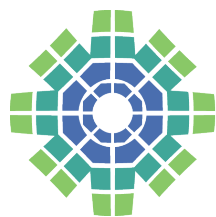


A report on
current global
access to new
childhood
vaccines



VIEW-hub

VIEW-hub Report: Global Vaccine Introduction and Implementation

May 2016

Developed from data in VIEW-hub

www.VIEW-hub.org

Johns Hopkins Bloomberg School of Public Health

International Vaccine Access Center (IVAC)

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New updates to the report:

- The VIMS report is now the VIEW-hub report, with all maps generated by VIEW-hub (www.VIEW-hub.org), IVAC's newly launched data visualization platform.
- New content that has been added to the quarterly reports include vaccine product and dosing schedule, as well as mapping of PCV and rotavirus vaccine impact evaluations, which will be featured twice a year.

New vaccine introduction updates (since December 2015) include:

- Kyrgyzstan and Mauritius introduced pneumococcal conjugate vaccine (PCV).
- India introduced rotavirus vaccine.
- Azerbaijan, Bolivia, Chile, Congo, Cuba, El Salvador, Guatemala, Haiti, Iraq, Mali, Paraguay, Saint Kitts and Nevis, Timor-Leste, and Venezuela introduced inactivated polio vaccine (IPV).

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Acknowledgement and Notes

Appendix

- The appendix includes a description of VIEW-hub, support and funding for VIEW-hub, and how to cite VIEW-hub as a source.

This report and the PowerPoint slides with the report graphics can be found at: <http://www.jhsph.edu/research/centers-and-institutes/ivac/view-hub>. For all other VIEW-hub-related inquiries, please email Linh Nguyen at linh.nguyen@jhu.edu.

VACCINE INTRODUCTION DASHBOARD

The following section provides contextual historic information about Hib vaccine, PCV, rotavirus vaccine, and IPV introduction in low-, middle-, and high-income countries, as well as Gavi-supported countries. It also provides a summary snapshot of the cumulative number of countries that have introduced each vaccine to date (globally and for Gavi countries only).

Year of First Vaccine Introduction

Income Level	Hib Vaccine	PCV	Rotavirus Vaccine	IPV
High-Income	1989 (Iceland)	2000 (US)	2006 (3 countries)	1955 (2 countries)
Middle-Income	1994 (2 countries)	2008 (5 countries)	2006 (5 countries)	1959 (Hungary)
Low-Income	1997 (Gambia)	2009 (Rwanda)	2012 (Rwanda)	2014 (Nepal)
Gavi Supported	2001 (2 countries)	2009 (2 countries)	2008 (Bolivia)	2014 (Nepal)

Total number of countries that have introduced each vaccine, by program type

Vaccine	Global Introductions (194 Countries)			Total
	Universal	Special Risk Populations*	Subnational	
Hib	191	0	1	192
PCV	128	6	3	137
Rotavirus	80	0	7	87
IPV*	157	1	6	163

Vaccine	Gavi Introductions (73 Countries)			Total
	Universal	Special Risk Populations*	Subnational	
Hib	73	0	0	73
PCV	54	0	1	55
Rotavirus	37	0	2	39
IPV**	44	0	4	48

*This program type targets special populations at high risk, and will be hereforth referred to as "risk programs". Note: The definition of high-risk populations may vary by country.

**IPV introduction defined as the inclusion of at least one dose of IPV into the child immunization schedule.

EXECUTIVE SUMMARY

The VIEW-hub Global Vaccine Introduction and Implementation report is an extension of the previous VIMS report, with enhanced content and figures generated by IVAC's newly launched VIEW-hub data visualization platform, now accessible at www.VIEW-hub.org. VIEW-hub is an interactive platform (supported by internal databases), developed and maintained by IVAC and supported by Gavi, The Vaccine Alliance and the Bill & Melinda Gates Foundation.

Similar to the previous VIMS report, the VIEW-hub report displays data and figures on the introduction status of *Haemophilus influenzae* type b (Hib) vaccine, pneumococcal conjugate vaccine (PCV), rotavirus vaccine, and inactivated polio vaccine (IPV) both globally and in the 73 Gavi countries. The images and text below describe: the number of countries that have introduced each vaccine or plan to in the future, global and Gavi rates of vaccine coverage and access, and historical trends in the rate of global vaccine introduction.

New additions to the VIEW-hub report which will appear in every quarterly report starting March 2016, are information on countries' current product and dosing schedules for Hib vaccine, pneumococcal conjugate vaccine (PCV), rotavirus vaccine, and inactivated polio vaccine (IPV). Furthermore, twice annually, the report will feature updates on countries conducting PCV and rotavirus vaccine impact evaluations both globally and in Gavi countries, along with summary analyses of those impact evaluations.

The report concludes with a more detailed description of VIEW-hub and its uses.

METHODS

This report has been prepared using data and maps generated in VIEW-hub, a data visualization tool developed and maintained by the International Vaccine Access Center at the Johns Hopkins Bloomberg School of Public Health for use by IVAC and its affiliated partners and projects. Information in VIEW-hub was gathered from internationally recognized sources, such as the World Health Organization (WHO), UNICEF, Gavi, vaccine manufacturers, ministries of health, and news media. The data in this report is current as of March 2016.

Current Introduction Statuses for Hib, Pneumococcal Conjugate, Rotavirus, and Inactivated Polio Vaccines

- Data on historical years of vaccine introduction are gathered from the WHO. Information on current introduction status are gathered from a variety of sources, such as WHO, UNICEF, Gavi, vaccine manufacturers, ministries of health, and news media. Forecasted introduction dates are from WHO and Gavi's Strategic Demand Forecast v12. For more information on sources, see the full data dictionary within VIEW-hub (www.VIEW-hub.org) or email Linh Nguyen at linh.nguyen@jhu.edu.

Coverage

- The number of children vaccinated in each country, was calculated with the following formula: Surviving Infants with Access*Vaccine Coverage Rate. (See method for calculating number of surviving infants with access in the "Present Access" section below.) The following WHO/UNICEF estimates of national immunization coverage (WUENIC) were used for Hib vaccine, PCV, rotavirus vaccine, and IPV, respectively: third dose of Hib vaccine, third dose of PCV, last dose of rotavirus vaccine, and third dose of polio vaccine. For countries using both IPV and oral polio vaccine (OPV), DTP3 coverage rates were used instead of polio3 rates (since polio3 figures do not distinguish between IPV and OPV). For countries that have introduced a vaccine, but the coverage rate for that particular vaccine is not yet available, DTP3 coverage rates were used as a proxy to estimate level of coverage.

Access

- The variable "surviving infants with access" refers to the number of children in each country who are intended to be vaccinated according to the country's vaccine policy. It is therefore a combination of the number of surviving infants in the country and the type of vaccine program (i.e., recommended for use universally in all infants, among special populations at high risk of disease only, or only in subnational areas). If the country has introduced universally, the number of surviving infants with access is equal to the total number of surviving infants in the country. Given the difficulty in estimating the number of surviving infants targeted by countries vaccinating only special risk populations (as the definition for special populations at high risk vary by country), the number of infants with access in these countries is assumed to be the country's total number of surviving infants (although we acknowledge this is an overestimate and a limitation in the analysis). For countries currently with subnational vaccine programs, the number of surviving infants with access is equal to the total number of surviving infants in the country multiplied by the fraction of the total population that are living in the subnational areas that have introduced. For countries that have not yet introduced a vaccine, the number of surviving infants with access is set at zero.

Vaccine Introduction by Income Level

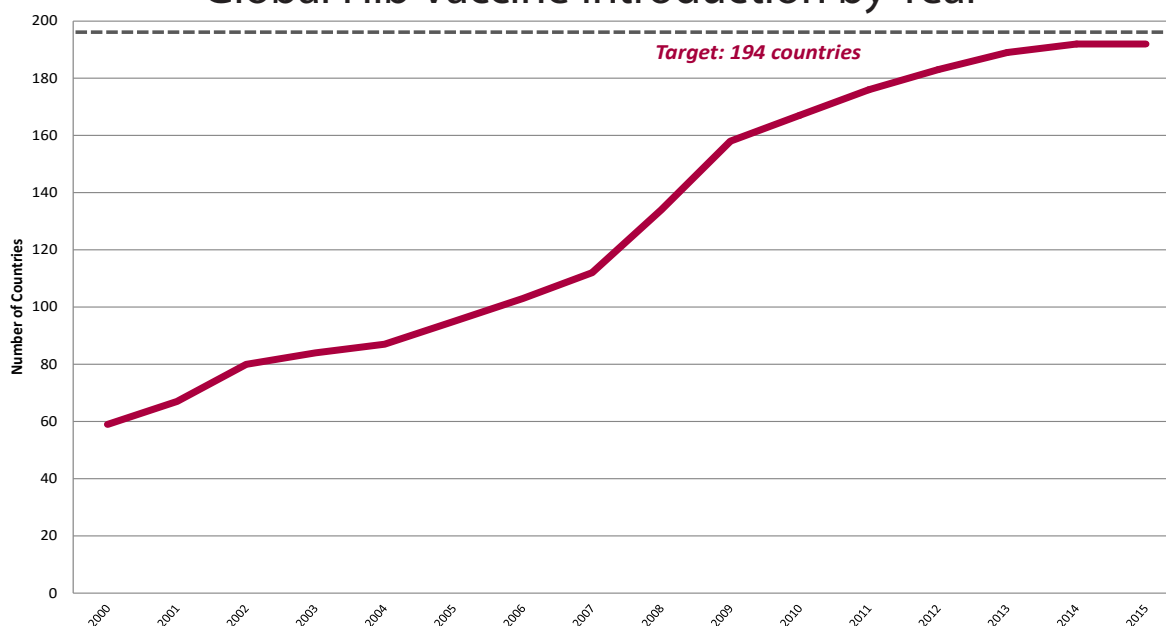
- Countries were classified using 2014 World Bank income classifications (2013 GNI data). Year of introduction or forecasted introduction was determined through WHO reports, news media, and Gavi's Strategic Demand Forecast v12.

