

**Inter-American Development Bank
Technical Cooperation Program (CANTAP-3)**

TC/FUNDS BRIEF

TC N°: CO-T1008

I. GENERAL INFORMATION:

- | | | |
|----|--|--|
| 1. | Name of the T.C. Project | Support to the Extended Vaccinations Program (PAI) CO-L10021 |
| 2. | Name of the Trust Fund: | Canadian Technical Assistance Program, Cantap-3 |
| 3. | Beneficiary country: | Colombia |
| 4. | Beneficiary agency: | National Institute of Health (INS)/ Ministry of Social Protection (MPS) |
| 5. | Estimated Total Amount to be financed: | US\$150,000 |
| | • Financed by Cantap-3: | CAD 133,000 (US\$100,000) |
| | • Financed by other sources (RE3): | US\$50,000 |
| 6. | Execution and Disbursement Deadlines: | Execution: 4 months from approval;
Disbursement: 6 months from approval |

II. OBJECTIVES:

The objective of the proposed technical cooperation is to support the Government of Colombia in the preparation of a performance driven loan (PDL) (CO-L1002), which disburses against verified development outcomes, in this case, vaccination rates and other program outcomes.

The specific objective of the technical cooperation is to carry out a survey to establish baseline vaccination rates in a group of at least 50 poor and low coverage municipalities in Colombia. These baseline rates will be used to project vaccination targets to be met annually during the period of execution of the loan; the activity will also establish a clear methodology for the measurement of these rates that will be utilized during subsequent annual measurements.

III. DESCRIPTION:

The overarching goal of the Support to the Extended Vaccinations Program (PAI) is to improve vaccination rates at both the national level and within specific, targeted communities known to have low vaccination rates. Each outcome must have a baseline value established prior to approval of the program by the Board. While most of the development outcomes to be measured by the program are based on administrative data produced by the Ministry of Health, a key piece of the program is to improve vaccination rates in the poorest municipalities in Colombia (which concentrate afro Colombian and indigenous communities), where vaccination rates are lowest and outbreaks of

¹ This TC brief was prepared by the project team composed of Leslie Stone (RES), project team leader for the technical cooperation, and Amanda Glassman (RE3/SO3).

vaccine preventable disease most likely to occur.

To set a baseline value in a sample of these low vaccination rate communities, a special survey must be conducted. The cost of this survey has been budgeted at US\$150,000 and, given the nature of these municipalities in Colombia, it is best that a local firm with experience surveying in these difficult areas be contracted. Subsequent measurements of the rates in the sampled communities will be financed by the loan and would follow the methodology established during the baseline measurement. Establishing an accurate baseline of these low vaccination rate communities will provide information necessary to improve vaccination outreach efforts and raise vaccination rates.

The primary goal of this baseline survey is to collect accurate data on vaccination in a sample of communities that are considered to have low vaccination rates (less than 80%) based on administrative data. Administrative data alone are not sufficient to present a comprehensive picture of the vaccination situation. The results of this survey will be used as a benchmark to be used to project annual project outcome goals and to compare vaccination results in the subsequent three years of the project. A secondary goal of the baseline survey is to collect data that allows for analysis of why vaccination rates are so low in these particular communities. Understanding the reasons why a child is not vaccinated will improve the design and targeting of programs to promote better vaccination coverage.

This baseline survey will be conducted in approximately 50 municipalities, ranked and selected based on low vaccination rates, relatively high population densities (to assure cost-efficiency in the application of the survey and the program's efforts), high poverty rates and low health insurance coverage. A document containing the technical statistical requirements for sample size within each municipality is available in the technical files of the project.

The questionnaire will solicit information on the birth date of each child (under age 5) and the exact dates of each vaccination received. In addition, parents/guardians of children who are partially or completely missing the vaccination scheme will be asked why the child was not properly vaccinated. This questionnaire is a modified version of the module used by the Demographic and Health Survey used in Colombia in the year 2000. The questionnaire is attached as Annex I.

