

## Joint Appraisal Update report 2018

<b>Country</b>	Nicaragua
<b>Full JA or JA update</b>	<input type="checkbox"/> full JA <input checked="" type="checkbox"/> <b>JA update</b>
<b>Date and location of Joint Appraisal meeting</b>	22 to 25 October 2018
<b>Participants / affiliation<sup>1</sup></b>	Ministry of Health (MINSAs), PAHO-WHO, Gavi, UNICEF
<b>Reporting period</b>	January to December 2017
<b>Fiscal period<sup>2</sup></b>	2017
<b>Comprehensive Multi Year Plan (cMYP) duration</b>	2016 to 2020
<b>Gavi transition / co-financing group</b>	Graduation in progress

### 1. RENEWAL AND EXTENSION REQUESTS

Renewal requests were submitted on the country portal

<b>Vaccine (NVS) renewal requests (by 15 May)</b>	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	N/A <input type="checkbox"/>
<b>HSS renewal request</b>	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>
<b>CCEOP renewal request</b>	Yes <input type="checkbox"/>	No <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>

### Observations on vaccine request

<b>Population</b>					
<b>Birth cohort</b>					
Vaccine	<b>Rotavirus</b>	<b>PCV13</b>	<b>IPV</b>	...	...
<b>Population in the target age cohort</b>	133,801	133,801	133,801		
<b>Target population to be vaccinated (first dose)</b>	133,801	133,801	133,801		
<b>Target population to be vaccinated (last dose)</b>	133,801	133,801	133,801		
<b>Implied coverage rate</b>	100%	100%	100%		
<b>Last available WUENIC coverage rate</b>	98%	98%	99%		
<b>Last available admin coverage rate</b>	106%	109%	108%		
<b>Wastage rate</b>	5%	5%	20%		
<b>Buffer</b>	126,719	202,472	52,512		
<b>Stock reported*</b>	126,719	202,472	52,512		

\*The breakdown of vaccine stocks by level was included in the Request for renewal of vaccine support submitted in April this year.

Although the population scheduled is as shown, the number of vaccinated people differs as set forth in Annex 1.

### Indicative interest to introduce new vaccines or request Health System Strengthening support from Gavi in the future<sup>3</sup>

<b>Indicative interest to introduce new vaccines or request HSS support from Gavi</b>	<b>Programme</b>	<b>Expected application year</b>	<b>Expected introduction year</b>
		Not applicable	

<sup>1</sup> If taking too much space, the list of participants may also be provided as an annex.

<sup>2</sup> If the country reporting period deviates from the fiscal period, please provide a short explanation.

<sup>3</sup> Providing this information does not constitute any obligation for either the country or Gavi, it merely serves for information purposes.

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## 2. RECENT CHANGES IN COUNTRY CONTEXT AND POTENTIAL RISKS FOR NEXT YEAR

The Plan of Action for the assessed year was developed in 2017 in the course of implementing the 2016-2020 five-year plan. The projected activities were monitored on a monthly basis, achieving 95% implementation.

Immunisation activities were implemented systematically using different Expanded Programme on Immunisation (EPI) and vaccine-preventable disease (VPD) surveillance strategies while managing to maintain optimum-range coverage and VPD surveillance strengthening.

The risk of measles reintroduction and other cases of VPDs brought under control persisted in the region throughout 2017 and 2018; however, high immunisation coverage at all levels and surveillance activities resulted in our maintaining our achievements in the elimination of measles to date.

The social problems that arose in the country in the second and third quarters of 2018 jeopardised the maintenance of high immunisation coverage and surveillance activities. The risk was counteracted by continuous monitoring at national level to support the realignment of immunisation strategies and tactics as well as vaccine delivery to all Local Comprehensive Care Systems – the SILAIS – through different means of transport: by air, water and using ambulances, making it possible to guarantee the regular supply of all the vaccines to the local level and maintain EPI indicators.

In terms of Gavi grant implementation, the social crisis and the change in the state’s Administrative and Financial Management Information System (SIGAF) affected implementation of performance-based funding and other grants.