Countries Conducting PCV/Rotavirus Vaccine Impact Evaluation

- Studies were identified for inclusion in the VIEW-hub impact study database via a literature search targeting published studies that evaluated the health impact of PCV/rotavirus vaccine in countries that have introduced the vaccine, or the economic impact of the vaccine (regardless of the country's introduction status). For PCV, this covered the time span between 1994 and 2010 and January 2015-March 2016. PCV impact studies published between 2010 and 2015 were opportunistically identified and included, and efforts to systematically fill in the data gap during that period are currently underway. For rotavirus vaccine, the literature review covered the period of January 2006-March 2016. Published literature was also supplemented with information on ongoing impact studies obtained through personal communications with key funders and stakeholders.

Projected introduction dates for Gavi countries are taken from the most recently available Gavi Strategic Demand Forecast and WHO sources. For non-Gavi countries, the World Health Organization and a variety of other sources are used. Information on a particular country's Gavi application status or projected introduction dates may be sensitive and is not for public circulation without prior consent from VIEW-hub personnel.

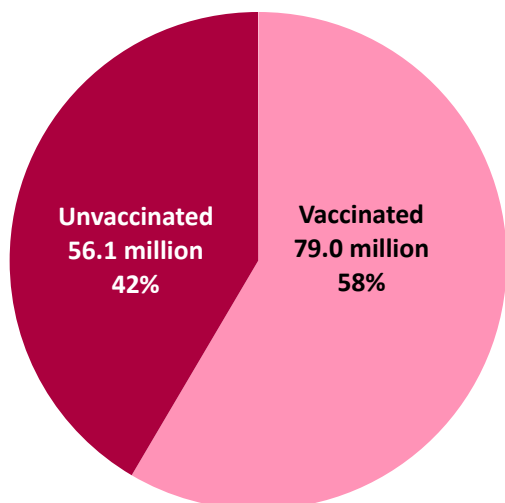
Global Hib Vaccine Introduction by Year



An estimated 42% of the world’s infants (56.1 million) are not receiving Hib vaccine, according to 2014 WHO/UNICEF estimates of national immunization coverage (WUENIC). These children are unvaccinated because either their country has not yet introduced the vaccine (n=2), or they are not being reached by the routine immunization services in their country.

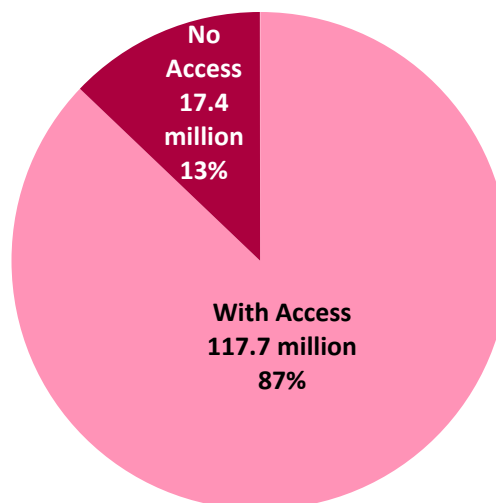
An estimated 13% percent of the world’s infants (17.4 million) live in countries or regions that have not yet introduced Hib vaccine into their National Immunization Program (n=2).

Hib Coverage
(Global Surviving Infants)



Hib coverage is calculated as the number of surviving infants globally covered by Hib3 vaccine in countries or subnational regions within countries that have introduced Hib-containing vaccine.

Hib Access
(Global Surviving Infants)

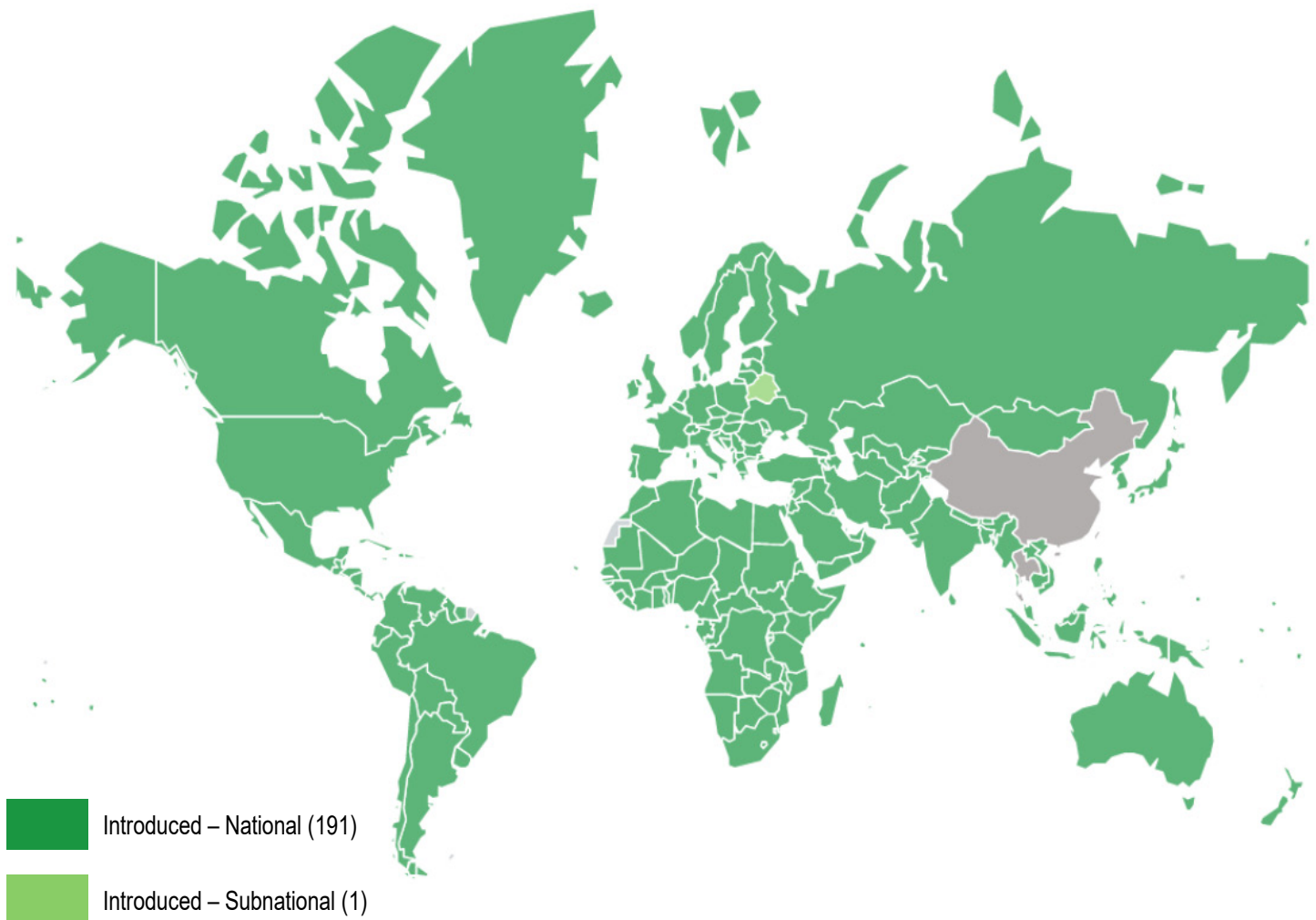
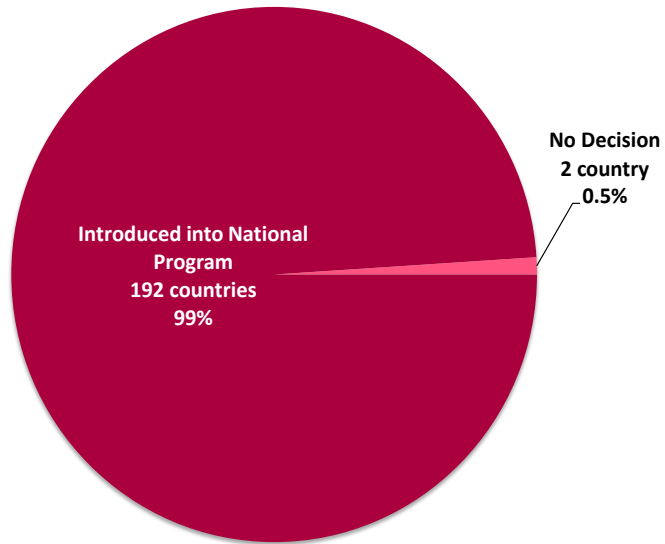


Hib access is calculated as the number of surviving infants globally that live in countries or subnational regions within countries that have introduced Hib-containing vaccine.