Consulting Services Required: A local Colombian survey firm will be contracted to conduct the survey. The nature of the project -- security issues, difficulty of access and transport and overall costs -- makes the task a good fit for a local firm with experience surveying in these difficult areas. An international firm would take longer to identify, contract, would have much higher overall costs, and may not have the necessary local knowledge to conduct the project within the conditions and tight timeframe. The proposed terms of reference for the consultancy are attached as Annex II.

Outputs required: The contracted survey firm will prepare a database containing questionnaire results and a summary report.

Duration: The survey firm will collect the data during the month of September 2004 and provide initial results to the IDB by October 1, 2004. A final report will be prepared by November 30, 2004.

IV. JUSTIFICATION:

Since the Support to the Extended Vaccinations Program (PAI) is a performance driven loan (PDL) that disburses against verified vaccination rates, having accurate baseline data on vaccination for a sample of municipalities is vital in order to project reasonable performance targets and establish a sound and independently established methodology for annual measurement of the performance targets under the loan. Administrative data alone are not sufficient to present a comprehensive picture of the vaccination situation. There are potential problems with both the denominators and numerators used to calculate rates using administrative data.

The denominators used to calculate vaccination rates at all levels (municipal, state, regional, national) are based on population projections from Colombia's last census conducted in 1993. In the past 11 years Colombia has experienced huge demographic, social, economic and geographic transformations. In addition the armed conflict has increased the pace of urbanization and displacement of the population, making projections at disaggregated levels very unstable. Until another census is conducted, statistical surveys are the only way to precisely measure the occurrence of an event within a specific population (e.g. vaccination rates of children under age 5).

There is also a possibility that the numerators used to calculate vaccination rates may be biased in both directions, making it unclear whether rates are over or underestimated. Based on instructions from the National Institute of Health, a child who has lost his/her vaccination card (that records the number and dates of each vaccination) is to be considered not vaccinated and must start the scheme over again. This could create a system of double-counting in the numerator. However, there is also the possibility of an under-reporting of vaccination in cases, for example, where a careless/overwhelmed nurse forgets to record administering a vaccine. Likewise, if an understaffed/irresponsible municipal health office does not send its vaccination data to the national office, vaccination may also be under-reported.

V. BUDGET:

TYPE OF EXPENSE	CANTAP-3	COUNTERPART (RE3 admin)	TOTAL
<i>Honoraria (consulting firm)</i>			
Administrative Supervisors: 2 persons at US\$200 for 25 working days	US\$10,000		US\$10,000
Interviewers to survey 50 municipalities: 40 persons at US\$90/day for 20 working days	US\$72,000		US\$72,000
Data Processing & Analysis: 5 persons at US\$120/day for 20 working days	US\$12,000		US\$12,000
SUBTOTAL	US\$94,000		US\$94,000

Materials/Administration			
Printing of training manuals and questionnaires	US\$5000		US\$5,000
Training workshops	US\$1000		US\$1,000
SUBTOTAL	US\$6000		US\$6,000
Travel Costs			
Local transportation and per diem for 40 interviewers plus 2 supervisors to 50 municipalities in 5 departments of Colombia		US\$40,000	US\$40,000
SUBTOTAL		US\$40,000	US\$40,000
Contingencies		US\$10,000	US\$10,000
GRAND TOTALS	US\$100,000	US\$50,000	US\$150,000

VI. RESPONSIBILITY IN THE BANK:

Technical Responsibility:

Team Leader: Amanda Glassman, RE3/SO3, tel. (202) 623-3666, fax (202) 623-3173, email: amandag@iadb.org

Leslie Stone, RES, tel. (202) 623-3866, fax (202) 623-2481, email: leslies@iadb.org;

Responsibility for Disbursements:

RE3/SO3, Amanda Glassman, tel. (202) 623-3666, fax (202) 623-3173, email: amandag@iadb.org

VII. RECOMMENDATION:

Amanda Glassman, designated team leader for the project of the reference, recommends the approval of this operation and the use of resources from the Canadian Technical Assistance Program totaling up to CAD 133,000 in order to finance the corresponding project.