## 3. PERFORMANCE OF THE IMMUNISATION PROGRAMME

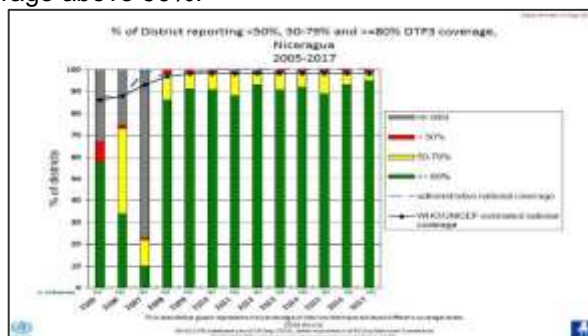
### Immunisation coverage with DPT3 as tracking indicator and MMR

For four years at the national level, from 2014 up to September 2018, coverage rates for all vaccines in children under two years of age was maintained at 100%. The percentage of municipalities with coverage above 90% using DPT3 as tracking indicator increased, however, from 80% (122 municipalities) in 2015, to 87% (133 municipalities) in 2016 and 89% (136 municipalities) in 2017.

As of September 2018, DPT3 coverage at national level extends to 84% against the projected target of 75%, with 91% (139) of all municipalities (153) having coverage above 90%.

Años	Municipios según rango de cobertura con DPT3					
	Rango <50%	Porcentaje	Rango 50 a 89%	Porcentaje	Rango ≥90%	Porcentaje
2014	1	0.7%	28	18.3%	124	81.0%
2015	1	0.7%	31	20.3%	122	79.0%
2016	1	0.7%	19	12.3%	133	87.0%
2017	1	0.7%	16	10.3%	136	89.0%

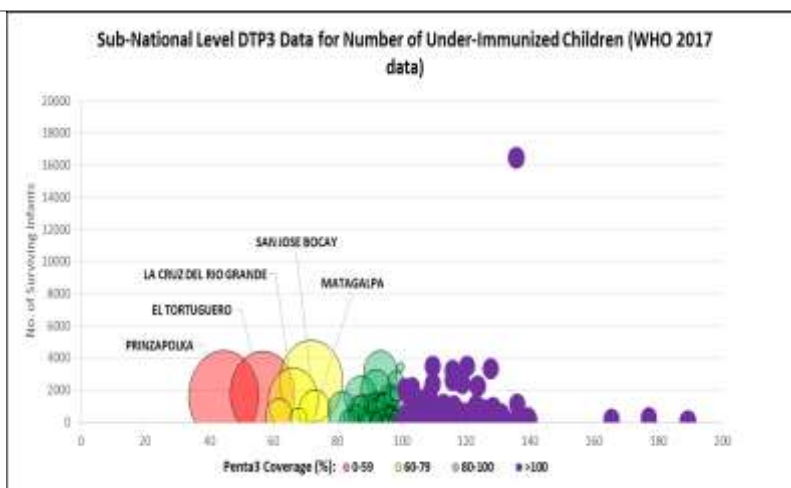
*Note: El país cuenta con un total de 153 municipios.*



Years	Municipalities by DPT3 coverage range			
	Range < 50%	Percentage	Range 50-89%	Percentage
			Range ≥ 90%	Percentage

*Note: The country has a total of 153 municipalities.*

High immunisation coverage at national and sub-national levels and the high percentage of municipalities with coverage of 90% and above for all vaccines reflect the equity of the Nicaraguan immunisation programme. However, the population denominator and the non-existence of a nominal record system persist as the main challenges to the EPI. Difficulties with the denominator are evident from the elevated percentage of municipalities with coverage above 100% and, conversely, from the existence of municipalities with low immunisation coverage rates (those of Nueva Segovia, Madriz and Chontales), where rapid coverage monitoring (RCM) shows that 95% or more of the children are immunised.



We acknowledge the existence of municipalities with chronically low coverage (Prinzapolka, Tortuguero, La Cruz de Río Grande and San José de Bocay) due to various geographic, cultural and economic barriers to access (social determinants), where the operating costs incurred in mobilising resources to immunise children are high. In these municipalities, the number of health personnel is lower than in other areas of the country.

In terms of the risk of measles reintroduction, there were no imported cases due to high measles (MMR1) immunisation coverage, which was 114% at the national level in 2016 and 106% in 2017. The percentage of municipalities with coverage above 90% was 88% (134 municipalities) in 2016 and 96% (147 municipalities) in 2017. Other relevant aspects were the implementation of the sixth measles monitoring campaign in 2016, when children aged 1 to 4 years were given the protection of an additional MR dose and 568,422 doses were administered, representing a coverage of 105% at national level.