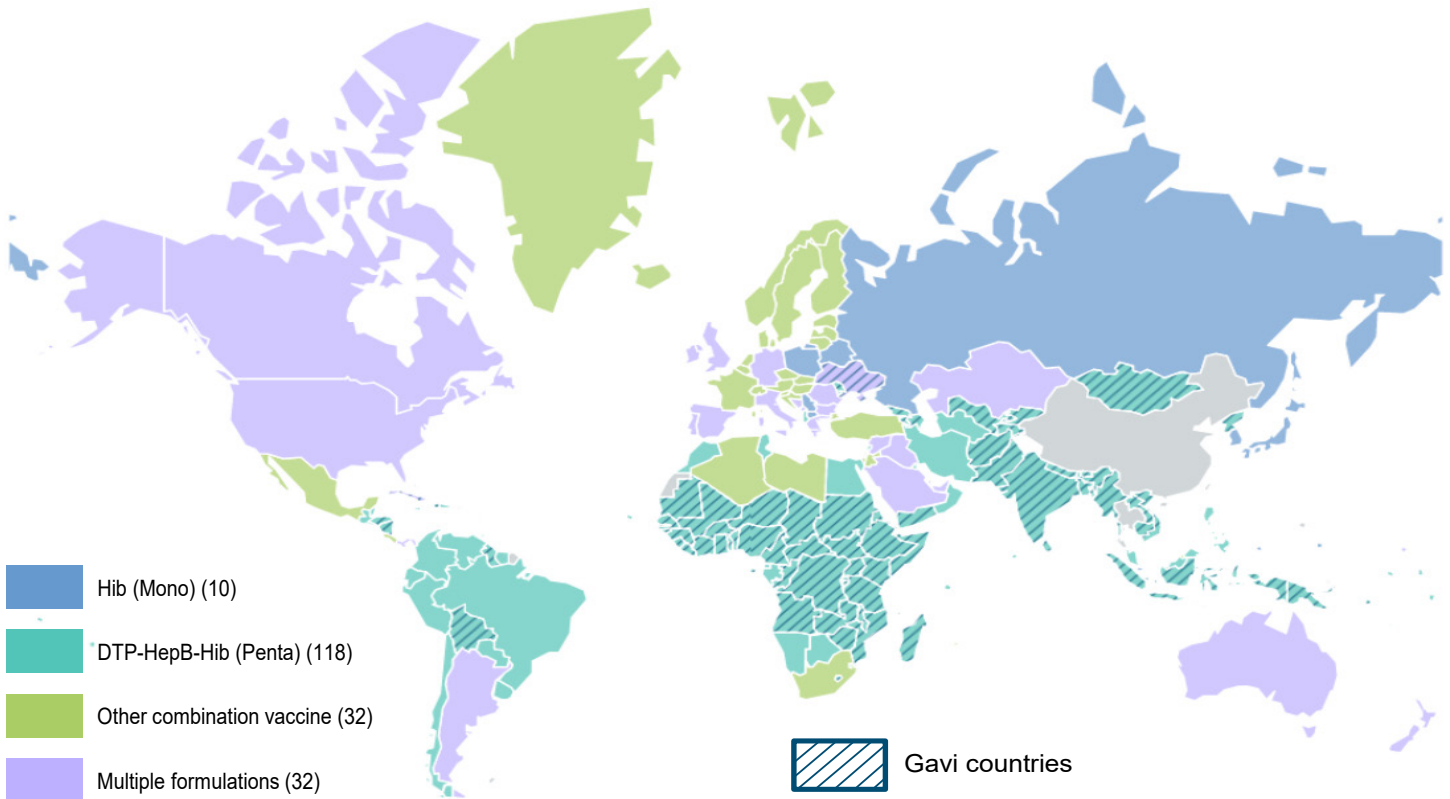
Global Hib Vaccine Introduction Status

As of March 2016, 192 countries have introduced a Hib-containing vaccine into their National Immunization Program, one of which (Belarus) introduced subnationally. Two countries (Thailand and China) have yet to make a decision regarding introduction.

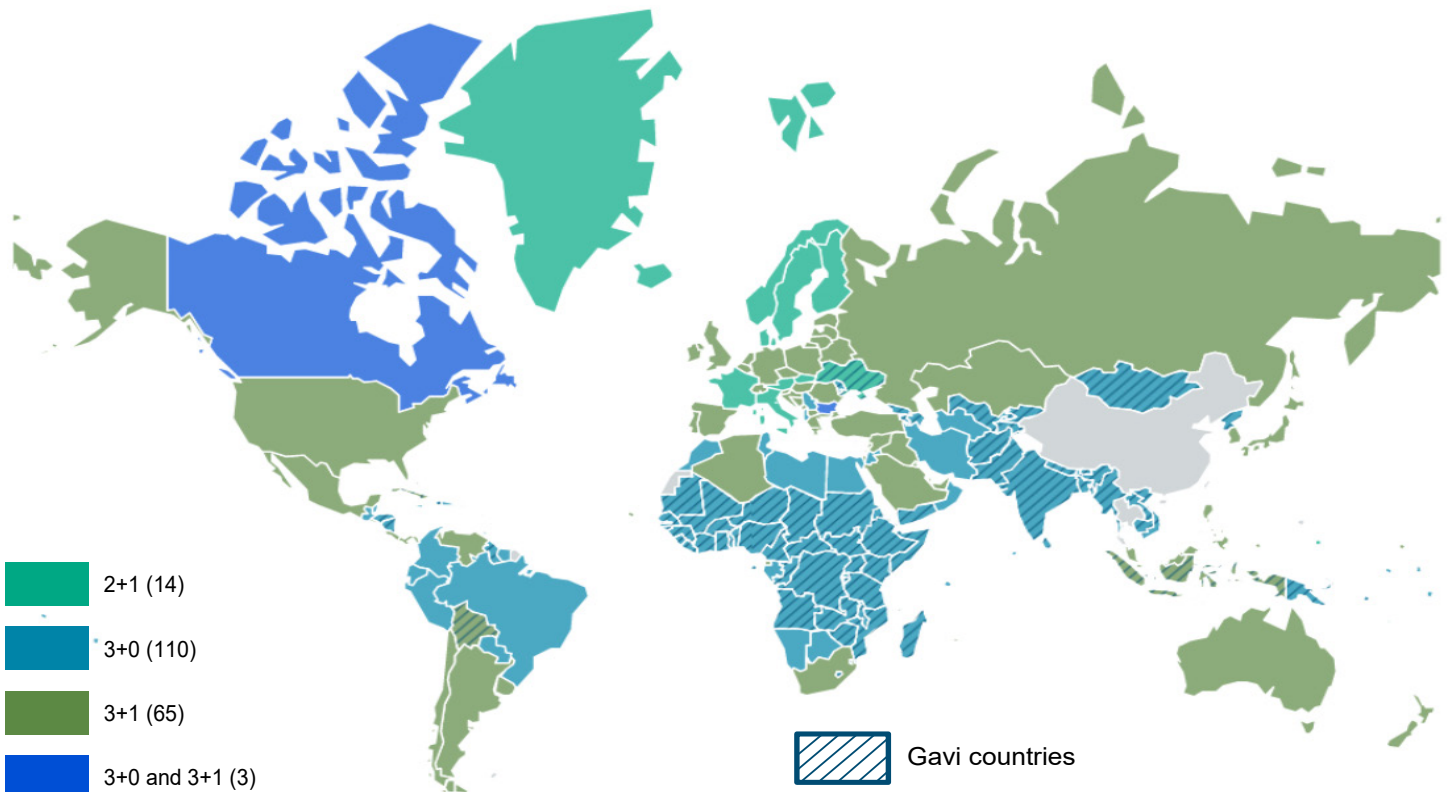
A map of countries that have introduced Hib vaccine is below.



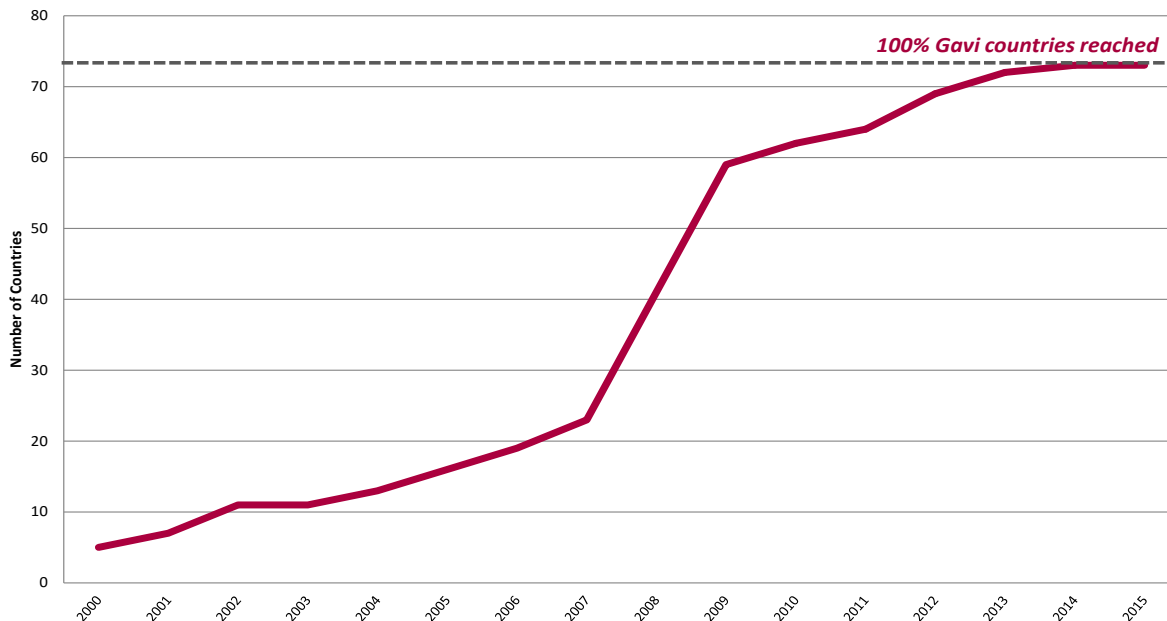
Hib Vaccine - Current Product



Hib Vaccine - Current Dosing Schedule



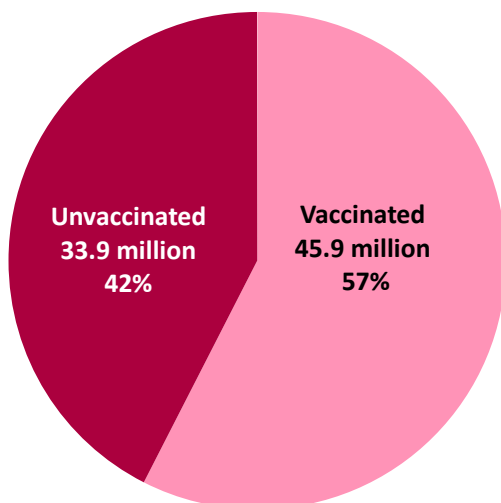
Gavi Hib Vaccine Introduction by Year



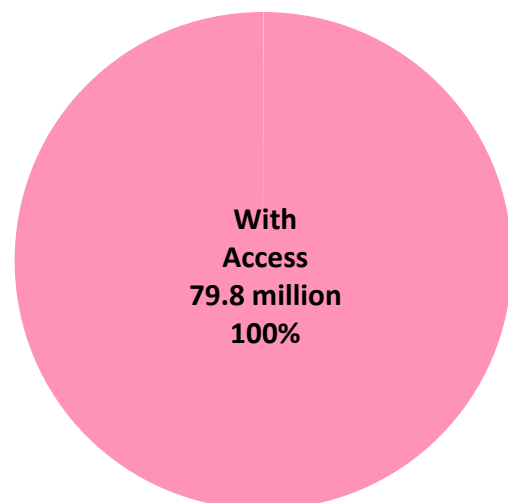
An estimated 43% of infants in Gavi countries (33.9 million) are not receiving Hib vaccine, according to 2014 WHO/UNICEF estimates of national immunization coverage. These children are unvaccinated because they are not being reached by the routine immunization services in their country.

