



# Interviewer Monitoring

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## New approaches for CATI and CAPI at Statistics Canada

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## Introduction

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- Over the past year, Statistics Canada has been working on some new initiatives to address data quality and interviewer performance
- POINT (Pace Of Interviewing) - to identify CATI or CAPI interviews which are “unusually fast” or have high item non-response
- CAPI Monitoring – to audio record CAPI interviews and provide feedback on interviewer performance





## Existing methods of monitoring

- Verification (CAPI and CATI)
  - Call back a sample of respondents to verify that they were contacted and responded, with verification of some key questions
- CATI monitoring
  - Listen in and watch partial interviews to evaluate interviewer performance using a set of indicators
  - Formal program – each interviewer is monitored for a fixed amount of time each month; the amount of time is based on experience and previous performance assessments
  - Regular feedback is provided to interviewers at end of shift; if serious issues are identified, feedback is provided immediately





## Pace of Interviewing (POINT)

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- Objectives:
  - Measure the quality of collection (main content)
  - Measure interviewer performance
    - ◆ Quickly detect problems and provide meaningful reports
  - Improve data quality
  
- Attributes:
  - Establish survey criteria to evaluate calls objectively (fairness to interviewers)
  - Provide timely reports and timely feedback





## What is POINT?

- Pace of interviewing = number of field changes per minute
- Field change: response to a survey question, modifying the answer to a question, entering a non-response code (DK, RF)
- Actual Pace = # fields changed / total minutes
- Amended Pace = # fields changed / modified total minutes, where times greater than 14 seconds are adjusted
- Measurable calls: calls having at least 20 field changes, content portion





## POINT

- Pace of interview can vary by survey
  - Surveys with difficult concepts or wordy questions will have longer average times to ask and answer a question and therefore a slower pace
- Benchmarks are established for each survey, based on data from first 600 measurable calls (i.e. calls having at least 20 field changes)
- Calls are identified as “irregular” if the amended pace of interview is more than 75% faster than the average pace established for that survey, or if more than 25% of the field changes are item non-response





## Irregular Calls

<b>Survey Name</b>	Surv 7 CP 2	<b>Survey Pace</b>	7.4 Field Changes / Minute
<b>Date Range</b>	All collection dates	<b>Irregular Calls</b>	Amended Pace > 13.0 FCPM
<b>Site</b>	Site 5	<b>Boundaries</b>	Item Non-Response > 25.0%
<b>Interviewer</b>	Intrvwr 83 (full name)	<b>Other</b>	Long-Visit Field > 3.0 minutes

Identifiers				Field Changes	Actual Int. Pace		Amended Int. Pace		Long-Visit Fields		Item Non-Response		
Date	IntID	Case	Call #		Time (Mins)	FldChg /Min	Time (Mins)	FldChg /Min	#	Time (Mins)	DK	RF	%
Date 1	Intrvwr 83	Case 1	<a href="#">1</a>	298	23.6	12.7	19.9	15.0	0	0.0	12	30	14.1
Date 2	Intrvwr 83	Case 2	<a href="#">1</a>	350	32.4	10.8	30.2	11.6	0	0.0	15	73	25.1
Date 2	Intrvwr 83	Case 3	<a href="#">1</a>	309	13.9	22.2	11.9	25.9	0	0.0	11	210	71.5
Date 4	Intrvwr 83	Case 4	<a href="#">1</a>	139	1.3	106.9	1.1	128.1	0	0.0	0	138	99.3
Date 4	Intrvwr 83	Case 4	<a href="#">1</a>	289	22.6	12.8	19.1	15.1	0	0.0	13	45	20.1





