Internal Medicine/Médecine interne	100
OB/GYN	97
Paediatrics/Pédiatrie	100
Psychiatry/Psychiatrie	81
Surgery/Chirurgie*	0
BC/CB	164
Prairies	184
Ontario	439
Québec	329
Atlantic/Atlantique	109
CMA/RMR	915
50,000+	125
<50,000	185
English/Anglais	921
French/Français	304
Male/Homme	761
Female/Femme	464
Office/Clinic/Clinique	883
Hospital/Hôpital	490

\* Surgeons excluded in 2008/ 2009 MMS.

## 9.0 SPECIAL CIRCUMSTANCES

---

### 1. Combined Titles

- “Compendium of Pharmaceuticals and Specialties” and “Compendium des produits et spécialités pharmaceutiques” are reported as a single publication.

### 2. Frequency Changes

- The Medical Post (changed to 30 times July 2008, formerly weekly then changed to 25 times March 2009)
- L’Actualité Médicale (changed to 30 times July 2008, formerly weekly then changed to 25 times March 2009)
- Canadian Respiratory Journal (changed to 6 times per year January 2009, formerly 8 times per year)
- The Canadian Journal of Infectious Diseases and Medical Microbiology (changed to 4 times per year January 2009, formerly every 2 months)

### 3. Change in Reporting of Website Visits

- Scale for visiting websites changed in 2008/ 2009.

<u>2007/ 2008</u> <u>MMS Questionnaire</u>	<u>2008/ 2009</u> <u>MMS Questionnaire</u>
0/month	Never
1-2/month	Less often
3-4/month	Monthly
5+/month	Weekly
	Daily

- The results available in the 2-year database are based on matching the new scale with the previous one, as below:

<u>2007/ 2008</u> <u>MMS Questionnaire</u>	<u>2008/ 2009</u> <u>MMS Questionnaire</u>	<u>Matched in MMS</u> <u>2009 Codebook</u>
0/month	Never	Never visit
1-2/month	Less often	} Visit Daily/Weekly/ Monthly/Less often
3-4/month	Monthly	
5+/month	Weekly	
	Daily	

- One-year results are also available in the readership volume under the Internet tab.

#### 4. Addition to Website Visits

- The New England Journal of Medicine added to website visits (on demo page) July 2008.

#### 5. Change to Universe

- The universe for MMS studies previous to MMS 2006 has been defined as “resident physicians, excluding those 65 years of age or older, non-prescribing specialties, and those living in military establishments”. Since 2005/2006, this definition was changed to include GP/ FM’s aged 65 to 70.
- For the MMS 2009 study, results are based on All Physicians including GP/FM’s 65-70 years of age (universe = 47,223).

#### 6. Publication Information

- National Review of Medicine ceased publication September, 2008.
- The Chronicle of Neurology & Psychiatry ceased measurement January, 2009.

#### 7. Surgeons

- Surgeons were not included in the 2008/ 2009 fieldwork. To ensure the coverage of all specialties, Surgeons from the 2006/ 2007 MMS were combined with Surgeons from the 2007/ 2008 MMS. Please see table below:

Specialty	Fieldwork		
	July 06 - June 07	July 07 - June 08	July 08 - June 09
GP/FM	–	✓	✓
Internal Medicine	–	✓	✓
Psychiatry	–	✓	✓
OB/Gyn	–	✓	✓
Paediatrics	–	✓	✓
Cardiologist	–	✓	✓
Surgeons	✓	✓	–

## 10.0 DEFINITIONS

### 10.1 Average Issue Audience

For this report, readership was calculated using the “*frequency of reading*” question. Theoretical probabilities are assigned to each category to reflect readership based on the claimed frequency of reading. The probabilities assigned for this report are,

4 out of 4	1.00
3 out of 4	0.75
2 out of 4	0.50
1 out of 4	0.25
Less often than 1 out of 4	0.125
Never look into an issue	0.00
Never – do not receive	0.00

For the reference publications, readership was defined as “*refer to, or read*” daily, weekly, or monthly.