All infants in Gavi countries have access to Hib vaccine because all 73 Gavi countries have introduced Hib vaccine into their Routine Immunization Program.

**Hib Coverage
(Gavi Surviving Infants)**



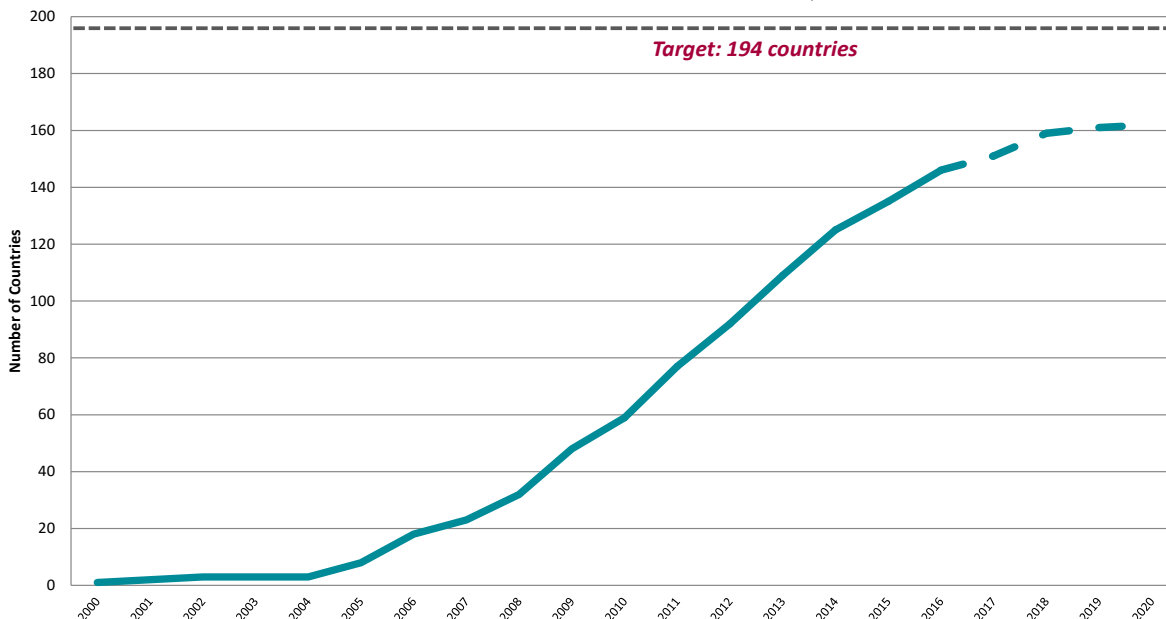
**Hib Access
(Gavi Surviving Infants)**



Hib coverage is calculated as the number of surviving infants covered by Hib3 vaccine in Gavi countries or subnational regions within Gavi countries that have introduced Hib-containing vaccine.

Hib access is calculated as the number of surviving infants that live in Gavi countries or subnational regions within Gavi countries that have introduced Hib-containing vaccine.

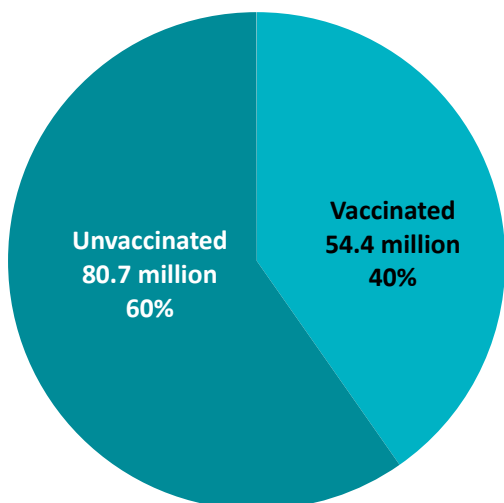
Global PCV Introduction by Year



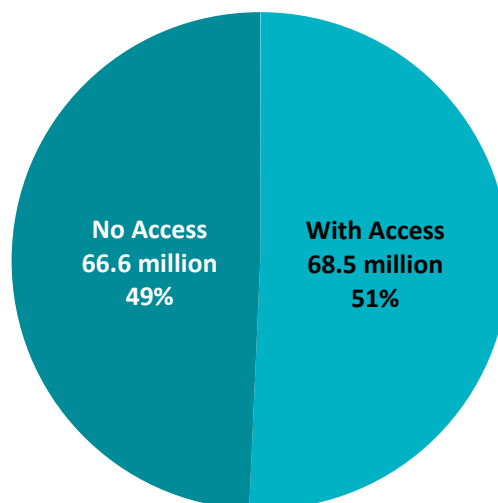
An estimated 60% of the world’s infants (80.7 million) are not receiving PCV, according to 2014 WHO/UNICEF estimates of national immunization coverage. These children are unvaccinated because either their country has not yet introduced the vaccine (n=57), or they are not being reached by the routine immunization services in their country.

An estimated 49% of the world’s infants (66.6 million) live in countries or subnational regions within countries that have not yet introduced PCV into their National Immunization Program (n=57).

PCV Coverage
(Global Surviving Infants)



PCV Access
(Global Surviving Infants)



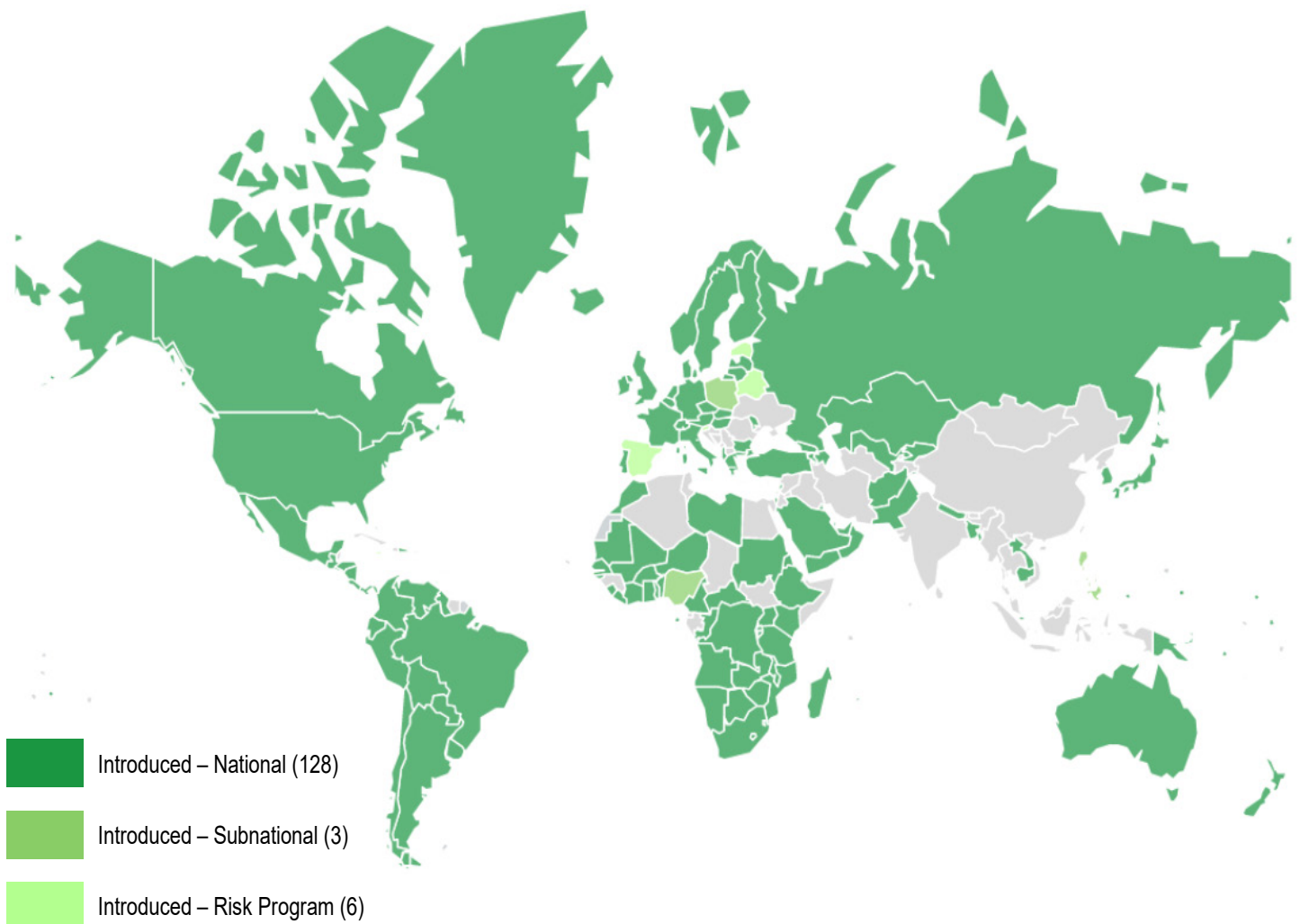
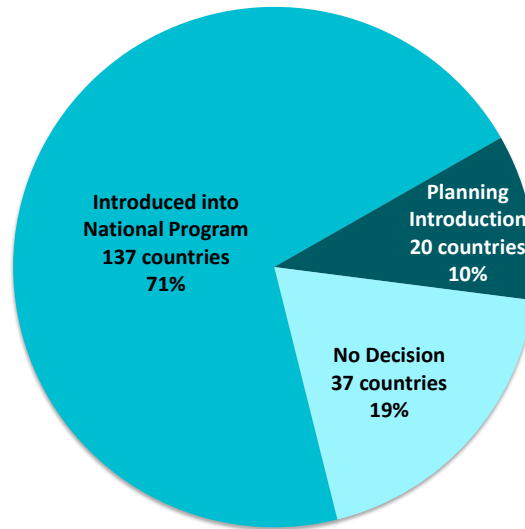
PCV coverage is calculated as the number of surviving infants globally covered by PCV3 in countries or subnational regions within countries that have introduced PCV. In the absence of PCV3 coverage data for 2014, DTP3 coverage was used as a proxy to estimate PCV coverage.