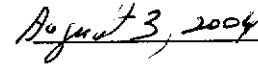
VIII. CERTIFICATION:

I certify that this operation was approved for financing by the donor of the Canadian Technical Assistance Program, Cantap-3, on August 3, 2004, in consultation with Mr. Jonathan Caldicott, Counselor for Canada and donor representative for Cantap-3. In addition, I certify that resources from Cantap-3 are available for up to CAD 133,000 in order to finance the activities described and budgeted in this document. The commitment of these resources shall be made only by the Bank in Canadian dollars. The same currency shall be used to stipulate the remuneration and payments to consultants, except that local consultants working in their own borrowing member country shall have

their remuneration defined and paid in the currency of that country. No resources of the Fund shall be made available to cover amounts greater than the amount certified herein above for the implementation of this technical cooperation. Amounts greater than the certified amount may arise from commitments on contracts denominated in a currency other than the Fund currency, resulting in currency exchange rate differences, for which the Fund is not at risk.



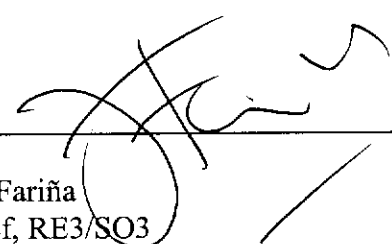
Arnaldo M. da Fonseca
Chief
Technical Cooperation Coordination Unit, RE2/TEC



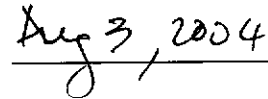
Date

IX. APPROVAL:

Approved:



Juan Manuel Fariña
Division Chief, RE3/SO3



Date

Terms of Reference

Survey on Vaccination Rates in a Sample of Colombian Municipalities

I. Background

This consultancy forms part of a larger project to improve vaccination rates at both the national level and within specific, targeted communities known to have low vaccination rates. The proposed consultancy will support a performance driven loan (PDL), which disburses against verified development outcomes, in this case, vaccination rates and other program outcomes. Each outcome must have a baseline value established prior to approval of the program by the Board. While most of the development outcomes to be measured by the program are based on administrative data produced by the Ministry of Health, a key piece of the program is to improve vaccination rates in the poorest municipalities in Colombia (which concentrate afro Colombian and indigenous communities), where vaccination rates are lowest and outbreaks of vaccine preventable disease most likely to occur.

To set a baseline value in a sample of these low vaccination rate communities, a special survey must be conducted. The results of this survey will be used as a benchmark to be used to project annual project outcome goals and to compare vaccination results in the subsequent three years of the project. Annual measurements of the rates in the sampled communities in subsequent years will be contracted separately. Establishing an accurate baseline of these low vaccination rate communities will provide information necessary to improve vaccination outreach efforts and raise vaccination rates. A secondary goal of the baseline survey is to collect data that allows for analysis of why vaccination rates are so low in these particular communities. Understanding the reasons why a child is not vaccinated will improve the design and targeting of programs to promote better vaccination coverage. Given the nature of these municipalities in Colombia, it is best that a local firm with experience surveying in these difficult areas be contracted.

II. Objective

The objective of this consultancy is to conduct a baseline survey on vaccination rates in children under age 5 in approximately 50 specified municipalities in 5 departments of Colombia. The survey firm contracted will be in charge of the administration, management, and overall logistical aspects of the survey including the following: reproduction of the questionnaire, development and distribution of interviewer's training manuals, interviewer training, household selection within each municipality, household interviews/data collection, data entry, data processing/cleaning/analysis, and production of a final report.

III. Outline of Work Program

The IDB will provide the survey firm with the following tools in order to conduct the vaccination survey.