## Survey Calls by Interviewer

IntID	Evaluated Calls					Field Changes	Actual Int. Pace		Amended Int. Pace		Long-Visit Fields		Item Non-Response			
	All		Regular		Irregular		Time (Mins)	FldChg /Min	Time (Mins)	FldChg /Min	#	Time (min)	DK	RF	%	
	#	%	#	%	#											%
<a href="#">Intrvwr 1</a>	6	0.0	0	0.0	6	100.0	1,008	71.3	14.1	48.4	20.8	3	14.2	19	309	32.5
<a href="#">Intrvwr 2</a>	41	100.0	41	100.0	0	0.0	12,969	1,774.2	7.3	1,573.4	8.2	3	18.9	225	15	1.9
<a href="#">Intrvwr 3</a>	2	100.0	2	100.0	0	0.0	715	103.6	6.9	93.7	7.6	0	0.0	6	0	0.8
<a href="#">Intrvwr 4</a>	13	100.0	13	100.0	0	0.0	3,556	601.4	5.9	515.9	6.9	1	4.5	33	5	1.1
<a href="#">Intrvwr 3</a>	15	86.7	13	86.7	2	13.3	4,555	738.3	6.2	636.0	7.2	1	4.1	1	0	0.0
<a href="#">Intrvwr 3</a>	12	100.0	12	100.0	0	0.0	3,294	598.6	5.5	495.7	6.6	2	18.3	60	0	1.8
<a href="#">Intrvwr 3</a>	22	100.0	22	100.0	0	0.0	7,187	1,031.9	7.0	865.1	8.3	8	59.0	132	78	2.9
<b>TOTAL</b>	<b>521</b>	<b>94.6</b>	<b>493</b>	<b>94.6</b>	<b>28</b>	<b>5.4</b>	<b>153,114</b>	<b>21,763.7</b>	<b>7.0</b>	<b>18,782.7</b>	<b>8.2</b>	<b>90</b>	<b>468.5</b>	<b>3,381</b>	<b>2,307</b>	<b>3.7</b>





## Summary of Calls by Survey

Survey Name	All active surveys									
Date Range	All collection dates									
Site(s)	Site 1									
Site	Survey Name	Field Changes	Evaluated Calls					Item Non-Response		
			Total	Regular		Irregular		DK	RF	%
			#	#	%	#	%			
<b>TOTAL</b>	<b>TOTAL</b>	<b>2,865,365</b>	<b>21,748</b>	<b>21,700</b>	<b>99.8</b>	<b>48</b>	<b>0.2</b>	<b>38,576</b>	<b>4,939</b>	<b>1.5</b>
TOTAL	<a href="#">Surv 1 CP 5</a>	421,163	2,034	2,029	99.8	5	0.2	3,762	1,005	1.1
TOTAL	<a href="#">Surv 1 CP 6</a>	325,773	1,550	1,549	99.9	1	0.1	3,697	867	1.4
TOTAL	<a href="#">Surv 2 CP 1</a>	374,700	3,234	3,233	100.0	1	0.0	9,170	325	2.5
TOTAL	<a href="#">Surv 3 CP 1</a>	1,082,251	8,721	8,710	99.9	11	0.1	11,053	1,545	1.2
TOTAL	<a href="#">Surv 4 CP 1</a>	438,332	5,036	5,009	99.5	27	0.5	9,442	806	2.3
TOTAL	<a href="#">Surv 5 CP 1</a>	223,146	1,173	1,170	99.7	3	0.3	1,452	391	0.8
<b>Site 1</b>	<b>TOTAL</b>	<b>2,865,365</b>	<b>21,748</b>	<b>21,700</b>	<b>99.8</b>	<b>48</b>	<b>0.2</b>	<b>38,576</b>	<b>4,939</b>	<b>1.5</b>
Site 1	<a href="#">Surv 1 CP 5</a>	421,163	2,034	2,029	99.8	<u>5</u>	0.2	3,762	1,005	1.1
Site 1	<a href="#">Surv 1 CP 6</a>	325,773	1,550	1,549	99.9	<u>1</u>	0.1	3,697	867	1.4
Site 1	<a href="#">Surv 2 CP 1</a>	374,700	3,234	3,233	100.0	<u>1</u>	0.0	9,170	325	2.5
Site 1	<a href="#">Surv 3 CP 1</a>	1,082,251	8,721	8,710	99.9	<u>11</u>	0.1	11,053	1,545	1.2
Site 1	<a href="#">Surv 4 CP 1</a>	438,332	5,036	5,009	99.5	<u>27</u>	0.5	9,442	806	2.3
Site 1	<a href="#">Surv 5 CP 1</a>	223,146	1,173	1,170	99.7	<u>3</u>	0.3	1,452	391	0.8