Moreover, in January 2017, MMR2 was introduced into the schedule for children aged 18 months, achieving 89% coverage nationwide. The introduction was marked, however, by problems of doses being recorded in the MMR1 box instead of the MMR2, high staff rotation and lack of local level personnel training in immunisation standards. By September 2018, a national level coverage of 74% was obtained against the projected target of 75%. Work on strengthening measles surveillance has continued.

**Dropout data**

The dropout rate between Pentavalent 1 and 3 at national level was maintained below 2% between 2014 and 2017. However, there were municipalities where the positive dropout rate (fewer third doses than first doses) or the negative dropout rate (more first doses than third doses) was higher than the standard, set at 10%.

**Fulfilment of Effective Vaccine Management Assessment recommendations**

Temperature mapping in the eight cold rooms at national level was implemented as was the purchase of thermometers for continuous temperature recording. Moreover, an electric generator was purchased for the national warehouse.

**Improvement of the vaccine inventory system**

The web-based Vaccine Supplies and Stock Management (wVSSM) system was implemented at national and sub-national levels and in 49 municipalities in the country. Extension to the remaining municipalities will continue with the procurement of computers.

**Data quality**

A national workshop was conducted with regional and local PAHO support and the participation of the personnel in charge of the EPI and statistics from the 19 SILAIS. Replication in terms of theory and fieldwork took place in all municipalities and monitoring visits were subsequently conducted by national level and local PAHO staff. An international evaluation programmed for November 2018 had to be rescheduled to 2019 due to the social situation in the country.

**Other relevant EPI achievements are as follows:**

- Elimination of congenital rubella syndrome and measles was maintained.

- The polio eradication plan objectives were fulfilled, underscoring submission of the updated country eradication status report and the report on the containment of potentially infectious Sabin poliovirus samples in 2018.
- The national committees for measles elimination and polio eradication have worked actively and in coordination with staff and institutional commitment. Moreover, the national committee on immunisation practices was restructured in 2018.

### 3.4. Immunisation financing

#### **Funding of immunisation activities**

Funding for the EPI's immunisation activities is based on the multi-year plan for 2016-2020, which is also the basis for formulating annual action plans.

The Government of Nicaragua prioritises and guarantees funding for vaccines in the basic schedule to provide free, universal access to immunisation. For the funding of new vaccines purchased through Gavi, in keeping with the co-financing agreement the budget was increased by 7% from 2016 to 2017, as reflected in the WHO-UNICEF joint reporting forms for those years. For the period of 2015 to 2020, Gavi is donating the IPV vaccine, with the national budget covering the salary of immunisation programme workers at management and operational levels.

There is a yearly national budget for the vaccine and supply purchases programmed on PAHO Form 173, while the PCV13 purchase is programmed on the UNICEF Forecast form.

In 2017 and during the first six months of 2018, some immunisation activities enjoyed funding support from other sources, such as PAHO regional and local funds for immunisation brigades in remote areas, RCM implementation, training, supervision, surveillance, the information system and evaluation. There was also local funding for immunisation activities from other projects, such as "Health Care Quality Improvement" funded by the World Bank and the "Mesoamerica Health Initiative" funded by the Inter-American Development Bank (IDB).

In 2017, equipment to strengthen the cold chain purchased with HSS 2016 funds, Gavi performance-based funding for 2017 and IDB funds through the PAHO Revolving Fund was distributed. Local PAHO funding was also used to build two vaccine warehouses, in Zelaya Central SILAIS and the South Caribbean Coastal Region (RACCS) SILAIS.

Gavi also provides grants to strengthen local immunisation activities through PAHO/WHO and UNICEF, which contributed through different activities to maintaining and improving immunisation coverage.

The UNICEF-Gavi grant improved coverage at the community level through the preparation of materials and training, promoting the participation of the communities themselves and local staff in immunisation activities and coverage expansion. Examples are the flip charts, the community immunisation booklets and the involvement of community leaders in promoting immunisation.

Commitment to and full compliance in implementing the funds allocated to immunisation from any source at local level made it possible to maintain the flow of financial support from outside sources.