A. Questionnaire

1. The vaccination questionnaire has been designed and is presented in Annex I

B. Sample-size Requirements

1. The sample-size requirements have been calculated and are presented in Annex II.

2. Data must be collected for a minimum of 250 children under age 5 per municipality, which means that the number of households interviewed per municipality will vary depending on the age-structure of the municipality.

C. List of Municipalities to be Included in Survey

1. The IDB will provide the survey firm with the list of 50 specific municipalities to be surveyed.

The survey firm contracted will administer and manage the following aspects of the survey.

A. Questionnaire

1. The survey firm will duplicate and distribute sufficient copies of the questionnaire for its interviewers. A maximum of 2 copies per household will be needed, since each form can record information for up to 2 children per household.

B. Training workshop and training manuals

1. The survey firm contracted will be responsible for becoming familiar with the questionnaire and training its interviewers specifically for the administration of the vaccination questionnaire.
2. The survey firm will prepare and provide its interviewers with a detailed manual with specific instructions to accurately conduct the vaccination interviews.

C. Household selection within each municipality & Data collection

1. The survey firm will determine how many households within each municipality it needs to interview in order to collect the required information for at least 250 children per municipality.
2. The survey firm will use maps of each municipality and a specified method to determine which neighborhoods within the municipality it will interview.
3. The survey firm will conduct interviews for a minimum of 250 children under age 5 in a minimum of 50 municipalities, resulting in vaccination information for approximately 12,500 children in Colombia.

D. Data entry & quality control

1. The survey firm will be in charge of completing all data entry.
2. The survey firm will perform appropriate data-quality reviews. All missing data issues should be reported and reconciled.

E. Data analysis & presentation of final report

1. The survey firm will be in charge of analyzing the data results to identify discrepancies in data entry and cleaning.
2. The survey firm will present a final summary report containing summary measures for each variable collected.

IV. Timeline for Survey and Results

Solicit proposals: July 28 – August 6, 2004

Select and contract survey firm: August 6 – August 10, 2004

Survey firm collects data: August 15– September 15, 2004

Survey firm prepares database with results: September 15 - September 30, 2004

Survey firm releases preliminary results: October 1, 2004

Survey firm releases full summary report: October 15, 2004

V. Responsibilities and Schedule

Leslie Stone (RES) and Amanda Glassman (RE3/SO3) are responsible for this project. A total of 3 months of work has been estimated to complete tasks A through E in the Work Program. The survey and results must be completed by October 15, 2004. Due to the tight deadline requirements, the survey firm who can provide the highest quality data, while meeting sample-size requirements, will be chosen to conduct the survey.

VI. Qualifications

The survey firm must have demonstrated experience in the application of household surveys in rural Colombia and a record of timely and quality completion of field work and data processing.

VII. Financial Aspects

The IADB will pay US\$**x**,000 in the following manner:

- (a) \$**x**,000 within 30 days of the signature of the contract between the consultant and the IADB Research Department
- (b) \$**x**,000 within 30 days of the acceptance of the complete draft by the IADB
- (c) \$**x**,000 within 30 days of the acceptance of the final version by the IADB.

Annex I

Questionnaire

Annex II

Sample Size Calculations

The following table presents the corresponding sample sizes of children under age 5 needed, based on different assumptions for the confidence interval (95% versus 90%), assumed proportion of children vaccinated (ranging from 50% - 80%), and a 5% margin of error.