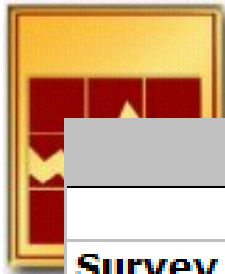





## Survey Summary by Site

Site	# of Ints	Evaluated Calls			Field Changes	Amended Interviewing Pace		Item Non-Response		
		Type	#	%		Time (min)	FldChg /Min	DK	RF	%
<b>TOTAL</b>	<b>32</b>	<b>All Calls</b>	<b>1,672</b>	<b>100.0</b>	<b>60,361</b>	<b>8,855.2</b>	<b>6.8</b>	<b>1,360</b>	<b>91</b>	<b>2.4</b>
TOTAL		Regular	1,639	98.0	59,397	8,774.3	6.8	1,260	66	2.2
TOTAL		Irregular	33	2.0	964	80.9	11.9	100	25	13.0
<b>Site 1</b>	<b>10</b>	<b>All Calls</b>	<b>653</b>	<b>100.0</b>	<b>25,246</b>	<b>3,705.1</b>	<b>6.8</b>	<b>355</b>	<b>55</b>	<b>1.6</b>
Site 1		Regular	643	98.5	24,950	3,681.7	6.8	347	46	1.6
Site 1		Irregular	<u>10</u>	1.5	296	23.4	12.6	8	9	5.7
<b>Site 2</b>	<b>22</b>	<b>All Calls</b>	<b>1,019</b>	<b>100.0</b>	<b>35,115</b>	<b>5,150.1</b>	<b>6.8</b>	<b>1,005</b>	<b>36</b>	<b>3.0</b>
Site 2		Regular	996	97.7	34,447	5,092.6	6.8	913	20	2.7
Site 2		Irregular	<u>23</u>	2.3	668	57.5	11.6	92	16	16.2



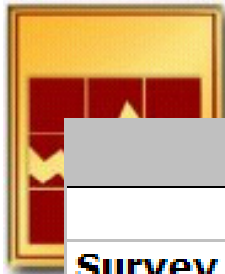


## Interviewer Calls

<b>Survey Name</b>	All surveys	
<b>Date Range</b>	All collection dates	
<b>Site</b>	Site 3	
<b>IntID</b>	Intrvwr 23	

Survey Name	Field Changes	Evaluated Calls					Item Non-Response		
		Total	Regular		Irregular		DK	RF	%
		#	#	%	#	%			
Surv 1 CP 1	3,182	15	15	100.0	0	0.0	55	3	1.8
Surv 1 CP 2	7,864	37	37	100.0	0	0.0	234	17	3.2
Surv 1 CP 3	9,447	51	51	100.0	0	0.0	214	21	2.5
Surv 1 CP 4	9,763	48	48	100.0	0	0.0	279	35	3.2
Surv 1 CP 5	5,220	24	24	100.0	0	0.0	135	9	2.8
Surv 1 CP 6	2,269	10	10	100.0	0	0.0	60	12	3.2
<b>TOTAL</b>	<b>37,745</b>	<b>185</b>	<b>185</b>	<b>100.0</b>	<b>0</b>	<b>0.0</b>	<b>977</b>	<b>97</b>	<b>2.8</b>





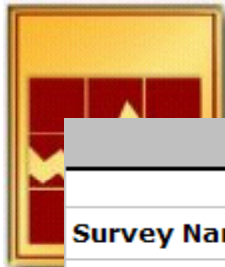
## Interviewer Calls



<b>Survey Name</b>	All surveys
<b>Date Range</b>	All collection dates
<b>Site</b>	Site 5
<b>IntID</b>	Intrvwr 83

Survey Name	Field Changes	Evaluated Calls					Item Non-Response		
		Total	Regular		Irregular		DK	RF	%
		#	#	%	#	%			
Surv 7 CP 1	1,370	5	4	80.0	<u>1</u>	20.0	60	142	14.7
Surv 7 CP 2	9,460	48	26	80.0	<u>22</u>	45.8	319	1,304	17.2
Surv 7 CP 3	5,664	20	12	60.0	<u>8</u>	40.0	172	473	11.4
Surv 7 CP 4	4,619	17	15	88.2	<u>2</u>	11.8	121	278	8.6
Surv 7 CP 5	4,672	17	13	76.5	<u>4</u>	23.5	99	487	12.5
Surv 7 CP 6	3,524	14	12	85.7	<u>2</u>	14.3	61	204	7.5
<b>TOTAL</b>	<b>29,309</b>	<b>121</b>	<b>82</b>	<b>67.8</b>	<b>39</b>	<b>32.2</b>	<b>832</b>	<b>2,888</b>	<b>12.7</b>





## Unusual Fields Details

<b>Survey Name</b>	Surv 7 CP 2	<b>Survey Pace</b>	7.4 Field Changes / Minute
<b>Date</b>	Date 6	<b>Irregular Calls Boundaries</b>	Amended Pace > 13.0 FCPM
<b>Site</b>	Site 5		Item Non-Response > 25.0%
		<b>Other</b>	Long-Visit Field > 3.0 minutes
<b>Identifiers</b>			
<b>Case</b>	<b>Call #</b>	<b>IntID</b>	
Case 9	1	Intrvwr 83	

