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Implementation of Responsive Design for (CATI) Surveys for CPRD

CPRD - Collection Research and Innovation Section

Introduction



- ❑ Responsive Collection Design (RCD) is an approach that uses the information available prior and during data collection to adjust the collection strategy for the remaining in-progress cases
- ❑ Trade-off between quality, cost, productivity, responding potential of in-progress cases.

Main Factors Affecting the Choice of RCD Strategy



- ❑ RCD objectives
 - ◆ Improve response rate
 - ◆ Reduce cost
 - ◆ Improve sample representativeness
 - ◆ Any combination of these potential objectives
- ❑ Mode of collection (e.g. CATI, CAPI, multi-mode)
- ❑ Duration of collection period
- ❑ The availability of the information prior to collection
- ❑ Type and quality (including timeliness) of information available during collection
- ❑ Practical considerations (e.g. technical & communication)

RCD Strategy - Overview



□ Four steps

- 1) Planning step
- 2) Initial data collection step
- 3) RCD phase 1
- 4) RCD phase 2

RCD Strategy - Overview (cont'd)

1) Planning step

- ◆ Analysis of previous data collection cycle (when available)
- ◆ Data collection phases and strategies
 - RCD objectives
 - Staffing plans
 - Response propensity model
- ◆ Active management tools and reports
 - New key indicators and communication plan

RCD Strategy - Overview (cont'd)

2) Initial data collection step

- ◆ Use strategic improvement opportunities previously identified
 - Embedded experiments
- ◆ More likely to collect easy cases
- ◆ Monitor key indicators to identify start of RCD Phase 1
 - Response rate, productivity, cost (% of budget spent) and responding potential of in-progress cases
 - By Regional Office (RO)
 - RO progresses at different pace

RCD Strategy - Overview (cont'd)