	Confidence Interval	Proportion of children vaccinated	Proportion not vaccinated	Margin of Error	Sample Size	Rounded Sample Size
	$z (a/2)$	p	$(1-p)$	e	n	n -rounded
$a = .05$	1.96	0.8	0.2	0.05	245.86	246
$a = .10$	1.64	0.8	0.2	0.05	172.13	173
$a = .05$	1.96	0.7	0.3	0.05	322.69	323
$a = .10$	1.64	0.7	0.3	0.05	225.93	226
$a = .05$	1.96	0.6	0.4	0.05	368.79	369
$a = .10$	1.64	0.6	0.4	0.05	258.20	259
$a = .05$	1.96	0.5	0.5	0.05	384.16	385
$a = .10$	1.64	0.5	0.5	0.05	268.96	269

Interpretation of table:

The goal of this survey is to estimate the proportion of children under age 5 within a municipality who have been fully immunized, appropriate for their age. For a municipality that we believe has a vaccination coverage rate of 70%, using a 90% confidence interval with a margin of error of 0.05, our required sample size would be the following:

$$n_0 = \frac{(1.64)^2 (0.7)(0.3)}{(0.05)^2} = 226 \text{ children under age 5.}$$

In other words, the estimated sample size of children needed to be 90% confident that the estimate of the population percent frequency is within 5% (+/- 0.05) of the true percent frequency equals 226.

If the sample size is large relative to the population size (for example if the municipality has only 1000 children under age 5), we can make the finite population correction (fpc) adjustment and use a reduced sample size of:

$$n = \frac{n_0}{1 + \frac{n_0}{N}} = \frac{226}{1 + \frac{226}{1000}} = 179.37 \text{ rounds up to 180 children.}$$

For those municipalities with lower coverage rates, for example of 50%, then repeating the first calculation that uses a 90% confidence interval and a margin of error of 0.05, our sample size would be the following:

$$n_0 = \frac{(1.64)^2 (0.5)(0.5)}{(0.05)^2} = 269 \text{ children under age 5.}$$

SECCIÓN 5: INMUNIZACIÓN Y SALUD

501	ANOTE EL NÚMERO DE ORDEN, NOMBRE Y CONDICIÓN DE SUPERVIVENCIA DE CADA NACIDO VIVO DESDE ENERO DE 1999. HAGA LAS PREGUNTAS ACERCA DE CADA UNO DE ESTOS NACIMIENTOS, EMPEZANDO CON EL ÚLTIMO. (SI HAY MÁS DE DOS NACIMIENTOS UTILICE UN FORMULARIO ADICIONAL).		
502	VERIFIQUE NÚMERO DE ORDEN EN 212	ÚLTIMO NACIDO VIVO NÚMERO DE ORDEN <input type="text"/>	PENÚLTIMO NACIDO VIVO NÚMERO DE ORDEN <input type="text"/>
503	DE 212, ANOTE EL NOMBRE DE 216, SI ESTA VIVO O MUERTO	NOMBRE <input type="text"/> VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/> (VAYA A 503 EN PRÓXIMA COLUMNA; SI NO HAY MÁS NACIMIENTOS PASE A 548)	NOMBRE <input type="text"/> VIVO <input type="checkbox"/> MUERTO <input type="checkbox"/> (VAYA A 503 EN PRÓXIMA COLUMNA; SI NO HAY MÁS NACIMIENTOS PASE A 548)
504	Tiene usted el carnet (tarjeta) de vacunación de (NOMBRE)? Me permite verlo por favor?	SI, VISTO..... 1 (PASE A 506) ← SI, NO VISTO..... 2 (PASE A 508) ← SIN CARNET..... 3	SI, VISTO..... 1 (PASE A 506) ← SI, NO VISTO..... 2 (PASE A 508) ← SIN CARNET..... 3
505	Tuvo usted alguna vez un carnet de vacunación para (NOMBRE)?	SI..... 1 NO..... 2 (PASE A 508) ←	SI..... 1 NO..... 2 (PASE A 508) ←

- 506
- COPIE DEL CARNET LAS FECHAS DE VACUNACIÓN PARA CADA VACUNA
 - ESCRIBA "44" EN LA COLUMNA "DÍA" SI EL CARNET MUESTRA QUE LE PUSIERON LA VACUNA PERO NO HAY FECHAS. SI HAY FECHAS PARA "DPT" Y HAY EVIDENCIA DE QUE EL NIÑO RECIBIO "POLIO" (RECIBIO GOTITAS EN LA BOCA), UTILICE LAS MISMAS FECHAS QUE PARA "DPT".

