

Medical Media Study

**Technical Appendix
- MMS 2011 -**

Presented to:

PMB Print Measurement Bureau

Presented by:

Synovate Research Inc.

Disponible en français sur le site www.pmb.ca

July 2011

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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.

In 2010, the MMS was on hiatus, subsequently the reporting for the 2011 MMS is based on combining two data sets of fieldwork from January to June 2009 and January to June 2011. A target of 1,653 completed questionnaires distributed over two years was established for the 2011 MMS (592 from 2009 plus 1,061 from 2011). While GP/FM's and all six specialties were included in the 2011 MMS, Surgeons were not included in the 2009 fieldwork.

A total of 23 publications were measured in the study. The publications included,

- general publications (7);
- specialty publications (10);
- 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 18 English publications and 5 French publications.

New to the 2011 MMS is the frequency of visiting the corresponding website of each publication.

For the 2009 study, the overall response rate target was 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 for Paediatricians to \$125 for Cardiologists.

For the 2011 MMS, incentive amounts were re-evaluated resulting in an incentive of \$40 for GP/FM's. The incentive amount for all other specialties was pegged at \$60. As a consequence, the overall response rate target for 2011 was set to 30% and response rates for each specialty were also estimated at 30%.

For the returns included from the 2009 MMS, a total of 1,400 questionnaires were mailed from January to June 2009. The January wave was mailed on January 23, 2009 and the final wave for the 2009 MMS was mailed on April 16th, 2009. A total of 592 completed questionnaires had been received from January to the cut-off date of June 12th, 2009. With 25 returned as undeliverable, this represents a response rate of 43.1%.

For the 2011 fieldwork, a total of 3,917 questionnaires were mailed between January 3rd, 2011 and May 2nd, 2011 over the course of 5 waves. From the 5 waves, a total of 1061 questionnaires were returned by June 13th, 2011, with 127 undeliverable representing a response rate of 28.0%

The overall combined response rate for the two fieldwork periods was 32.0%.

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.

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 and website landing pages of all the publications being measured together with a series of questions related to readership of each publication and the frequency of visiting each publication's website. Data collection for frequency of visiting website landing pages is new to the 2011 MMS. A copy of the final questionnaire is presented under the "Questionnaire" tab.

Questions in the survey cover not only publication readership and visits to the publication's website 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. New to the 2011 questionnaire are ratings for medical information sources and collecting the frequency of visiting specific medical websites.

2.1 Questionnaire Layout

In addition to the cover and website 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 and website visits appear on the left-hand side of each page. Questions covering areas such as the value of various medical information sources, the frequency of visiting specific and general medical websites, 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 receive a questionnaire that includes all French and English publications. A French translation was prepared for this version of the questionnaire. The French version of the questionnaire is sent to any doctor in the sample who has requested correspondence in French. Respondents in other areas of Canada receive a questionnaire that covers 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 and the list of medical information sources and websites within each version. The reference publications are placed either at the front or back of the questionnaire. The other three groups of publications are rotated so that each group appears equally in 1st, 2nd, and 3rd position (for the French Canada/ English Quebec versions) or equally in 1st, or 2nd position (for the balance of Canada). The publications in each of the versions are 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 23 publications (including the reference publication in English and French) were included in the 2011 mailing, while 29 publications were included in the 2009 mailing. The following publications appeared in the 2009 questionnaire but were omitted in 2011:

- Canadian Journal of Surgery
- Geriatrics & Aging
- Journal of Obstetrics and Gynecology Canada
- Perspectives in Cardiology
- The Canadian Journal of Cardiology
- The Canadian Journal of Infectious Diseases & Medical Microbiology

Table 2.1.1 presents the list of publications that appear in the 2011 mailings. Also included are the medical information sources and specific and general medical/ pharmaceutical websites that appear at the back of the questionnaire. Table 2.1.1 provides the order in which each of these appear by questionnaire version.