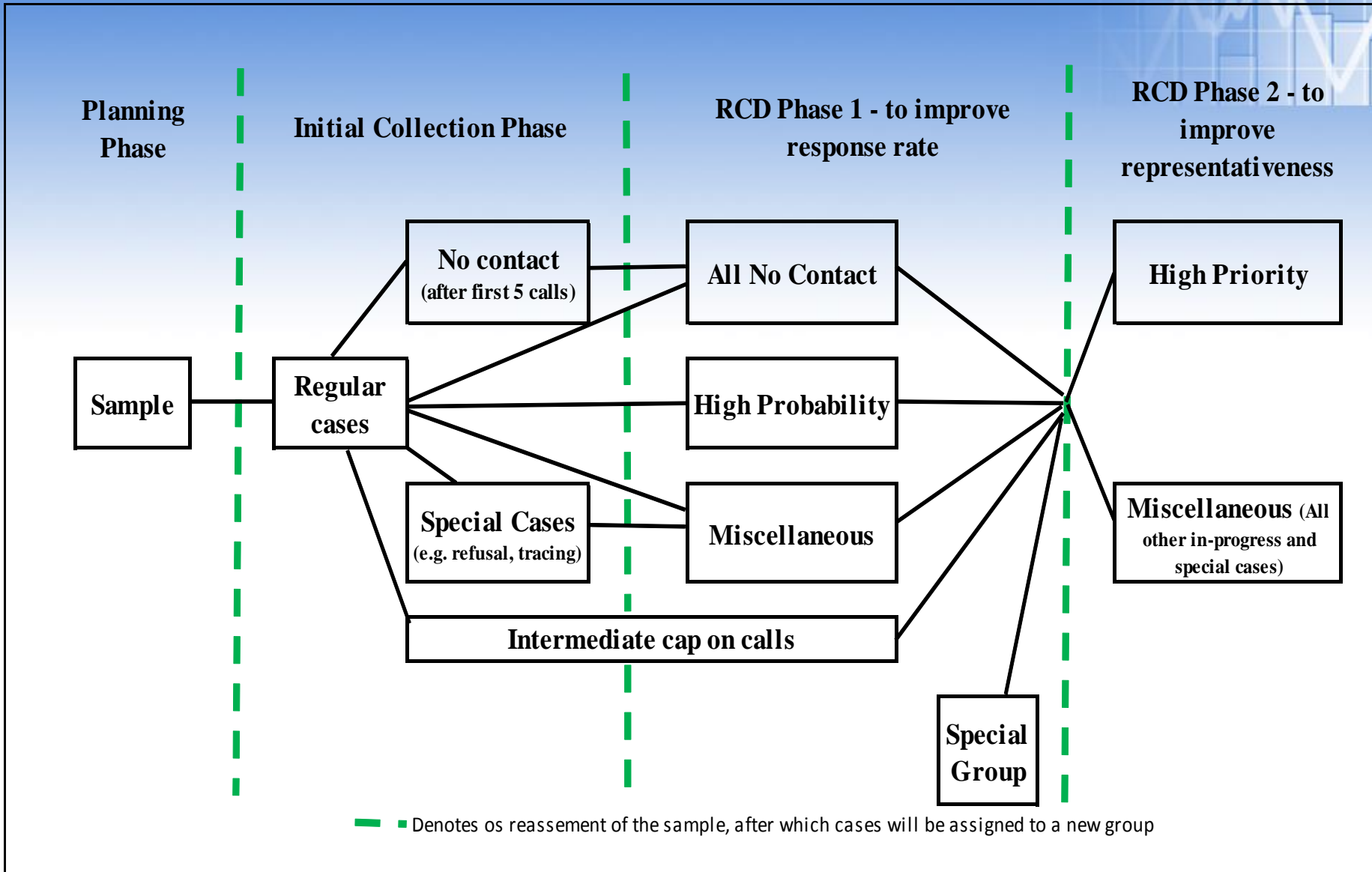
3) RCD Phase 1 - Daily overnight job

- ◆ Categorize cases to improve overall response rates
 - Probability of completion (propensity)
- ◆ Monitor key indicators to identify start of RCD Phase 2
 - Representativeness indicator and previous key indicators
 - By Regional Office (RO)

4) RCD Phase 2 - Daily overnight job

- ◆ Prioritize cases to improve sample representativeness
 - Priority on domains of interest with lower response rates or for which the difference between expected and observed response rate is larger

RCD Strategy



Active Management

- Set of plans and tools to manage data collection while in progress

- Active management is mainly used:
 - ◆ to provide timely information on survey progress and performance using key indicators
 - ◆ to decide when is the right moment to initiate RCD phases

Survey Monitoring



□ Key indicators

- ◆ Response rate (by domains of interest)
 - ◆ Representativeness indicator (variability between response rates)
 - ◆ Cost and budget (% of budget spent)
 - ◆ Productivity
 - ◆ Responding potential of in-progress cases
 - ◆ Efforts and results
-
- Also used to identify when to start RCD Phase 1 and 2

Key indicators report

- Monitoring tool that summarizes the survey progress and performance in a single report (National and RO level). It contains
 - ◆ # of resp., non- resp., voids, response and hit rate, no contact cases, etc
 - ◆ Effort and conversion rate for refusal and special cases
 - E.g. # of cases with at least one refusal and cases converted as resp.
 - ◆ # of attempts and total system time, productivity and average interview time
 - ◆ TPU by RO and respondent type (resp., non-respondent, voids)
 - ◆ % of budget spent in terms of system time and payroll hours
 - ◆ Effort (system time) spent by time slice
 - ◆ Effort (attempts) by Blaise group (i.e. % of calls issued from each Group)
 - ◆ And more...