## 10.2 Universe Definition

The universe for this study comprises physicians in the IMS Findr list who are in specialties considered prescribing specialties that meet the age criterion and are not serving in a military establishment.

IMS Findr List - Prescribing Specialties*		
General Practice	GP	17,472
Family Medicine	FM	12,949
General Surgery	GSU	1,540
Orthopedic Surgery	ORS	1,142
Plastic Surgery	PSU	451
Neurosurgery	NSU	235
Thoracic Surgery	TSU	75
Pediatric General Surgery	PGS	40
Internal Medicine	IM	2,271
Gastroenterology	GAS	482
Rheumatology	RHE	301
Nephrology	NEP	402
Geriatric Medicine	GER	187
Endocrinology & Infertility	END	43
Endocrinology & Metabolism	ENM	259
Infectious Diseases	ID	138
Clinical Immunology & Allergy	IMA	117
Psychiatry	PSY	3,909
Neurology	NEU	684
Obstetrics & Gynecology	OBG	1,570
Pediatrics	PED	2,065
Neonatal-Perinatal Medicine	NEO	13
Cardiology	CAR	975
		47,320

PMB MMS 2009	≤ 70
GP/FM	31,958
Surgery	2,993
Internal Medicine	3,872
Psychiatry	4,085
Obstetrics & Gynaecology	1,415
Paediatrics	1,940
Cardiologists	960
	47,223

\*Source – CCAB Statement – March 2008

## 10.2 Universe Definition (cont'd)

Not included in the universe are the following 39 non-prescribing specialties:

1	Anatomical Pathology	722
2	Anesthesia	2,552
3	Cardiac Surgery	52
4	Cardiothoracic Surgery	117
5	Cardio-Vascular Thoracic Surgery	48
6	Clinical Pharmacology	1
7	Clinician Investigator	1
8	Community Medicine	344
9	Critical Care Medicine	61
10	Dermatology	446
11	Diagnostic Radiology	1,996
12	Electroencephalography	1
13	Emergency Medicine	475
14	General Pathology	280
15	General Surgical Oncology	2
16	Gynecologic Oncology	2
17	Hematological Pathology	55
18	Hematology	322
19	Maternal-Fetal Medicine	4
20	Medical Biochemistry	80
21	Medical Genetics	62
22	Medical Microbiology	235
23	Medical Oncology	288
24	Neuropathology	35
25	Nuclear Medicine	193
26	Occupational Medicine	44
27	Ophthalmology	1,034
28	Otolaryngology	597
29	Palliative Care	1
30	Pediatric Emergency Medicine	2
31	Pediatric Hematology/Oncology	1
32	Pediatric Neurology	4
33	Pediatric Radiology	1
34	Physical Medicine & Rehabilitation	351
35	Public Health	2
36	Radiation Oncology	325
37	Respirology	485
38	Urology	536
39	Vascular Surgery	130
		<b>11,887</b>

\*Source - CCAB Statement - March 2008

### **10.3 High Prescribers**

“High prescribers” were defined as those writing an average of 25 or more prescription items (as distinct from prescription forms) per day. Data for this is collected from the “Number of Prescription Items (Not Forms) Written per Day” question.

### **10.4 Urban/ Rural**

In designing and conducting the Census of Population of Canada, Statistics Canada, in cooperation with various levels of government, designates areas of the country with urban populations of 100,000 people or more to be Census Metropolitan Areas (CMA).

Synovate receives the IMS Findr list of Canadian doctors with a designation dividing them into two groups: those with addresses falling within a CMA and those with addresses falling outside a CMA.

Statistics Canada assigns each Postal Code to an Enumeration Area (EA) – now designated as DA (Dissemination Area). Each EA, or DA, in turn, is assigned an Urban Area Size Code. Through this linkage, Postal Codes can be described as falling into an area with a certain Urban Size.