#### **Vaccine budget monitoring**

The MINSA financial area utilises a monitoring system for budget allocation, implementation and accountability. The EPI performs the physical inventory of vaccines at the national warehouse on a monthly basis, including costing, which is sent to the Administrative and Financial Directorate. For each SILAIS, the financial area and the EPI receive the vaccines sent as costed.

## 4. PERFORMANCE OF GAVI SUPPORT

### 4.1. Performance of vaccine support

Through Gavi, Nicaragua has been receiving new vaccine support through the co-financing mechanism: for the rotavirus vaccine since January 2009 and PCV13 since December 2010 and the donation of IPV vaccine since November 2015.

The country has periodically met its co-financing payments in accordance with the amounts set in the decision letters sent yearly to the highest authority of the MINSA.

The country complies annually with the report submission requirement to renew new vaccine purchases. The calculation of doses for the three vaccines is based on official population estimates, specifically Nicaragua's 2005 census projections. The population shown is lower than the doses of the three vaccines administered, a fact corroborated by coverage exceeding 100%, as per the following table.

Ministerio de Salud de Nicaragua					
Programa Nacional de Inmunizaciones					
Cobertura de las Vacunas Gavi- Minsa 2017					
Vacunas	Población < 1 año	Dosis			% Cobertura
		1ra	2da	3ra	
IPV	133,801	144,802			108
Rota	133,801	146,190	141,910		106
Neumococo 13	133,801	146,280	142,441	143,887	108

Nicaragua Ministry of Health Expanded Programme on Immunisation Gavi-MINSA Vaccine Coverage 2017					
Vaccines	Population < 1	Doses			% Coverage
		1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	
IPV					
Rotavirus					
Pneumococcus 13					

The table above clearly reflects the difference between the population and the doses administered, which has caused vaccine supply problems year after year, resolved through coordination between the EPI, Gavi and local and regional PAHO.

### New Vaccine Grant

#### Inactivated Poliovirus (IPV) vaccine grant

In line with the objectives of the Polio Eradication and Endgame Strategic Plan, the country introduced one dose of IPV vaccine donated by Gavi into the national schedule for children 2 months of age in November 2015, with the commitment to extend donations up to 2020.

Given the global shortfall of IPV, and following the recommendations of WHO-PAHO, Nicaragua has prepared for the introduction of fractioned doses of this vaccine (fIPV). It developed a manual of technical guidelines for health personnel and opinion leaders and prepared theoretical and practical courses for all levels. Similarly, in 2018, lack of continuity in the supply of this vaccine, the change in presentation from monodose to 5-dose vials – which increased vaccine wastage – and the differences between the doses requested and the doses administered jeopardised supply. These issues were resolved through coordination between the country, Gavi and PAHO.

#### Rotavirus vaccine co-financing

In 2018, this vaccine was not supplied in accordance with PAHO 173 programming, resulting in lower figures in the standard three-month reserve stock balance at national level. This situation was also resolved through joint coordination between the Government, Gavi and PAHO.

**4.2. Performance of Gavi HSS support (if country is receiving Gavi HSS support)**

Not applicable

**4.3. Performance of Gavi CCEOP support (if country is receiving Gavi CCEOP support)**

Not applicable

**4.4. Financial management performance**

The country has met financial information and audit requirements with no additional recommendations. Details of the financial information are presented in the following table.

**GAVI PBF  
Cash Flow  
(US dollars)**

	2013	2014	2015	2016	2017	*2018	TOTAL
Original annual budgets (as per the originally approved HSS proposal)	179,780.00						
Revised annual budgets (if revised by previous Annual Progress Reviews)							-
Total funds received from Gavi during the calendar year (A)		179,780.00		240,000.00	120,000.00	239,980.00	779,760.00
Remaining funds (carry over) from the previous year (B)			82,580.28	24,724.58	240,000.00	120,424.73	467,729.59
Total funds available during the calendar year (C=A+B)		179,780.00	82,580.28	264,724.58	360,000.00	360,404.73	1,247,489.59
Total expenditure during the calendar year (D)		97,199.72	57,855.70	24,724.58	239,575.27	27,940.74	447,296.01
Balance carried forward to next calendar year (E=C-D)		82,580.28	24,724.58	240,000.00	120,424.73	332,463.99	800,193.58
Amount of funding requested for future calendar year(s)							