Field		On Field Entry			During Field Visit		On Field Exit		Duration		F4 Comment
Identifier	Seq	Empty?	Val	Stat	Val Chgd?	Stat Chgd?	Val	Stat	Field (Secs)	Runnig h:mm:ss	
Content.B27.B27_Q08	182	Yes		N	Yes	No	2	N	0	27:25	
Content.B27.B27_Q12	183	Yes		N	Yes	No	2	N	1	27:26	
Content.B27.B27_Q13	184	Yes		N	Yes	No	2	N	1	27:27	
Content.B27.B27_Q14	185	Yes		N	Yes	No	2	N	0	27:27	
Content.B27.B27_Q15	186	Yes		N	Yes	No	2	N	0	27:27	
Content.B27.B27_Q16	187	Yes		N	Yes	No	2	N	1	27:28	
Content.B27.B27_Q17	188	Yes		N	Yes	No	2	N	0	27:28	
Content.B27.B27_Q18	189	Yes		N	Yes	No	2	N	1	27:29	
Content.B27.B27_Q19	190	Yes		N	Yes	No	2	N	1	27:30	
Content.B27.B27_Q20	191	Yes		N	Yes	No	2	N	0	27:30	
Content.B27.B27_Q21	192	Yes		N	Yes	No	2	N	1	27:31	
Content.B27.B27_Q25	193	Yes		N	Yes	No	1	N	1	27:32	
Content.B27.B27_Q32	194	Yes		N	No	Yes		R	2	27:34	
First Q in App	197	No	1	N	No	No	1	N	1,888	59:06	
Last Q in Content.	201	Yes		N	Yes	No	1	N	0	59:06	
Last Q in App	204	Yes		N	Yes	No	1	N	0	59:06	





## How is POINT being used?

- Social CATI surveys first
- Performance management
  - Focus is regional
  - Coordinated with HR & staff relations
  - Take a positive approach, reinforce good practices
  - Complements manual monitoring
- Regional managers review reports daily
- If an interviewer is found to have excessive irregular calls, regular monitoring is increased, re-training may be recommended
- Subject matter clients are informed about possible data quality issues; they decide how to handle affected cases (e.g. treat as non-response; re-interview)





# CAPI Monitoring Project

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□ Objectives:

- Measure field interviewer performance
- Improve data quality

□ Methodology:

- Audio recording
- Formal monitoring strategy and feedback process





## CAPI Monitoring project

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- Phase 1: technical assessment
  - Microphones, recording software, integration with Blaise, transmission
  
- Phase 2: development and pilot test
  - Aim for test with Canadian Community Health Survey in summer or fall 2008
  
- Phase 3: implementation
  - Develop monitoring program for ongoing use
  - Staffing and training monitors





## Technical Assessment

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- Microphones:
  - Tested 4 brands of external microphones plus internal microphone – to assess sound quality
  - Field tested 2 brands for audio recording responses to cognitive tests (Pilot test of Survey on Aging)
  
- Blaise integration:
  - Set up survey application so that recording will start and stop automatically at pre-determined questions





## Technical Assessment (cont'd)

- Compression:
  - Difficult to find recording software that works with Blaise (to record in MP3 format)
  - Chose to record with the native Windows software (in .wav format) and use an open source software (Speex) to compress before transmission
- File sizes & transmission:
  - Our existing transmission method uses telephone lines – too slow for large audio files
  - Looking at high-speed internet transmission, but this will mean changes to laptop configuration to ensure security; this is the only viable long-term solution we see





## Privacy issues

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- Privacy / confidentiality issues:
  - Must ask permission to record
    - Plan to record the “agreement” question and response
    - If no agreement, recording will be disabled within questionnaire
    - If respondent later indicates that they don’t want to be recorded, need to implement a function key to over-ride the recording setting
  - Must have a Privacy Impact Assessment (PIA)
  - Must have a data retention and disposition plan
  - Must limit access to audio files





## CAPI monitoring strategy

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- Focus on performance evaluation
- Audio files to be reviewed by senior interviewer or monitor working in the regional office
- A subset of audio files will be identified for the monitor to listen to
- Still need to work out the mechanics for providing timely feedback to the interviewer in the field
- Recordings may also be provided to subject matter areas, to do quality assessment of content





## CAPI monitoring methodology

- Based on performance, interviewers are assigned to a “plan” which determines the intensity at which they are monitored
- The plan will determine the number of audio files (or number of minutes of audio) that the monitor must use to evaluate each interviewer
- The methodology must ensure that those minutes are distributed over a variety of question types and different respondents; this will be done by sub-sampling the audio files





## Next Steps

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- POINT:
  - Expand program to CAPI surveys
  - Add log to record results of any review of irregular calls
  
- CAPI monitoring:
  - Security configuration for internet transmission
  - Pilot test
  - Feedback from interviewers and monitors
  
- Future:
  - Recording of CATI?





## Contact Info

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