PCV access is calculated as the number of surviving infants globally that live in countries or subnational regions within countries that have introduced PCV.

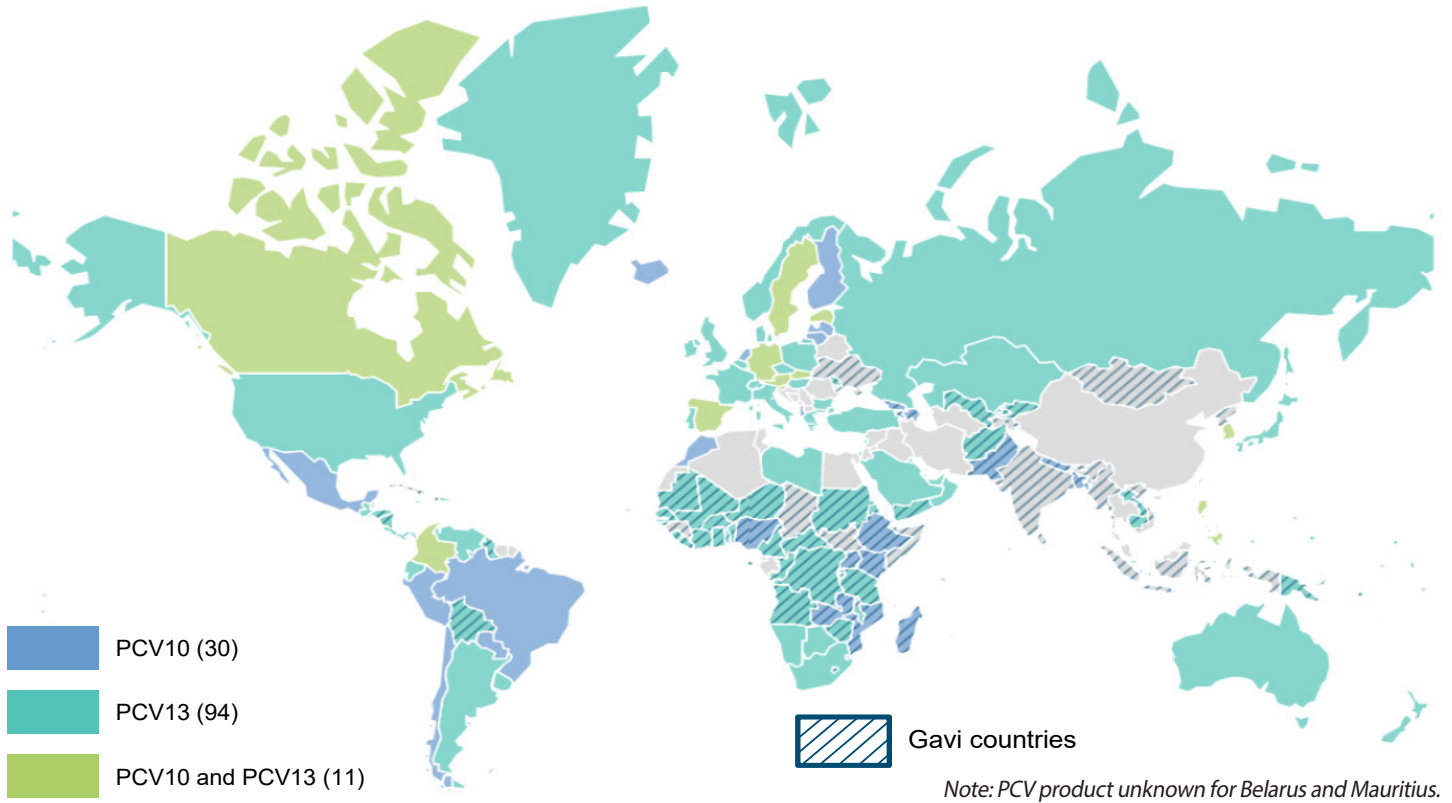
Global PCV Introduction Status

As of March 2016, 137 countries have introduced PCV into their National Immunization Program, including 128 universal, 3 subnational, and 6 risk programs. Twenty countries have announced plans to introduce PCV into their NIP. Thirty-seven countries have yet to make a decision regarding introduction.

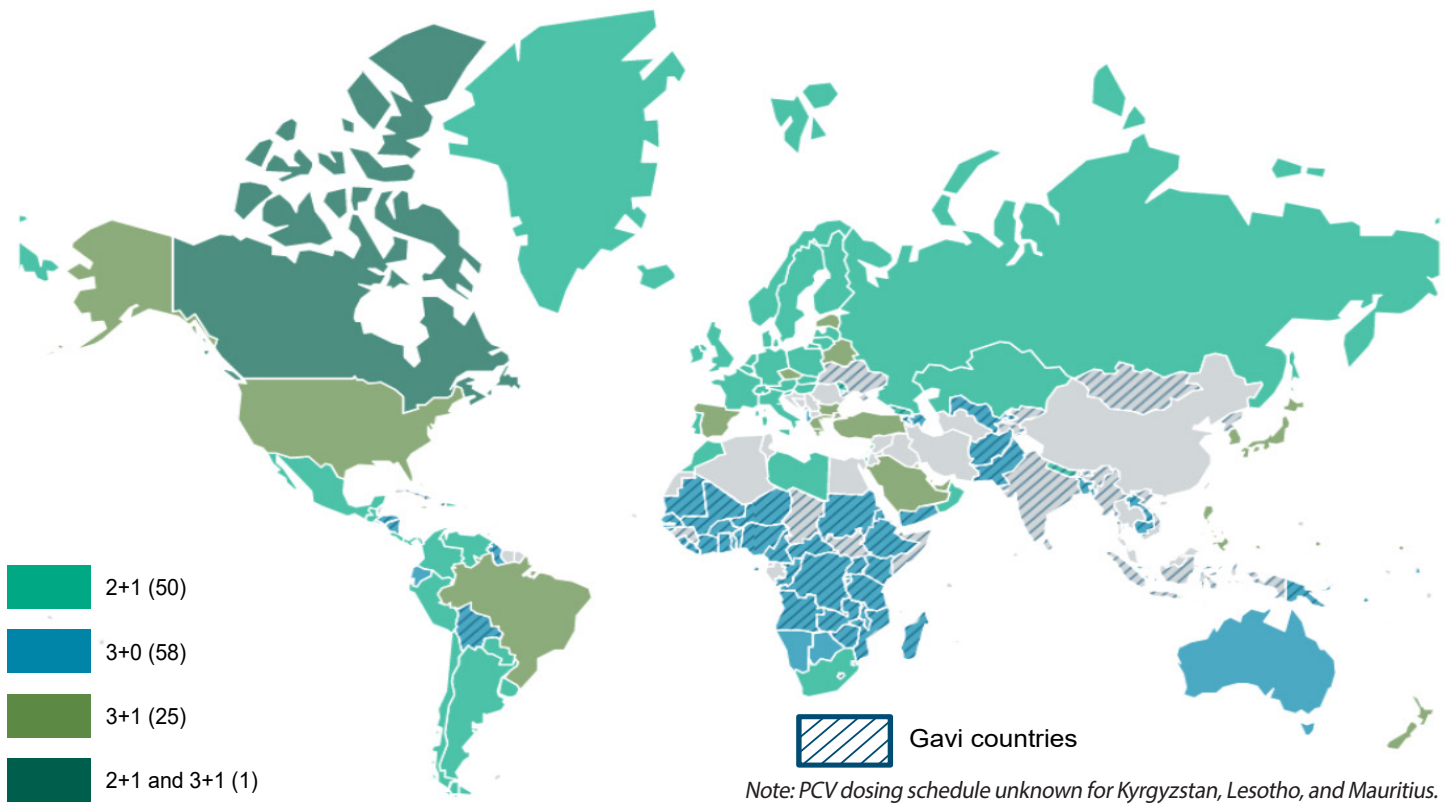
A map of countries that have introduced PCV is below.