\* Implementation cut off on 11/10/2018

Payments pending, funds in amount of US\$ 120,000.00	Amount in C\$
Purchase of air conditioners	1,285,245.22
Purchase of emergency power generator	1,226,913.74
Purchase of office material and equipment	122,885.85
<b>Total</b>	<b>2,635,044.81</b>

Payments pending, funds in amount of US\$ 120,000.00	Amount in C\$

Purchase of cold chain equipment through Revolving Fund	7,556,832.06
Audit	112,237.65
<b>Total</b>	<b>7,653,035.76</b>

Implementation of the Transition Plan funds administered by PAHO is based on the multi-year plan for 2016-2017. The details are given in paragraph 4.5

#### 4.5. Transition planning (if applicable, eg country is in accelerated transition phase)

The country utilises the Transition Plan for 2016-2020 with activities programmed for yearly implementation. The amount allocated for this plan is US\$ 750,000. Nicaragua received the first transition grant in May 2017 in the amount of US\$ 413,000.

PAHO receives the money from these funds, which are implemented by the SILAIS and the municipalities through PAHO mechanisms, such as letters of agreement and the mechanisms for centralised purchases, procurement or events.

A total of 99.32% of the allocated funds (US\$ 410,172.15) was implemented in 2017 and during the first quarter of 2018. The activities conducted were as follows:

- National workshop on preventive and corrective cold chain equipment handling, the purchase of 61 computers for web-based VSSM (vaccine inventory management) at national and SILAIS levels and in 42 municipalities.
- Indicator analysis workshop replication in the 19 SILAIS and 153 municipalities.
- In terms of social mobilisation, 3,500 “ABC” booklets for community workers and 2,680 flip charts for healthcare unit personnel were reproduced for their information, education and communication activities in relation to local level healthcare unit users.
- Support for 153 municipalities and 19 SILAIS to conduct at least two annual supervisions at the pertinent levels; the active search for VPDs (with emphasis on measles and rubella), data quality monitoring activities, and immunisation programme indicator evaluation (immunisation coverage and VPD surveillance).
- The conduct of operational research in 11 prioritised SILAIS (Managua, Nueva Segovia, Jinotega, Chontales, Boaco, Zelaya Central, RAACS, Bilwi, Minas, Matagalpa and Madriz).
- The purchase of licences for 61 computers to handle wVSSM.
- The purchase of more computers for wVSSM in additional municipalities.
- The reproduction of social communication materials for local use.

The remaining Transition Plan funds in the amount of US\$ 337,000 have not been disbursed. Some of the activities programmed in the EPI action plan for 2018 were funded with regional and local PAHO funds.

The Transition Plan activities for 2019-2020 will be reprogrammed based on the amount pending disbursement.

#### 4.6. Technical Assistance (TA)

The amount received for the 2017 Nicaragua PEF-TCA was US\$ 224,300.00, broken down as follows:

##### Funds managed by PAHO

The amount received through this subsidy was US\$ 97,350 in 2017 and US\$ 34,950 in the first quarter of 2018, for a total of US\$132,300, 100% of which was implemented.

An amount of US\$ 165,200 was received during the second quarter of 2018, corresponding to PEF-TCA funds for 2018, of which US\$ 62,639.08, accounting for 38%, has been implemented up to the present date. Details of the activities programmed and conducted are as follows:

- EPI management modules as an online course: advances were made in the macro-planning of the course based on the core EPI components. The social situation in the country did not allow for the definition of the academic credits and for online adaptation, to be finalised in December 2018.
- VPD response upgrading workshop scheduled for November this year, approved by the authorities and under implementation.
- The purchase of 119 computers with PEF-TCA and transition funds strengthened the use and handling of wVSSM in the 19 SILAIS and 70 municipalities. The connection of an additional 30 municipalities is projected up to the first quarter of 2019.
- Sentinel surveillance supervision and monitoring of the new vaccines was achieved and the country submitted the data from this surveillance to the global network on new vaccine surveillance, which Nicaragua forms part of.
- The printing of EPI Standards and Procedures is pending their approval by the National Regulation Authority. Their reproduction is scheduled for the first quarter of 2019.

It should be emphasised that some of the activities projected were implemented with local or regional PAHO funds, and that delays were due to the social situation in Nicaragua.