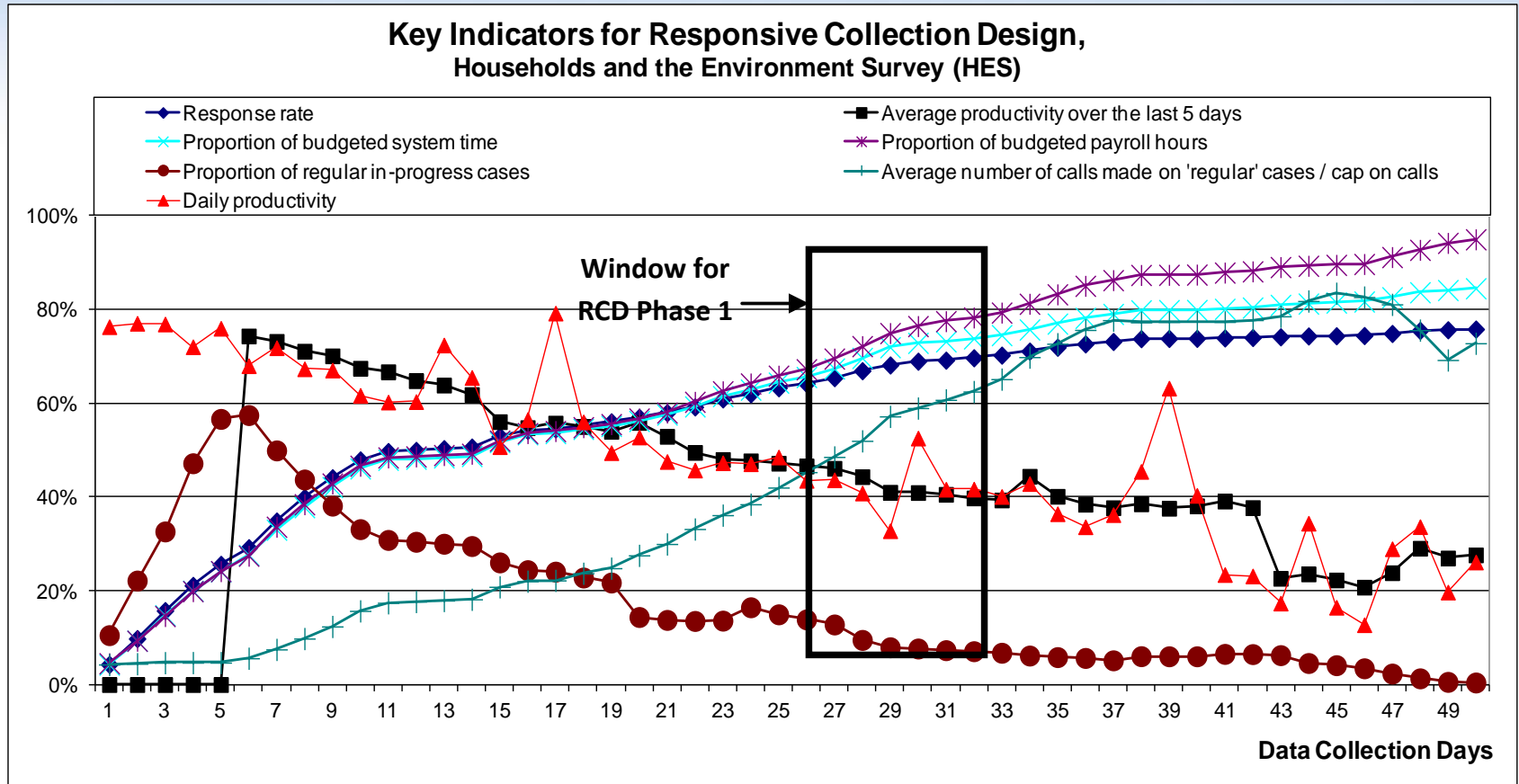


Examples of monitoring and decision making tools

***Adjustment Strategy -
Key indicators to identify when
to initiate RCD Phases***

Adjustment Strategy - Key Indicators to Identify Start of RCD Phase 1

- Decision based on survey progress in terms of response rate, productivity, proportion of budget spent (cost) and responding potential of in-progress sample



RCD Dashboard - Example for RCD Phase 1

- ❑ Dashboards are used to identify when to start both RCD phases (i.e. the window) to facilitate interpretation and objective decision-making
 - ◆ RCD phase 1: 6 conditions, RCD phase 2: 7 conditions
- ❑ Yellow (=3 or 4) and red lights (=5 or 6) signal when many conditions are met

RO	Response Rate		Productivity (Average over last 5)			Budget and Cost				Propensity of In-Progress Cases				Sum of conditions
	Response Rate	Cond 1	Initial	Current	Cond 2	% of Budget payroll hours	Cond 3	% of Budget System Time	Cond 4	% of regular In-progress cases	Cond 5	Avg. # of calls for regular in-progress cases / cap	Cond 6	
EDM	52.2%	1	64.3%	41.6%	1	56.6%	1	62.4%	1	28.3%	0	7.2	0	4
HFX	52.6%	1	63.6%	45.5%	1	62.8%	1	69.8%	1	27.0%	0	7.7	0	4
SHER	46.3%	0	66.9%	58.3%	1	49.8%	0	50.7%	0	34.5%	0	3.4	0	1
STUR	64.2%	1	74.4%	46.6%	1	67.2%	1	65.6%	1	13.9%	1	11.3	1	6
TOR	52.6%	1	65.7%	53.6%	1	58.0%	1	55.4%	1	27.9%	0	6.8	0	4
WIN	62.4%	1	69.9%	46.8%	1	69.8%	1	69.0%	1	12.5%	1	13.0	1	6