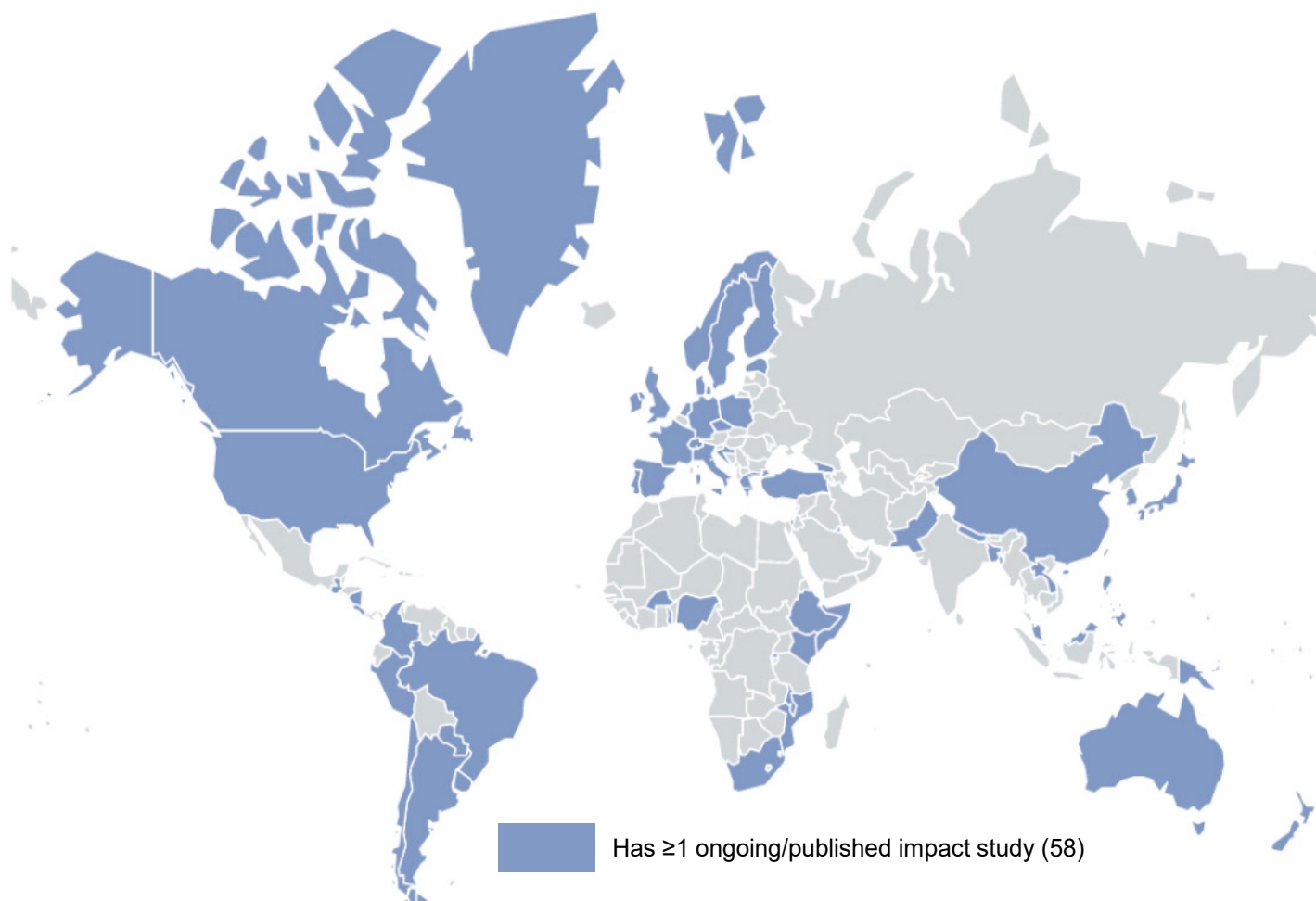
PCV - Current Product



PCV - Current Dosing Schedule



Countries Conducting PCV Impact Evaluation



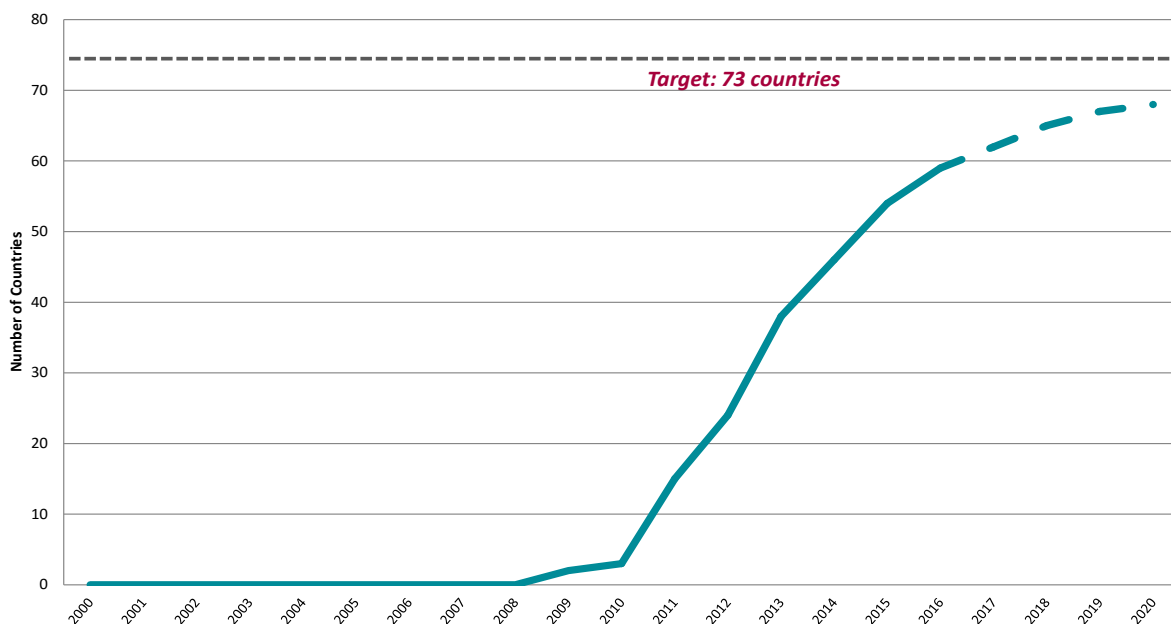
Shown above are countries that have ongoing or published studies evaluating PCV impact as of March 10, 2016. These include studies on the health and/or economic impact of PCV use in routine immunization programs, as well as studies modeling the potential economic impact of PCV in countries that have yet to introduce the vaccine.

Of the 58 countries evaluating PCV impact, 54 countries are currently using PCV in their NIPs and 4 countries (China, Croatia, Malaysia, and Somalia) are conducting PCV economic impact studies, but have not yet introduced the vaccine.

Note: Excluded from this map are ongoing studies designed to measure PCV impact in settings where the vaccine has not been introduced into the NIP (with the exception of economic impact studies). Countries collecting such pre-introduction data that we are aware of include Mongolia and Viet Nam.

For any countries with PCV impact studies not shown on the map above, please email Linh Nguyen at linh.nguyen@jhu.edu to provide this information.

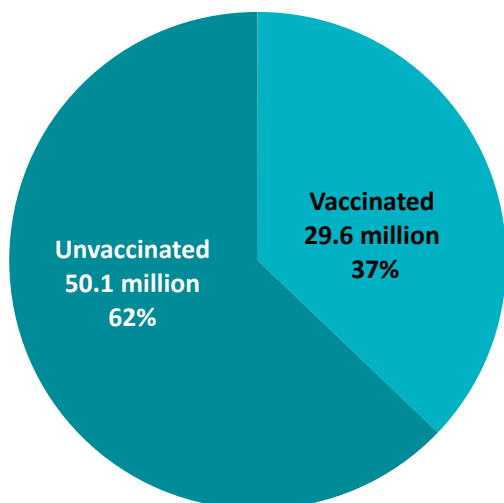
Gavi PCV Introduction by Year



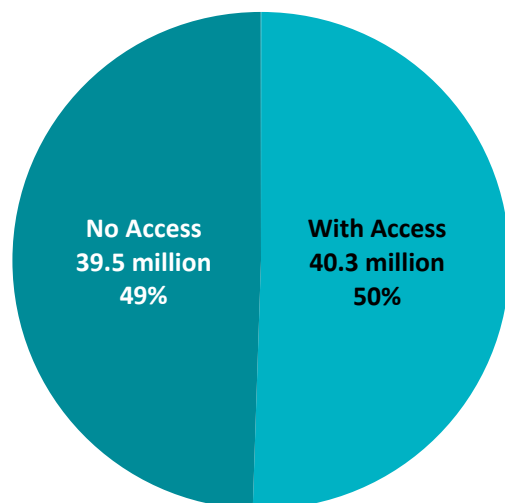
An estimated 62% of infants in Gavi countries (50.1 million) are not receiving PCV, according to 2014 WHO/UNICEF estimates of national immunization coverage. These children are unvaccinated because either their country has not yet introduced the vaccine (n=18), or they are not being reached by the routine immunization services in their country.

An estimated 49% of infants in Gavi countries (39.5 million) live in countries or subnational regions within Gavi countries that have not yet introduced PCV into their National Immunization Program (n=18).

**PCV Coverage
(Gavi Surviving Infants)**



**PCV Access
(Gavi Surviving Infants)**

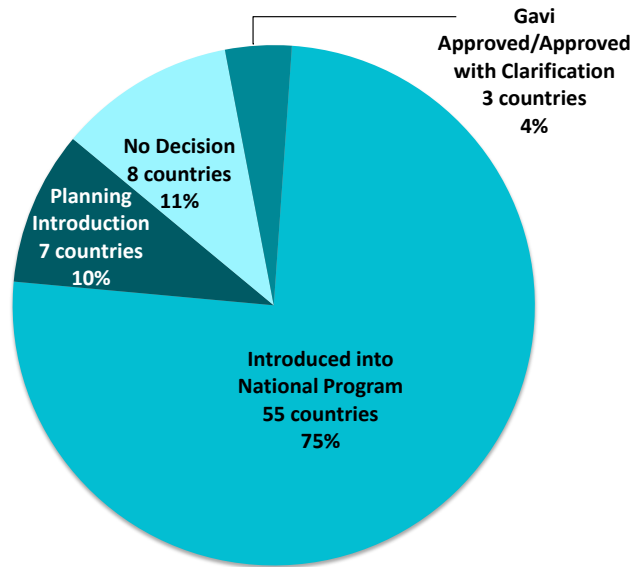


PCV coverage is calculated as the number of surviving infants covered by PCV3 in Gavi countries or subnational regions within Gavi countries that have introduced PCV. In the absence of PCV3 coverage data for 2014, DTP3 coverage was used as a proxy to estimate PCV coverage.