**Funds managed by UNICEF**

In 2017, funds in the amount of US\$ 92,000.00 were received, with full implementation concluded in the first quarter of 2018. The same amount was received in 2018, 77% of which (US\$ 70,937.55) was implemented by October. Below are the details of the activities programmed and conducted:

- A training programme was designed for community nurses with an emphasis on immunisation. There is an institutional programme of continuing education on “Health Promotion and Disease Prevention in Early Childhood in the framework of *Programa Amor* for infants, addressing family and community healthcare assistants”.
- The “Educational Manual on the Family and Community Healthcare Model for Healthcare Assistants” was prepared and the reproduction of 5,000 manuals for community nurses is in progress.
- One national workshop for facilitators addressing SILAIS nursing heads and a total of eight regional SILAIS workshops in the North Caribbean Coast Autonomous Region, Las Minas, Nueva Segovia, Madriz and Jinotega were conducted.
- A total of 250 community nurses belonging to 250 Family and Community Health Teams (ESAF) were trained in the Educational Manual. The training process is expected to complete in the last quarter of 2018 and in the first two months of 2019.
- A knowledge, attitudes and practices (KAP) study on community perceptions with regards to vaccines was prepared in the municipalities of Jinotega (Pantasma, Yalí and Alto Wanki), RACCS (La Cruz de Río Grande and Tortuguero), the North Caribbean Coast Autonomous Region (Los Corozos sector in Prinzapolka and Waspam) and Las Minas (Rosita and Mulukukú).
- By October, a total of 194 health personnel had been trained in the Community Information System (SICO) Manual, 446 community leaders had been trained in SICO reporting mechanisms, and SICO materials had been reproduced.
- The ABC vaccine booklet and flip chart were culturally adapted, their reproduction is in progress and 504 community leaders have been trained.

**5. UPDATE OF FINDINGS FROM PREVIOUS JOINT APPRAISAL**

Prioritised actions from previous Joint Appraisal	Current status
1. Coverage data in excess of 100% and high positive and negative dropout rates suggest data quality inconsistencies.	Following the national data quality workshop, monitoring visits were conducted; however, there is a need to strengthen skills in this area among the teams at the different levels in preparation for an international evaluation to be conducted in the last quarter of 2019.
2. Despite multiple efforts, remote municipalities with low coverage rates still exist (22 municipalities with coverage below 90%).	Despite the reduction in the number of municipalities with coverage below 90% (from 22 municipalities in 2016 to 17 in 2017, including towns with overestimated denominators), there are also municipalities with chronically low coverage due to access difficulties and the high operational costs of immunisation activities, which require permanent financial support.



<p>3. Knowledge gaps persist among community leaders and ESAFC personnel in terms of promoting the importance of immunisation.</p>	<p>A KAP study conducted reflected gaps in knowledge about immunisation among communities, requiring continued training and communication through key message adapted and tailored to target populations. Similarly, the review of knowledge about vaccines among community nurses showed the need to monitor and train them in order to enhance skills and capabilities in immunisation. SICO implementation is in progress, including the immunisation component.</p>
<p>4. Drafting a sustainability plan for activities.</p>	<p>The core components of the EPI, good practices and the fulfilment of plans at national and sub-national levels were evaluated in 2017. This could not be done in 2018 due to social problems.</p>
<p>5. The high rotation of staff responsible for immunisation at municipal level implies the need for permanent continuing education.</p>	<p>Progress has been made in designing online courses. This process and the training will continue in 2019-2020.</p>
<p>6. The country has put great effort into complying with the EVM improvement plan. However, gaps persist in terms of cold chain equipment procurement, and the strengthening of wVSSM must continue in the municipalities.</p>	<p>The last items of equipment purchased with HSS project funds and HSS performance-based funding were delivered in 2017. Equipment was also purchased with IDB funds. Local PAHO funding was furthermore used to build two vaccine warehouses in the Central Zelaya and RACCS SILAIS. Construction of the regional vaccine banks remains pending. More cold chain equipment is being purchased through the PAHO Revolving Fund with performance-based funding received in 2018. The purchase of computers facilitated the implementation of wVSSM in the 19 SILAIS and 70 municipalities.</p>
<p>7. The existence of measles cases in other parts of the world implies that there is always a risk of virus reintroduction into Nicaragua.</p>	<p>Surveillance activities have been strengthened and immunisation coverage remains high. The upgrading workshop in rapid outbreak response is projected for 2019.</p>
<p>8. The disease burden in pneumonia and diarrhoea has decreased due to the introduction of the new vaccines.</p>	<p>Surveillance of the new vaccines continues to be strengthened in the sentinel hospitals. Support for this surveillance is expected to continue.</p>
<p><b>Additional significant IRC / HLRP recommendations (if applicable)</b></p>	<p><b>Current status</b></p>