To permit further analysis by urban size, physicians whose addresses are not located in a CMA were divided into two categories. The first was physicians located outside CMAs, in communities with urban populations of 50,000 or more. The second was physicians located outside CMAs, in communities with urban populations of fewer than 50,000, including rural areas.

## 10.5 Average Page Exposure

Average page exposure is estimated from the product of the readership and the proportion of pages read. For example, if a respondent claims to have read all issues (4 out of 4) and to read about 50% of the pages, then the average page exposure for this respondent would be 50% for this publication.

Average page exposure takes into account the frequency of reading and the proportion of pages read. The following table (Table 10.5.1) shows the average page exposure for each combination of frequency of reading and proportion of pages read. There are 13 unique values for average page exposure. Codes for each unique value are provided in the codebook and the database.

**Table 10.5.1**

Q2A		Q1. Probability of Reading					
% Pages read		4 of 4	3 of 4	2 of 4	1 of 4	<1 of 4	Never
Response	Value	<u>1.000</u>	<u>0.750</u>	<u>0.500</u>	<u>0.250</u>	<u>0.125</u>	<u>0.000</u>
All	1.000	1.000000	0.750000	0.500000	0.250000	0.125000	0.000000
Most	0.7250	0.750000	0.562500	0.375000	0.187500	0.093750	0.000000
Half	0.500	0.500000	0.375000	0.250000	0.125000	0.062500	0.000000
Quarter	0.250	0.250000	0.187500	0.125000	0.062500	0.031250	0.000000
Very little	0.125	0.125000	0.093750	0.062500	0.031250	0.015625	0.000000
Not Stated	0.000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

## **10.6 Office/Clinic**

The Office/Clinic summary code refers to the Type of Practice reported by physicians. Included in this code are physicians who reported working in:

- an Office (Solo)
- an Office (Group)
- a Clinic

## **10.7 Gender**

This information was previously collected on the questionnaire. It is now obtained from the IMS Findr list.

## **10.8 Calculation of Averages**

Averages are consistently calculated in PMB volumes and computer access.

- Time Spent Reading
- Qualitative Questions: Valuable Information Resource / I Enjoy Reading This Publication
- Years in Current Field of Practice
- Number of Patients Per Day
- Number of Prescription Items Written Per Day
- Number of Prescription Drugs Written Per Week
- Number of Medical Conferences/CME Courses Participated in Past Year
- Frequency of Seeing Pharmaceutical Reps Per Month
- Frequency of Visiting Websites Per Month

For exact details of midpoint values used see Table 10.8 below:

**Table 10.8 – Midpoints Used to Calculate Averages**

Less than 10 Minutes	5.0
10 – 20 minute	15.0
21 – 30 minutes	25.5
1/2 - 1 hour	45.0
Over 1 hour	90.0
Not Stated	Excluded

1	1.0
2	2.0
3	3.0
4	4.0
5	5.0
Not Stated	Excluded

Less than 5	2.5
5-10	8
11-15	13
16-20	18
More than 20	25
Not Stated	Excluded

None	0.0
Under 5	2.5
5-14	9.5
15-24	19.5
25-34	29.5
35-44	39.5
45 or more	50.0
Not Stated	Excluded

None	0.0
Under 5	2.5
5-14	9.5
15-24	19.5
25-34	29.5
35-44	39.5
45-54	49.5
55-64	59.5
65+	75.0
Not Stated	Excluded

None	0.0
1-2	1.5
3-5	4.0
6+	7.5
Not Stated	Excluded

None	Excluded
1-2	1.5
3-5	4.0
6-10	8.0
11-19	15.0
20 or more	25.0
Not Stated	Excluded

None	0.0
1-4	2.5
5-8	6.5
9-11	10.0
12 or more	15.0
Not Stated	Excluded

## 11.0 STATISTICAL SIGNIFICANCE

Results from any survey based on a sample of the population are estimates whose accuracy is based on the sample size and the level of response (or in the case of Medical Media Study, the readership level). Following is a chart, which indicates how the confidence level changes with sample size and the observed percent (or readership levels). The data shown are for a single population at the 95% confidence level.