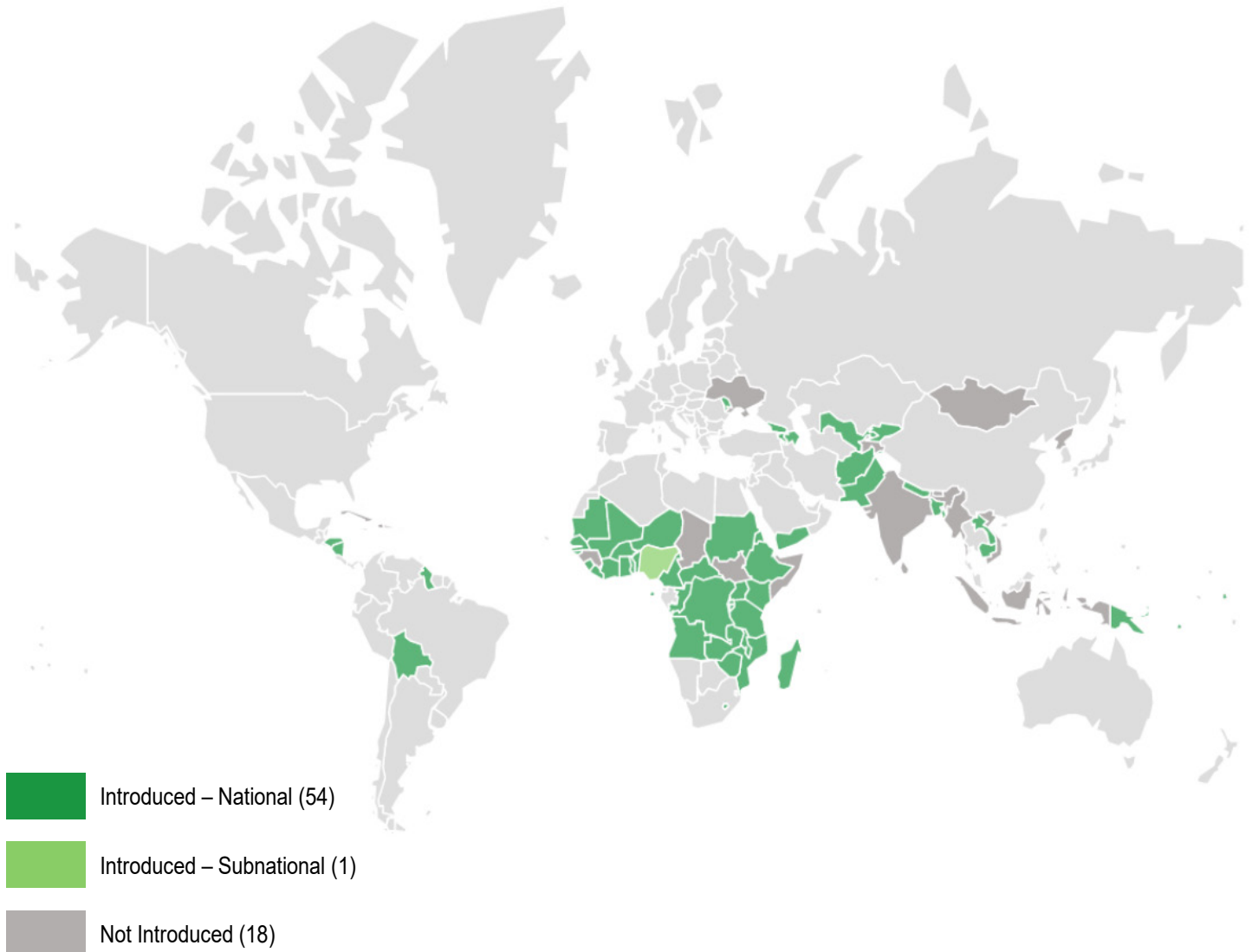
PCV access is calculated as the number of surviving infants that live in Gavi countries or subnational regions within Gavi countries that have introduced PCV.

Gavi PCV Introduction Status

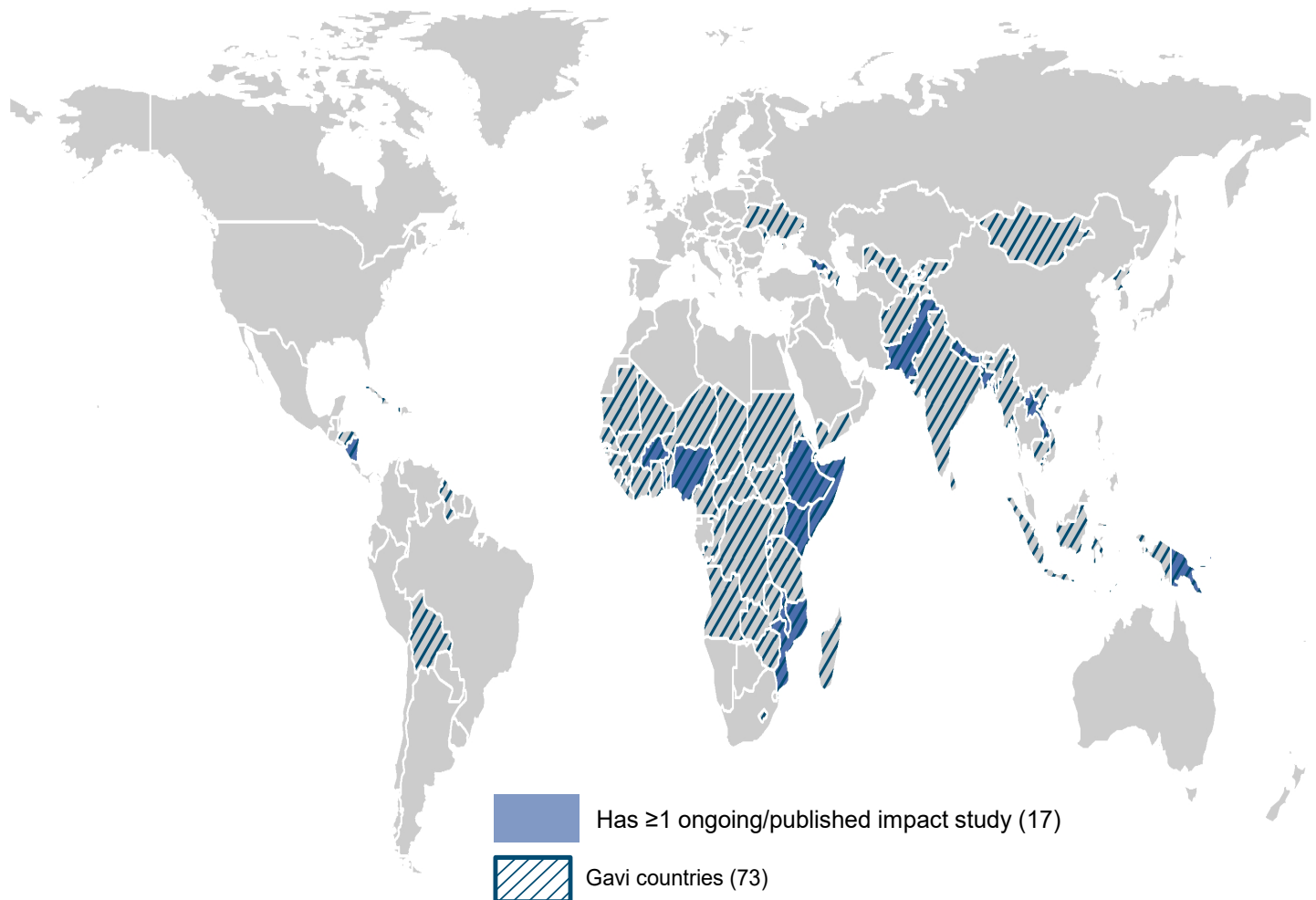
As of March 2016, 55 countries have introduced PCV into their National Immunization Program, one of which (Nigeria) has introduced in a phased manner (therefore has only achieved subnational introduction as of March 2016). Three countries have been approved, with or without clarification, for Gavi support to introduce. Seven countries have announced plans to introduce PCV into their NIP. Eight countries have yet to make a decision regarding PCV.



A map of Gavi countries that have introduced PCV is below.