	DÍA	MES	AÑO		DÍA	MES	AÑO
BCG	<input type="text"/>	<input type="text"/>	<input type="text"/>	BCG	<input type="text"/>	<input type="text"/>	<input type="text"/>
POLIO 0 (Recién nacido)	<input type="text"/>	<input type="text"/>	<input type="text"/>	P0	<input type="text"/>	<input type="text"/>	<input type="text"/>
POLIO 1	<input type="text"/>	<input type="text"/>	<input type="text"/>	P1	<input type="text"/>	<input type="text"/>	<input type="text"/>
POLIO 2	<input type="text"/>	<input type="text"/>	<input type="text"/>	P2	<input type="text"/>	<input type="text"/>	<input type="text"/>
POLIO 3	<input type="text"/>	<input type="text"/>	<input type="text"/>	P3	<input type="text"/>	<input type="text"/>	<input type="text"/>
PENTAVALENTE 1	<input type="text"/>	<input type="text"/>	<input type="text"/>	PV1	<input type="text"/>	<input type="text"/>	<input type="text"/>
PENTAVALENTE 2	<input type="text"/>	<input type="text"/>	<input type="text"/>	PV2	<input type="text"/>	<input type="text"/>	<input type="text"/>
PENTAVALENTE 3	<input type="text"/>	<input type="text"/>	<input type="text"/>	PV3	<input type="text"/>	<input type="text"/>	<input type="text"/>
ANTIHEPATITIS B0 (Recién nacido)	<input type="text"/>	<input type="text"/>	<input type="text"/>	B0	<input type="text"/>	<input type="text"/>	<input type="text"/>
ANTIHEPATITIS B1	<input type="text"/>	<input type="text"/>	<input type="text"/>	B1	<input type="text"/>	<input type="text"/>	<input type="text"/>
ANTIHEPATITIS B2	<input type="text"/>	<input type="text"/>	<input type="text"/>	B2	<input type="text"/>	<input type="text"/>	<input type="text"/>
ANTIHEPATITIS B3	<input type="text"/>	<input type="text"/>	<input type="text"/>	B3	<input type="text"/>	<input type="text"/>	<input type="text"/>
DPT 1	<input type="text"/>	<input type="text"/>	<input type="text"/>	D1	<input type="text"/>	<input type="text"/>	<input type="text"/>
DPT 2	<input type="text"/>	<input type="text"/>	<input type="text"/>	D2	<input type="text"/>	<input type="text"/>	<input type="text"/>
DPT 3	<input type="text"/>	<input type="text"/>	<input type="text"/>	D3	<input type="text"/>	<input type="text"/>	<input type="text"/>
SARAMPIÓN	<input type="text"/>	<input type="text"/>	<input type="text"/>	S	<input type="text"/>	<input type="text"/>	<input type="text"/>