### **CONFIDENCE INTERVAL FOR A PROPORTION** (At the 95% Confidence Level)

Sample Size	Magnitude of Observed Percent									
	5% 95%	10% 90%	15% 85%	20% 80%	25% 75%	30% 70%	35% 65%	40% 60%	45% 55%	50% 50%
50	6.0	8.3	9.9	11.1	12.0	12.7	13.2	13.6	13.8	13.9
75	4.9	6.8	8.1	9.1	9.8	10.4	10.8	11.1	11.3	11.3
100	4.3	5.9	7.0	7.8	8.5	9.0	9.3	9.6	9.8	9.8
125	3.8	5.3	6.3	7.0	7.6	8.0	8.4	8.6	8.7	8.8
150	3.5	4.8	5.7	6.4	6.9	7.3	7.6	7.8	8.0	8.0
175	3.2	4.4	5.3	5.9	6.4	6.8	7.1	7.3	7.4	7.4
200	3.0	4.2	4.9	5.5	6.0	6.4	6.6	6.8	6.9	6.9
225	2.8	3.9	4.7	5.2	5.7	6.0	6.2	6.4	6.5	6.5
250	2.7	3.7	4.4	5.0	5.4	5.7	5.9	6.1	6.2	6.2
275	2.6	3.5	4.2	4.7	5.1	5.4	5.6	5.8	5.9	5.9
300	2.5	3.4	4.0	4.5	4.9	5.2	5.4	5.5	5.6	5.7
325	2.4	3.3	3.9	4.3	4.7	5.0	5.2	5.3	5.4	5.4
350	2.3	3.1	3.7	4.2	4.5	4.8	5.0	5.1	5.2	5.2
375	2.2	3.0	3.6	4.1	4.4	4.6	4.8	5.0	5.0	5.1
400	2.1	2.9	3.5	3.9	4.2	4.5	4.7	4.8	4.9	4.9
425	2.1	2.9	3.4	3.8	4.1	4.4	4.5	4.7	4.7	4.8
450	2.0	2.8	3.3	3.7	4.0	4.2	4.4	4.5	4.6	4.6
475	2.0	2.7	3.2	3.6	3.9	4.1	4.3	4.4	4.5	4.5
500	1.9	2.6	3.1	3.5	3.8	4.0	4.2	4.3	4.4	4.4
525	1.9	2.6	3.1	3.4	3.7	3.9	4.1	4.2	4.3	4.3
550	1.8	2.5	3.0	3.3	3.6	3.8	4.0	4.1	4.2	4.2
575	1.8	2.5	2.9	3.3	3.5	3.7	3.9	4.0	4.1	4.1
600	1.7	2.4	2.9	3.2	3.5	3.7	3.8	3.9	4.0	4.0
650	1.7	2.3	2.7	3.1	3.3	3.5	3.7	3.8	3.8	3.8
700	1.6	2.2	2.6	3.0	3.2	3.4	3.5	3.6	3.7	3.7
750	1.6	2.1	2.6	2.9	3.1	3.3	3.4	3.5	3.6	3.6
800	1.5	2.1	2.5	2.8	3.0	3.2	3.3	3.4	3.4	3.5
850	1.5	2.0	2.4	2.7	2.9	3.1	3.2	3.3	3.3	3.4
900	1.4	2.0	2.3	2.6	2.8	3.0	3.1	3.2	3.3	3.3
950	1.4	1.9	2.3	2.5	2.8	2.9	3.0	3.1	3.2	3.2
1000	1.4	1.9	2.2	2.5	2.5	2.7	3.0	3.0	3.1	3.1
1500	1.1	1.5	1.8	2.0	2.2	2.3	2.4	2.5	2.5	2.5
2000	1.0	1.3	1.6	1.8	1.9	2.0	2.1	2.2	2.2	2.2

Based on this table, if the readership of a publication is 45% and the sample size 1,000, then the readership could be expressed as 45% ± 3.1% percentage points. The estimate of the readership would be between 41.9% and 48.1%.