Table 2.1.1
Order of Publications and Medical Information Sources/Websites/Pharmaceutical Websites by Rotation
(including French publications)

Publication	ROTATION A	ROTATION B	ROTATION C	ROTATION D	ROTATION E	ROTATION F
Canadian Family Physician	1	15	5	21	7	17
Canadian Medical Association Journal	2	16	6	20	6	16
Doctor's Review	3	17	7	19	5	15
Parkhurst Exchange	4	18	8	18	4	14
The Canadian Journal of Continuing Medical Education	5	19	9	17	3	13
The Canadian Journal of Diagnosis	6	20	10	16	2	12
The Medical Post	7	21	11	15	1	11
Canadian Journal of Rural Medicine	8	1	12	14	21	10
Canadian Psychiatry Aujourd'hui	9	2	13	13	20	9
Canadian Respiratory Journal	10	3	14	12	19	8
Journal of Psychiatry & Neuroscience	11	4	15	11	18	7
Ontario Medical Review	12	5	16	10	17	6
Paediatrics & Child Health	13	6	17	9	16	5
Pain Research & Management	14	7	18	8	15	4
The Canadian Journal of Gastroenterology	15	8	19	7	14	3
The Canadian Journal of Psychiatry	16	9	20	6	13	2
The New England Journal of Medicine	17	10	21	5	12	1
L'Actualité Médicale	18	11	1	4	11	21
Le Clinicien	19	12	2	3	10	20
Le Médecin du Québec	20	13	3	2	9	19
Magazine Santé inc.	21	14	4	1	8	18
Compendium of Pharmaceuticals and Specialties	F1	F2	F1	L2	L1	L2
Compendium des Produits et Spécialités Pharmaceutiques	F2	F1	F2	L1	L2	L1
Medical Information Sources						
E-Newsletter						
E-Detailing	1	2	3	4	5	4
CME – Online						
CME – Print	2	3	4	5	1	3
CME – Meetings						
Medical Publication Websites						
Disease Information Websites						
Pharmaceutical Company Websites	3	4	5	1	2	2
Medical Association Websites						
Medical Publications						
Reference Publications	4	5	1	2	3	1
Pharmaceutical Reps						
Direct Mail	5	1	2	3	4	5
Specific Medical Websites						
MdPassport/MdBriefCase	1	4	1	4	2	3
Canadian Medical Association	2	1	4	1	3	4
WebMD	3	2	2	3	4	1
Medscape	4	3	3	2	1	2
General Medical/Pharmaceutical Websites						
Disease Information Websites	1	4	1	4	2	3
Medical Publication Websites	2	1	4	1	3	4
Pharmaceutical Company Websites	3	2	2	3	4	1
Medical Portals (e.g. Medscape, WebMD, CMA)	4	3	3	2	1	2

Table 2.1.1 (cont'd)
Order of Publications and Medical Information Sources/Websites/Pharmaceutical Websites by Rotation
(excluding French publications)

Publication	ROTATION K	ROTATION L	ROTATION M	ROTATION N
Canadian Family Physician	1	11	17	7
Canadian Medical Association Journal	2	12	16	6
Doctor's Review	3	13	15	5
Parkhurst Exchange	4	14	14	4
The Canadian Journal of Continuing Medical Education	5	15	13	3
The Canadian Journal of Diagnosis	6	16	12	2
The Medical Post	7	17	11	1
Canadian Journal of Rural Medicine	8	1	10	17
Canadian Psychiatry Aujourd'hui	9	2	9	16
Canadian Respiratory Journal	10	3	8	15
Journal of Psychiatry & Neuroscience	11	4	7	14
Ontario Medical Review	12	5	6	13
Paediatrics & Child Health	13	6	5	12
Pain Research & Management	14	7	4	11
The Canadian Journal of Gastroenterology	15	8	3	10
The Canadian Journal of Psychiatry	16	9	2	9
The New England Journal of Medicine	17	10	1	8
Compendium of Pharmaceuticals and Specialties	F1	F1	L1	L1
Medical Information Sources				
E-Newsletter	1	2	3	4
E-Detailing				
CME – Online				
CME – Print	2	3	3	1
CME – Meetings				
Medical Publication Websites				
Disease Information Websites				
Pharmaceutical Company Websites	3	4	2	2
Medical Association Websites				
Medical Publications				
Reference Publications	4	5	1	3
Pharmaceutical Reps				
Direct Mail	5	1	5	4
Specific Medical Websites				
MdPassport/MdBriefCase	1	4	3	2
Canadian Medical Association	2	1	4	3
WebMD	3	2	1	4
Medscape	4	3	2	1
General Medical/Pharmaceutical Websites				
Disease Information Websites	1	4	3	2
Medical Publication Websites	2	1	4	3
Pharmaceutical Company Websites	3	2	1	4
Medical Portals (e.g. Medscape, WebMD, CMA)	4	3	2	1