**6. ACTION PLAN: SUMMARY OF FINDINGS, ACTIONS AND RESOURCE/SUPPORT NEEDS IDENTIFIED AND AGREED DURING THE JOINT APPRAISAL**

<p><b>Overview of key activities planned for the next year</b></p> <ol style="list-style-type: none"> <li>1. Continue developing the online course in EPI management modules.</li> <li>2. Continue strengthening new vaccine surveillance in sentinel hospitals.</li> <li>3. Continue supporting rapid immunisation coverage at the local levels.</li> <li>4. Strengthen data quality through upgrading workshops and international data quality assessment.</li> <li>5. Effective vaccine management assessment.</li> <li>6. National workshop to upgrade rapid response to measles outbreaks and its replication in all SILAIS.</li> <li>7. Continue strengthening the skills of community nurses spearheading immunisation in the more remote areas of the country.</li> <li>8. Prepare messages for communication aimed at changing the behaviour of the population regarding the importance of immunisation.</li> </ol>
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<p><b>Key finding/Action 1</b></p>	<p>The purchase of cold chain equipment has been strengthened with the support of Gavi funds from both the HSS grant and performance-based funding as well as</p>
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	IDP and World Bank funds; however, the funding gap persists for the construction of the regional vaccine warehouses.
Current response	PAHO is supporting the construction of two out of six regional vaccine warehouses.
Agreed country actions	Request Gavi support to build the regional vaccine warehouse in Managua.
Expected outputs/results	<ul style="list-style-type: none"> <li>– Fulfilment of Effective Vaccine Management Assessment 2015 recommendations.</li> <li>– Improvement in Managua SILAIS storage and distribution.</li> <li>– Availability of an alternative vaccine bank for emergency cases, considering the high risk of earthquakes in Nicaragua, particularly Managua.</li> </ul>
Associated timeline	Third and fourth quarters of 2019 and the first and second quarters of 2020.
Required resources/support	Gavi funds. Transition grant 2019.
<b>Key finding/Action 2</b>	Gavi support in 2017 made it possible to close funding gaps in the transition process, particularly in terms of training, supervision, evaluation and data quality activities. The transition grant funds were not received in 2018 despite an implementation of over 95%.
Current response	Activities programmed for 2018 were partially completed with funds from other donors.
Agreed country actions	The updated transition plan for 2019-2020 will be submitted together with the JA.
Expected outputs/results	Complete disbursement of the funds in accordance with the plan of activities programmed.
Associated timeline	Starting from the first quarter of 2019.
Required resources/support	Updated Transition Plan for 2019-2020 funded by Gavi.
<b>Key finding/Action 3</b>	The denominator for children under 1 year of age and 1-year-old children continues to pose a challenge to Nicaragua's EPI as shown by the high percentage of municipalities with coverage above 100%.
Current response	Coverage has been checked through monitoring in some municipalities.
Agreed country actions	Continue.
Expected outputs/results	Support for immunisation coverage data through the conduct of RCM.
Associated timeline	At least two RCMs a year in the municipalities prioritised for low coverage and coverage above 100%.
Required resources/support	Local and regional PAHO funds.
<b>Key finding/Action 4</b>	Current risk of vaccine-preventable recurrent diseases makes it mandatory to keep rapid response teams upgraded and active in case of outbreaks for effective and immediate reach.
Current response	The compliance of measles and acute flaccid paralysis surveillance indicators has been monitored.
Agreed country actions	Conduct the upgrading workshop in rapid measles outbreak response for surveillance and EPI personnel.
Expected outputs/results	Availability of active personnel at all levels to provide rapid response against imported measles cases.
Associated timeline	Third quarter of 2019.
Required resources/support	Gavi PEF-TCA grant and technical support from the PAHO regional office.
<b>Key finding/Action 5</b>	Continued training in the online management modules for personnel responsible for immunisation in the municipalities will contribute to maintaining programme achievements.