	NÚMERO DE ORDEN DE LA PREGUNTA 212	ÚLTIMO NACIDO VIVO NÚMERO DE ORDEN <input type="text"/> <input type="text"/> NOMBRE <input type="text"/>	PENÚLTIMO NACIDO VIVO NÚMERO DE ORDEN <input type="text"/> <input type="text"/> NOMBRE <input type="text"/>
507	(NOMBRE) recibió vacunas que no estén registra- das en este carnet, incluyendo vacunas recibidas en días de campaña de vacunación? MARQUE "SI" SÓLO SI LA ENTREVISTADA MENCIONA BCG, POLIO 0-3, DPT 1-3, SARAMPION, TRIPLE VIRAL, ANTIHEPATITIS B (0-3), ANTIHEMOFILUS Y/O PENTAVALENTE.	SI..... 1 (INDAGUE POR VACUNAS Y ESCRIBA "66" EN LA COLUMNA CORRESPONDIENTE A DÍA EN 506) (PASE A 525) ← NO..... 2 NO SABE..... 8 (PASE A 525) ←	SI..... 1 (INDAGUE POR VACUNAS Y ESCRIBA "66" EN LA COLUMNA CORRESPONDIENTE A DÍA EN 506) (PASE A 525) ← NO..... 2 NO SABE..... 8 (PASE A 525) ←
508	Recibió (NOMBRE) alguna vacuna para protegerlo(a) contra las enfermedades, incluyendo vacunas recibidas en días de campaña de vacunación?	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 525) ←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 525) ←
509	Dígame por favor si (NOMBRE) recibió alguna de las siguientes vacunas: La vacuna BCG contra la tuberculosis, esto es, una inyección que se aplica en el brazo o en el hombro izquierdo, que deja una cicatriz?	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8
510	Recibió una vacuna contra el POLIO , esto es, gotas en la boca?	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 513) ←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 513) ←
511	Cuándo recibió (NOMBRE) la primera dosis de la vacuna contra el POLIO: cuando nació o más adelante?	CUANDO NACIÓ..... 1 MÁS ADELANTE..... 2	CUANDO NACIÓ..... 1 MÁS ADELANTE..... 2
512	Cuántas veces le dieron la vacuna contra el POLIO?	No. DE VECES..... <input type="text"/>	No. DE VECES..... <input type="text"/>
513	Recibió la vacuna PENTAVALENTE , que protege contra la difteria, tos ferina, tétanos, hepatitis B y hemófilos influenza y que es una inyección que se coloca en el muslo y cada vez le dan gotas de polio (2-4-6 meses)?	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 515) ←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 515) ←
514	Cuántas veces le dieron la vacuna PENTAVALENTE?	No. DE VECES..... <input type="text"/>	No. DE VECES..... <input type="text"/>
515	Recibió una vacuna contra la HEPATITIS B que es una inyección que se pone en las nalgas?	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 518) ←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 518) ←
516	Cuándo recibió (NOMBRE) la primera dosis de la vacuna contra la HEPATITIS B: cuando nació o más adelante?	CUANDO NACIÓ..... 1 MÁS ADELANTE..... 2	CUANDO NACIÓ..... 1 MÁS ADELANTE..... 2
517	Cuántas veces le dieron la vacuna contra la HEPATITIS B?	No. DE VECES..... <input type="text"/>	No. DE VECES..... <input type="text"/>
518	Recibió la vacuna DPT , que es una inyección contra la tosferina, tétanos y difteria que se pone en las nalgas cada vez que le dan las gotitas de polio?	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 520) ←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 520) ←

	NÚMERO DE ORDEN DE LA PREGUNTA 212	ÚLTIMO NACIDO VIVO NÚMERO DE ORDEN <input type="text"/> <input type="text"/> NOMBRE _____	PENÚLTIMO NACIDO VIVO NÚMERO DE ORDEN <input type="text"/> <input type="text"/> NOMBRE _____
521	(NOMBRE) recibió la vacuna TRIPLE VIRAL contra sarampión, rubéola y parotiditis, que es una inyección que se pone en el brazo izquierdo?	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8
522	Recibió la vacuna ANTIHEMOFILUS , que es para evitar el virus causante de neumonía y meningitis?	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 524) ←	SI..... 1 NO..... 2 NO SABE..... 8 (PASE A 524) ←
523	Cuántas veces?	No. DE VECES..... <input type="text"/>	No. DE VECES..... <input type="text"/>
524	Recibió la vacuna contra la FIEBRE AMARILLA , que es es una enfermedad viral del hígado transmitida por mosquitos?	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8
525	Algunas de las vacunas que ha recibido (NOMBRE) durante el último año fueron parte de alguna campaña de vacunación?	SI..... 1 NO..... 2 NO SABE..... 8	SI..... 1 NO..... 2 NO SABE..... 8