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
- rating of the publication as a “valuable information resource”
- frequency of visiting the publication’s website (new in 2011)

In addition to the readership questions, the questionnaire also covers a number of other topics. These include:

- rating of medical information sources - for patient treatment and prescription products (new in 2011)
- frequency of visiting specific medical websites such as MdPassport/ MdBriefCase, Canadian Medical Association, WebMD and Medscape (new in 2011)
- type of practice
- years in current field of practice
- usual number of patients seen in a day
- average number of prescription items written per day
- 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 general medical/ pharmaceutical websites such as Disease Information Websites, Medical Publication Websites, Pharmaceutical Company Websites and Medical Portals (e.g. Medscape, WebMD, CMA)

The questionnaire also includes 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

For mailings commencing in January 2009, the May 2008 IMS list was used to select the entire sample for English and French Canada.

For the 2011 MMS, the sample for Quebec was compiled from lists provided by three separate providers: Dendrite, PTM and Scott. From the three lists, one unduplicated master list was created for the province of Quebec. The sample for Quebec was then selected from the master list. The sample for all other provinces was drawn from the October 2010 IMS Canada Findr physician database.

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. Although OB/Gyn, Paediatrics and Surgery are combined together in the reporting, the sample for each specialty was selected separately to ensure the desired yield of each within the combined group.

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 2009.

The regions are:

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

The specialties included:

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

* Note: Surgeons were not included in the 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[†] separate cells be established (2 x 5 x 7)[†] 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. Note: since the sample for three specialties (OB/Gyn, Surgeons, Paediatricians) is limited for the 2011 MMS, regions were combined where necessary for weighting purposes.

Eligible physicians for the 2011 mailings 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 IMS list and master list created for Quebec, was established at 48,593.

The universe of physicians in each of the cells derived from lists from the two sample sources (IMS and Quebec master list) is shown in Table 3.3.1 for all seven specialties.

Table 3.3.2 provides the universe of physicians with OB/Gyn, Surgeons and Paediatricians combined.

[†] 60 cells (2 x 5 x 6) in 2009 MMS.

One of the general principles established initially for the MMS was that no physician would be sent a questionnaire in two successive years. Since the MMS was on hiatus in 2010, this was not a factor in the sample selection for the 2011 MMS. The second principle, to maintain a minimum sampling level not less than 500 for each specialty, was maintained.

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 30% 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^{th} name after that selected.

Since a goal of the study was to maximize returns by June, 2011, it was necessary to generate a sample of 3,452 eligible physicians for the 2011 mailings. The sample of 3,452 doctors in the original selection was further divided into four replicates. An additional 465 records were selected for a 5th wave to boost specialties that were underperforming, thereby bringing the total number of mailings to 3,917.

Table 3.3.3 shows the final total mail-out sample including the 5th wave for the 2011 MMS by cell.

For the purpose of weighting results on 2 year data from the 2009 and 2011 fieldwork periods, the universe for weighting on a base of 2 years is presented in Table 3.3.4.

In addition, certain results are produced on 1 year data from the 2011 MMS. The universe for weighting for 1 year data is shown on Table 3.3.5.