Current response	The online modules for training SILAIS EPI managers in the immunisation programme core components will be made available.
Agreed country actions	Training 40% of those in charge of EPI components in the municipalities through availability of the online modules.
Expected outputs/results	Municipal EPI managers will be trained in immunisation strategies to improve equity in immunisation services and in the core components of the immunisation programme.
Associated timeline	Third and fourth quarters of 2019 and the first quarter of 2020.
Required resources/support	Gavi PEF-TCA grant, PAHO, local PAHO technical support.
<b>Key finding/Action 6</b>	To continue strengthening the skills of the community nurses spearheading immunisation in the more remote areas of the country.
Current response	With UNICEF support, MINSA has prepared a programme to educate community nursing personnel and the manual for community nurses.
Agreed country actions	Providing technical support to nursing management and the EPI in training processes; conducting a national workshop with the participation of the immunisation team (EPI), nursing management and the integrated child healthcare team of prioritised SILAIS; and conducting 36 local workshops for nursing personnel along with 36 workshops for community leaders in prioritised municipalities regarding community activities and strategies for immunisation and reducing missed opportunities.
Expected outputs/results	A total of 90% of community assistants from 36 prioritised municipalities trained in the Educational Manual on Health Promotion and Disease Prevention in Early Childhood, with emphasis on immunisation; and training for 50% of the community leaders in key immunisation aspects.
Associated timeline	Second, third and fourth quarters of 2019 and first quarter of 2020.
Required resources/support	Gavi PEF-TCA grant, UNICEF, local UNICEF technical support.
<b>Key finding/Action 7</b>	Preparing communication messages aimed at changing the behaviour of the population regarding the importance of immunisation.
Current response	Preparation of key messages to promote behavioural change with regards to immunisation based on the results of KAP studies on the reasons for low immunisation coverage.
Agreed country actions	Preparing a manual of key messages on immunisation: a national workshop with EPI heads, nurses and integrated healthcare to design and validate key messages, six local workshops, and technical support and monitoring visits to the local level.
Expected outputs/results	A total of 80% of health personnel and community leaders from the 36 prioritised municipalities using key messages to change behaviour.
Associated timeline	Third quarter of 2019 and first quarter of 2020.
Required resources / support	Gavi PEF-TCA grant, UNICEF, local UNICEF technical support.

## 7. JOINT APPRAISAL PROCESS, ENDORSEMENT BY THE NATIONAL COORDINATION FORUM (ICC, HSCC OR EQUIVALENT) AND ADDITIONAL COMMENTS

<p>The Nicaragua Joint Appraisal update took place in Managua from 22 to 26 October 2018. The participants were the MINSA (EPI and the Administrative and Financial Directorate), PAHO, UNICEF, regional PAHO, and Gavi (virtual attendance):</p> <ul style="list-style-type: none"> <li>• Jazmina Umaña, MINSA, General Directorate of Health Surveillance. Immunisation Programme Coordinator.</li> <li>• Johana Talavera, MINSA, External Funds Unit Coordinator.</li> <li>• Nancy Vasconez. PAHO Nicaragua, Immunisation Consultant.</li> <li>• Alexander Florencio, PAHO Nicaragua, Health Services.</li> <li>• María Delia Espinoza, UNICEF Nicaragua, Health Officer.</li> <li>• Soledad Urrutia, PAHO Washington DC, Health System Strengthening.</li> <li>• Ricard Lacort Gavi, Project Manager for Nicaragua.</li> </ul> <p>At the end of the Joint Appraisal, the team shared its conclusions with MINSA management and members of the ICC for discussion and approval.</p>
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**Signatures of the National Authority of the Ministry of Health and of the Alliance Partners approving the Joint Appraisal document**

Name of Minister or Representative	Date	Signature and Seal
<p><b>Dr Sonia Castro González Minister of Health Nicaragua</b></p>		
<p><b>Dr Socorro Gross PAHO/WHO Nicaragua Representative</b></p>		
<p><b>Mr Iván Yerovi UNICEF Nicaragua Representative</b></p>		