Response Rate by Domain of Interest – Priority and Representativeness

RO	Health Region (HR)	Regin Name	Sample Resp. Out-of-scope			Observe Response Rate in Field	Expected Response rate			Response rate difference		Representativeness indicators		Priority Group*
						By HR (H)	By HR (K)	National (L)	Expect. Rrate Nat - Observed Rrate by HR (L-H)	Expect. Rate by HR - Observed Rrate by HR (K-H)	RAW	Adjusted		
HFX	1011	NF- Eastern Health Authority	133	82	13	68.3%	65.0%	67.0%	-1.3%	-3.3%	0.85277	0.85687		
HFX	1012	NF- Health and Community S	81	53	9	73.6%	65.0%	67.0%	-6.6%	-8.6%	0.85277	0.85687		
HFX	1013	NF- Health and Community S	75	44	11	68.8%	70.0%	67.0%	-1.8%	1.3%	0.85277	0.85687		
HFX	1014	NF- Labrador-Grenfell Health A	51	23	9	54.8%	60.0%	67.0%	12.2%	5.2%	0.85277	0.85687		
HFX	1101	Kings County	31	15	6	60.0%	60.0%	67.0%	7.0%	0.0%	0.85277	0.85687		
HFX	1102	Queens County	85	44	20	67.7%	65.0%	67.0%	-0.7%	-2.7%	0.85277	0.85687		
HFX	1103	Prince County	63	33	11	63.5%	65.0%	67.0%	3.5%	1.5%	0.85277	0.85687		
HFX	1210	Zone 1 (Yarmouth/South Shor	70	40	11	67.8%	70.0%	67.0%	-0.8%	2.2%	0.85277	0.85687		
HFX	1223	Zone 2 (Kentville)	53	39	9	88.6%	75.0%	67.0%	-21.6%	-13.6%	0.85277	0.85687		
HFX	1230	Zone 3 (Truro)	63	40	8	72.7%	70.0%	67.0%	-5.7%	-2.7%	0.85277	0.85687		
HFX	1240	Zone 4 (New Glasgow)	60	35	8	67.3%	70.0%	67.0%	-0.3%	2.7%	0.85277	0.85687		
HFX	1258	Zone 5 (Cape Breton)	74	32	13	52.5%	70.0%	67.0%	14.5%	17.5%	0.85277	0.85687	1	
HFX	1269	Zone 6 (Halifax)	118	66	17	65.3%	75.0%	67.0%	1.7%	9.7%	0.85277	0.85687		
HFX	1301	Region 1 (Moncton)	81	55	11	78.6%	75.0%	67.0%	-11.6%	-3.6%	0.85277	0.85687		
HFX	1302	Region 2 (Saint John)	73	49	9	76.6%	75.0%	67.0%	-9.6%	-1.6%	0.85277	0.85687		
HFX	1303	Region 3 (Fredericton)	75	46	14	75.4%	75.0%	67.0%	-8.4%	-0.4%	0.85277	0.85687		
HFX	1304	Region 4 (Edmunston)	45	28	7	73.7%	65.0%	67.0%	-6.7%	-8.7%	0.85277	0.85687		
HFX	1305	Region 5 (Campbellton)	42	22	7	62.9%	75.0%	67.0%	4.1%	12.1%	0.85277	0.85687	1	
HFX	1306	Region 6 (Bathurst)	59	34	7	65.4%	70.0%	67.0%	1.6%	4.6%	0.85277	0.85687		
HFX	1307	Region 7 (Chatham)	44	23	3	56.1%	70.0%	67.0%	10.9%	13.9%	0.85277	0.85687	1	

Highlights

- ❑ Technical and operational feasibility have been proven
- ❑ Initial RCD strategy has been improved
 - ◆ e.g. Gradually phase-in of no contact group in initial collection phase
- ❑ Standardization of RCD strategy and reports
 - ◆ Facilitate the implementation of new RCD surveys
 - ◆ Reduce the time and risks of implementation
 - ◆ Possible to conduct more RCD surveys
 - *Initially developed with a research rather than a production perspective*
- ❑ Conduct RCD surveys for which no information from previous survey or cycle is available

Highlights



□ Maintain and even improve response rate overtime

◆ HES

- 2007, 74.3% (no RCD)
- 2009, 75.3% (RCD with control group)
- 2011, 76.2% (Full RCD)
- 2013, 75.5% (Full RCD)

□ Embedded experiments

◆ HES 2011

- New time slices strategy to improve the distribution of calls during the day (morning, afternoon, evening) and days of the week
- Better response and contact rates (over 2%) for cases in which the first call was forced to be in the same time slice as previous interview

Other Lessons Learned



❑ Active Management

- ◆ Essential for any RCD
- ◆ Need timely and accessible paradata
- ◆ Active Management strategy has been improved
- ◆ CATI surveys can take advantage of it even though RCD is not used

❑ Communication

- ◆ Required on-going and well planned communication (Planning and Collection)

❑ Staff

- ◆ New analytical skills required - Training might be required
- ◆ Interviewer staffing in RO - Required guidelines for staff between groups

❑ RCD is not a “magic” solution

- ◆ Needs to be used in conjunction with other initiatives



For more information, please contact

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