**Table 3.3.1 (based on lists provided by IMS Findr and master list for Quebec)
2011 - Universe of Doctors**

REGION		Grand Total	Specialty						
			GP/FM	SURGERY	INTERNAL MEDICINE	PSYCHIATRY	OB/GYN	PAEDIATRICS	CARDIOLOGY
British Columbia	CMA	4167	2799	230	331	449	118	164	76
	Non-CMA	2420	1924	153	102	125	62	45	9
	Total	6587	4723	383	433	574	180	209	85
Prairies	CMA	6560	4170	421	654	574	203	384	154
	Non-CMA	2007	1718	96	48	76	40	26	3
	Total	8567	5888	517	702	650	243	410	157
Ontario	CMA	13893	8695	889	1329	1438	505	659	378
	Non-CMA	3531	2677	231	202	208	104	74	35
	Total	17424	11372	1120	1531	1646	609	733	413
Quebec - Other	Total	1915	1019	148	286	187	70	144	61
Quebec - French	CMA	7400	4786	438	710	754	191	292	229
	Non-CMA	3026	2412	154	149	171	66	56	18
	Total	10426	7198	592	859	925	257	348	247
Atlantic	CMA	1557	910	121	139	179	57	105	46
	Non-CMA	2117	1539	146	137	134	74	66	21
	Total	3674	2449	267	276	313	131	171	67
	Total	48593	32649	3027	4087	4295	1490	2015	1030

**Table 3.3.2 (based on lists provided by IMS Findr and master list for Quebec)
Universe of Doctors –OB/Gyn, Paediatricians & Surgeons Combined**

REGION		Grand Total	Specialty				
			GP/FM	INTERNAL MEDICINE	PSYCHIATRY	CARDIOLOGY	OB/GYN, PAEDIATRICS, SURGERY
British Columbia	CMA	4167	2799	331	449	76	512
	Non-CMA	2420	1924	102	125	9	260
	Total	6587	4723	433	574	85	772
Prairies	CMA	6560	4170	654	574	154	1008
	Non-CMA	2007	1718	48	76	3	162
	Total	8567	5888	702	650	157	1170
Ontario	CMA	13893	8695	1329	1438	378	2053
	Non-CMA	3531	2677	202	208	35	409
	Total	17424	11372	1531	1646	413	2462
Quebec - Other	Total	1915	1019	286	187	61	362
Quebec - French	CMA	7400	4786	710	754	229	921
	Non-CMA	3026	2412	149	171	18	276
	Total	10426	7198	859	925	247	1197
Atlantic	CMA	1557	910	139	179	46	283
	Non-CMA	2117	1539	137	134	21	286
	Total	3674	2449	276	313	67	569
	Total	48593	32649	4087	4295	1030	6532

Table 3.3.3
2011 - Final Mail-Out Sample

REGION		Grand Total	GP/FM	Specialty					
				SURGERY	INTERNAL MEDICINE	PSYCHIATRY	OB/GYN	PAEDIATRICS	CARDIOLOGY
British Columbia	CMA	337	212	6	28	52	5	6	28
	Non-CMA	179	146	3	8	14	3	2	3
	Total	516	358	9	36	66	8	8	31
Prairies	CMA	528	316	11	54	66	9	14	58
	Non-CMA	149	130	2	5	9	1	1	1
	Total	677	446	13	59	75	10	15	59
Ontario	CMA	1147	658	22	113	167	23	23	141
	Non-CMA	270	202	6	17	24	5	3	13
	Total	1417	860	28	130	191	28	26	154
Quebec	CMA	767	428	14	83	108	12	15	107
	Non-CMA	246	196	4	14	21	3	2	6
	Total	1013	624	18	97	129	15	17	113
Atlantic	CMA	130	69	4	12	22	3	3	17
	Non-CMA	164	118	3	12	16	4	3	8
	Total	294	187	7	24	38	7	6	25
Grand Total		3917	2475	75	346	499	68	72	382
Incentive Amount			\$40	\$60	\$60	\$60	\$60	\$60	\$60

Table 3.3.4
2 Year Universe of Doctors (for weighting)

REGION		Grand Total	Specialty						
			GP/FM	SURGERY	INTERNAL MEDICINE	PSYCHIATRY	OB/GYN	PAEDIATRICS	CARDIOLOGY
British Columbia	CMA	4309	2799	360	331	449	118	174	78
	Non-CMA	2615	1924	360	102	125	62	35	7
	Total	6924	4723	720	433	574	180	209	85
Prairies	CMA	6414	4170	180	702	574	221	410	157
	Non-CMA	1816	1718	-	-	76	22	-	-
	Total	8230	5888	180	702	650	243	410	157
Ontario	CMA	13805	8695	800	1329	1438	505	660	378
	Non-CMA	3619	2677	320	202	208	104	73	35
	Total	17424	11372	1120	1531	1646	609	733	413
Quebec - Other	Total	1962	1019	211	286	187	54	144	61
Quebec - French	CMA	7435	4786	423	710	754	242	290	230
	Non-CMA	2993	2412	106	149	171	81	58	17
	Total	10429	7198	529	859	925	323	348	247
Atlantic	CMA	1492	910	134	139	179	54	43	34
	Non-CMA	2132	1539	134	137	134	27	128	34
	Total	3624	2449	267	276	313	81	171	67
	Total	48593	32649	3027	4087	4295	1490	2015	1030

Table 3.3.5
1 Year Universe of Doctors (for weighting)

REGION		Grand Total	Specialty				
			GP/FM	INTERNAL MEDICINE	PSYCHIATRY	CARDIOLOGY	OB/GYN, PAEDIATRICS, SURGERY
British Columbia	CMA	4139	2799	303	449	76	512
	Non-CMA	2448	1924	130	125	9	260
	Total	6587	4723	433	574	85	772
Prairies	CMA	6773	4170	702	574	157	1170
	Non-CMA	1794	1718	-	76	-	-
	Total	8567	5888	702	650	157	1170
Ontario	CMA	13893	8695	1329	1438	378	2053
	Non-CMA	3531	2677	202	208	35	409
	Total	17424	11372	1531	1646	413	2462
Quebec - Other	Total	1915	1019	286	187	61	362
Quebec - French	CMA	7377	4786	710	754	229	898
	Non-CMA	3049	2412	149	171	18	299
	Total	10426	7198	859	925	247	1197
Atlantic	CMA	1607	910	166	209	40	283
	Non-CMA	2067	1539	110	104	27	286
	Total	3674	2449	276	313	67	569
	Total	48593	32649	4087	4295	1030	6532

4.0 DATA COLLECTION

Prior to the initial mailings in each year, publishers were requested to provide representations of their publication covers in electronic format. In 2011, publishers also provided a representation of their website landing page. 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. For the 2011 study, publishers were able to update the covers and website landing pages after the second wave.

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

- a white envelope embossed with the PMB logo
- 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*”
- commemorative stamp

4.1 Mailing Schedule

The 2009 mailings commenced on January 23rd, 2009 and continued to April 16th, 2009. The 2011 mailings commenced on January 3rd, 2011 and continued to May 2nd, 2011.

5.0 IN-TAB SAMPLE COMPOSITION AND RESPONSE RATES

The sample composition for reporting is based on 2009 and 2011 fieldwork periods. Table 5.1.1 below provides the in-tab sample distribution for each specialty by year.

Table 5.1.1

Specialty	Completed Interviews	Completed Interviews	Total MMS
	January-June	January-June	
	<u>2009</u>	<u>2011</u>	<u>2011</u>
General Practitioners/FM	369	654	1023
Internal Medicine	49	85	134
Psychiatry	42	130	172
Cardiologists	42	113	155
Other Prescribing Specialties			
OB/Gyn	41	26	67
Paediatrics	49	30	79
Surgery	0	23	23
Total	592	1061	1653

Of the 1400 questionnaires mailed for the 2009 waves, 25 were returned as undeliverable. A total of 592 completed questionnaires were received between January 1st, 2009 and June 12th, 2009. The 592 completed questionnaires represent a response rate of 43.1%.

From the 3,917 questionnaires mailed for the 2011 waves, 127 were returned as undeliverable. A total of 1061 completed questionnaires were received by June 13th, 2011 and included in the datafile. The 1061 completed questionnaires represent a response rate of 28.0%.

Averaged over all of the mailings, the response rate for the data included in the MMS 2011 report is 32.0%.

Response rates differ by several factors including specialty. Table 5.1.2 highlights the response rate by specialty.

Table 5.1.2
Response Rate by Specialty

<u>Specialty</u>	<u>Mailed</u>	<u>Undelivered</u>	<u>Returned</u>	
	#	#	#	%
GP/ FM	3308	112	1023	32.0
Internal Medicine	461	9	134	29.6
Psychiatry	614	13	172	28.6
Cardiologists	494	5	155	31.7
<u>Other Prescribing Specialties</u>	<u>440</u>	<u>13</u>	<u>169</u>	<u>39.6</u>
OB/ Gyn	181	4	67	37.9
Paediatrics	184	3	79	43.6
Surgery*	75	6	23	33.3
Total	5317	152	1653	32.0

These results demonstrate a response rate of 32.0% overall and a range of 28.6% to 43.6% for the response rates for the individual specialties.

* Note: Response rate calculations for Surgeons are based on returns from the 2011 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 monthly 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 the appropriate skip logic is followed); 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 as a valuable information resource. If missed and not rated, 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 592 completed questionnaires from the 2009 waves, 546 returned the completed prescribing form. This represents a completion rate of 92.2%. A total of 1061 completed questionnaires were returned from the 2011 mailings. Of these, 980 completed the prescribing data form (a completion rate of 92.4%).

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 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 1061 completed questionnaires were received, entered through the data entry system, and used in the tabulations. Only those questionnaires received by June 13th, 2011 were included in the tabulations. The distribution of the completed interviews within each of the cells in the sampling plan is presented in Table 8.1.

The aim was to weight the data to match the original distribution of 48,593 doctors in the universe created from the IMS Findr list and the Quebec master list from which the 2011 sample was drawn. Due to the small base sizes in certain regions, returns in some CMAs and non-CMAs were combined to produce a more reliable base for weighting. To achieve the desired distribution, the data were weighted by:

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

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)

		Specialty							
		Total	GP/FM	Surgery	Internal Medicine	Psychiatry	OB/GYN	Paediatrics	Cardio- logists
British Columbia	CMA	141	87	2	12	12	7	10	11
	Non-CMA	72	51	2	5	6	5	2	1
	Total	213	138	4	17	18	12	12	12
Prairies	CMA	187	111	1	15	22	10	12	16
	Non-CMA	50	44	-	-	5	1	-	-
	Total	237	155	1	15	27	11	12	16
Ontario	CMA	473	262	5	50	52	22	27	55
	Non-CMA	111	80	2	7	7	5	3	7
	Total	584	342	7	57	59	27	30	62
Quebec French	CMA	300	180	4	19	37	9	10	41
	Non-CMA	113	87	1	5	12	3	2	3
	Total	413	267	5	24	49	12	12	44
Quebec Other	CMA	66	23	2	12	7	2	5	15
	Non-CMA	5	4	-	-	1	-	-	-
	Total	71	27	2	12	8	2	5	15
Atlantic	CMA	52	31	2	5	7	2	2	3
	Non-CMA	83	63	2	4	4	1	6	3
	Total	135	94	4	9	11	3	8	6
Total		1653	1023	23	134	172	67	79	155

Table 8.2
Unweighted Interviews by Major Reporting Variables (2-Year)

	<u>All Physicians Including GP/ FM's 65 - 70</u>
PROFESSIONAL CHARACTERISTICS/CARACT. PROFES.	
GP/FM-MG/famille	1023
Cardiology/Cardiologie	155
Internal Medicine/Médecine interne	134
OB/GYN	67
Paediatrics/Pédiatrie	79
Psychiatry/Psychiatrie	172
Surgery/Chirurgie*	23
BC/CB	213
Prairies	237
Ontario	584
Québec	484
Atlantic/Atlantique	135
CMA/RMR	1219
50,000+	168
<50,000	266
English/Anglais	1212
French/Français	441
Male/Homme	1039
Female/Femme	614
Office/Clinic/Clinique	1188
Hospital/Hôpital	714

* Surgeons excluded in 2009 fieldwork.

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

	<u>All Physicians</u> <u>Including</u> <u>GP/ FM's 65 - 70</u>
PROFESSIONAL CHARACTERISTICS/CARACT. PROFES.	
GP/FM-MG/famille	654
Cardiology/Cardiologie	113
Internal Medicine/Médecine interne	85
OB/GYN	26
Paediatrics/Pédiatrie	30
Psychiatry/Psychiatrie	130
Surgery/Chirurgie	23
BC/CB	127
Prairies	151
Ontario	376
Québec	320
Atlantic/Atlantique	87
CMA/RMR	781
50,000+	103
<50,000	177
English/Anglais	779
French/Français	282
Male/Homme	669
Female/Femme	392
Office/Clinic/Clinique	756
Hospital/Hôpital	483

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

- Le Clinicien (changed to 10 times per year January 2011, formerly 9 times per year)

3. Publication Title Changes (French)

- Journal of Psychiatry & Neuroscience (French title *Revue de Psychiatrie & de Neuroscience* added January 2011)
- Pain Research & Management (French title *La Douleur – Recherche et Traitement* added January 2011)

4. One Year Reporting

- Several new questions were included in the 2011 MMS that were not in the 2009 MMS:
 - Frequency of visiting the publication’s website
 - Rating the value of medical information sources on patient treatment and prescription products
 - Frequency of visiting specific medical websites such as MdPassport/MdBriefcase, Canadian Medical Association, WebMD, Medscape

For all new questions, data are reported on a 1-year base.

5. Sample Providers

- Prior to 2011, the sample for the MMS was drawn exclusively from the IMS Findr list. The universe was also determined by the list of physicians from IMS Findr.
- In 2011, the master list for Quebec was created from lists provided by 3 providers: Dendrite, PTM, and Scott. The sample for Quebec was then drawn from the master list. The sample for all other provinces was selected from the IMS Findr list of physicians. The universe for the 2011 MMS is based on IMS Findr and the master list created for Quebec.

6. Surgeons

- Surgeons were not included in the 2009 fieldwork.

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 and Quebec master 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 2011	≤ 70
GP/FM	32,649
Surgery	3,027
Internal Medicine	4,087
Psychiatry	4,295
Obstetrics & Gynaecology	1,490
Paediatrics	2,015
Cardiologists	1,030
	48,593

*Source – CCAB Statement – March 2008

10.2 Universe Definition (cont'd)

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

IMS Findr List - Non-Prescribing Specialties*

*Source - CCAB Statement - March 2008

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
		11,887

*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 sample lists from all providers (IMS Findr, Dendrite, PTM, Scott) 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

Q2		Q1. Probability of Reading					
% Pages read		4 of 4	3 of 4	2 of 4	1 of 4	<1 of 4	Never
Response	Value	1.000	0.750	0.500	0.250	0.125	0.000
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 sample provider's list.

10.8 Calculation of Averages

Averages are consistently calculated in PMB volumes and computer access.

- Qualitative Question: Valuable Information Resource
- 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
- Number of Times Visit Website Per Month
- Rating Medical Information Sources

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

Table 10.8 – Midpoints Used to Calculate Averages

Valuable Information Resource		# Years in Practice	
1 – Totally Disagree	1.0	Less than 5	2.5
2	2.0	5-10	8
3	3.0	11-15	13
4	4.0	16-20	18
5 – Totally Agree	5.0	More than 20	25
Not Stated	Excluded	Not Stated	Excluded
# Patients Per Day		# Prescription Items Written Per Day	
None	0.0	None	0.0
Under 5	2.5	Under 5	2.5
5-14	9.5	5-14	9.5
15-24	19.5	15-24	19.5
25-34	29.5	25-34	29.5
35-44	39.5	35-44	39.5
45 or more	50.0	45-54	49.5
Not Stated	Excluded	55-64	59.5
		65+	75.0
		Not Stated	Excluded
# Med Conf./CME Courses Per Year		# Prescription Items Written Per Week (Yellow Sheet)	
None	0.0	None	Excluded
1-2	1.5	1-2	1.5
3-5	4.0	3-5	4.0
6+	7.5	6-10	8.0
Not Stated	Excluded	11-19	15.0
		20 or more	25.0
		Not Stated	Excluded
# of Times Participated in Pharma. Co. Detailing Per Month		# of Times Visit Website Per Month	
None	0.0	Daily	20.0
1-4	2.5	Weekly	4.0
5-8	6.5	Monthly	1.0
9-11	10.0	Less Often	0.0
12 or more	15.0	Never	0.0
Not Stated	Excluded	Not Stated	0.0
Rating Medical Info Sources			
1 – Disagree Strongly	1.0		
2	2.0		
3	3.0		
4	4.0		
5 – Agree Strongly	5.0		
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%.