Countries Conducting PCV Impact Evaluation: A Closer Look at Gavi Countries

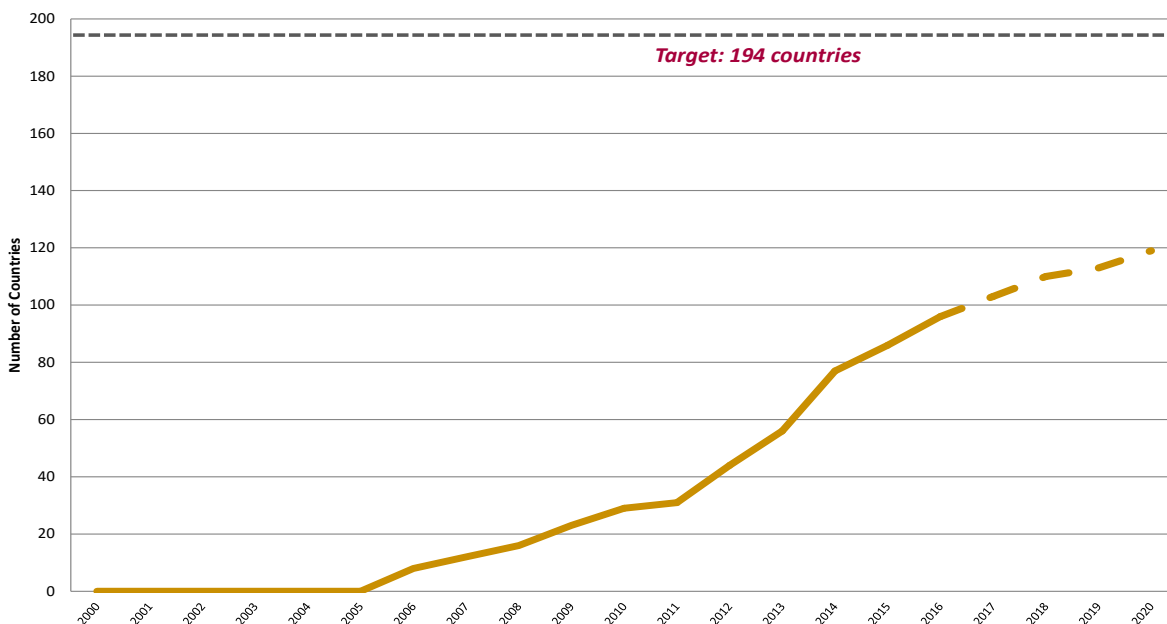


Seventeen of the 58 countries evaluating PCV impact globally are Gavi countries. This includes 16 Gavi countries that are both using PCV and evaluating its impact, and 1 Gavi country (Somalia) that is measuring the potential economic impact of PCV, but has not yet introduced the vaccine.

Note: Excluded from this map are ongoing studies designed to measure PCV impact in settings where the vaccine has not been introduced into the NIP (with the exception of economic impact studies). Gavi countries collecting such pre-introduction data that we are aware of include Mongolia and Viet Nam.

For any countries with PCV impact studies not shown on the map above, please email Linh Nguyen at linh.nguyen@jhu.edu to provide this information.

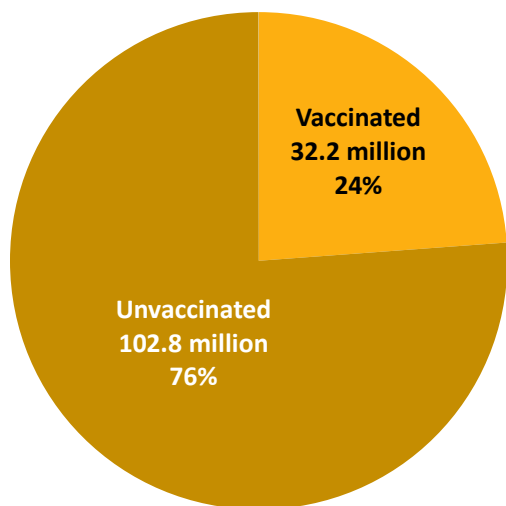
Global Rotavirus Vaccine Introduction by Year



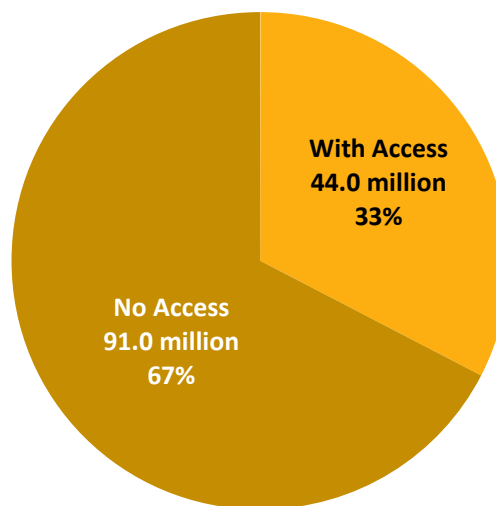
An estimated 76% of the world’s infants (102.8 million) are not receiving rotavirus vaccine, according to 2014 WHO/UNICEF estimates of national immunization coverage. These children are unvaccinated because either their country has not yet introduced the vaccine (n=107), or they are not being reached by the routine immunization services in their country.

An estimated 67% of the world’s infants (91.0 million) live in countries or subnational regions within countries that have not yet introduced rotavirus vaccine into their National Immunization Program (n=107).

Rotavirus Vaccine Coverage (Global Surviving Infants)



Rotavirus Vaccine Access (Global Surviving Infants)



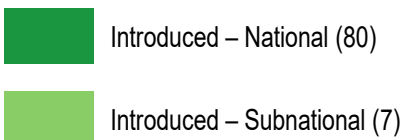
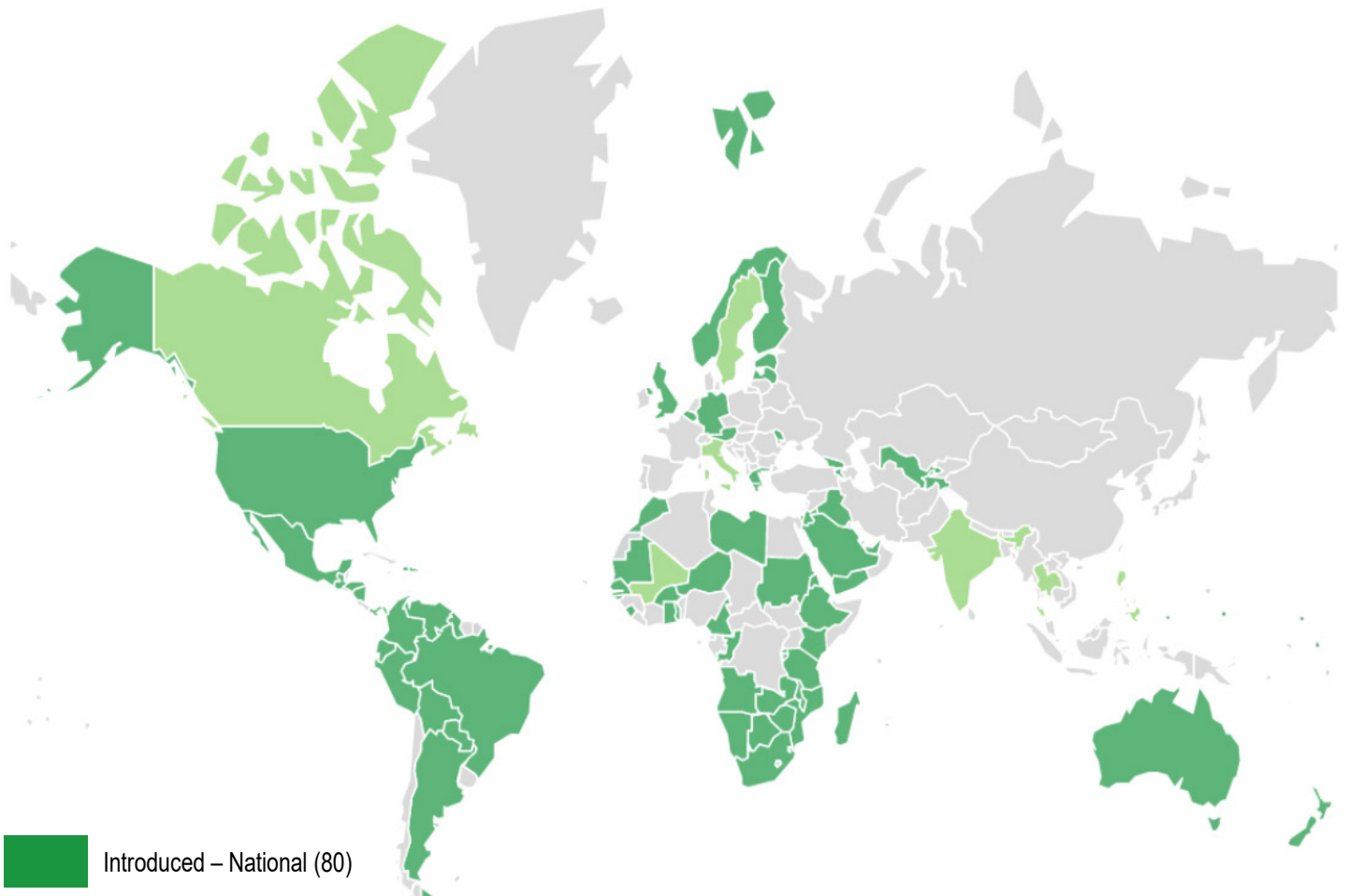
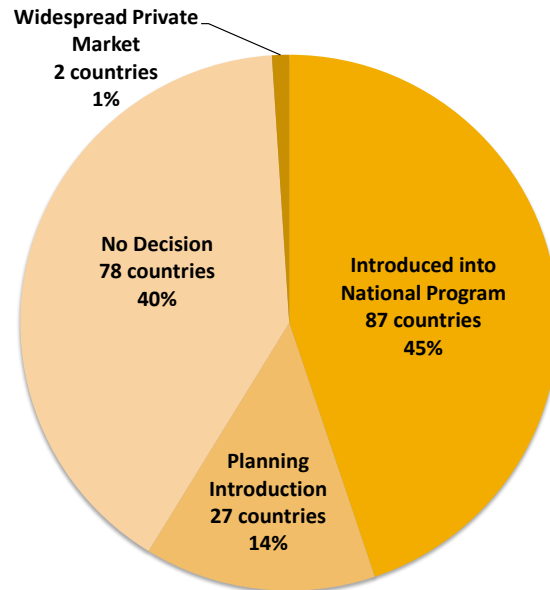
Rotavirus vaccine coverage is calculated as the number of surviving infants covered by the last dose of rotavirus vaccine in countries or subnational regions within countries that have introduced rotavirus vaccine. In the absence of rotavirus vaccine coverage data for 2014, DTP3 coverage was used as a proxy to estimate rotavirus vaccine coverage.

Rotavirus vaccine access is calculated as the number of surviving infants globally that live in countries or subnational regions within countries that have introduced rotavirus vaccine.

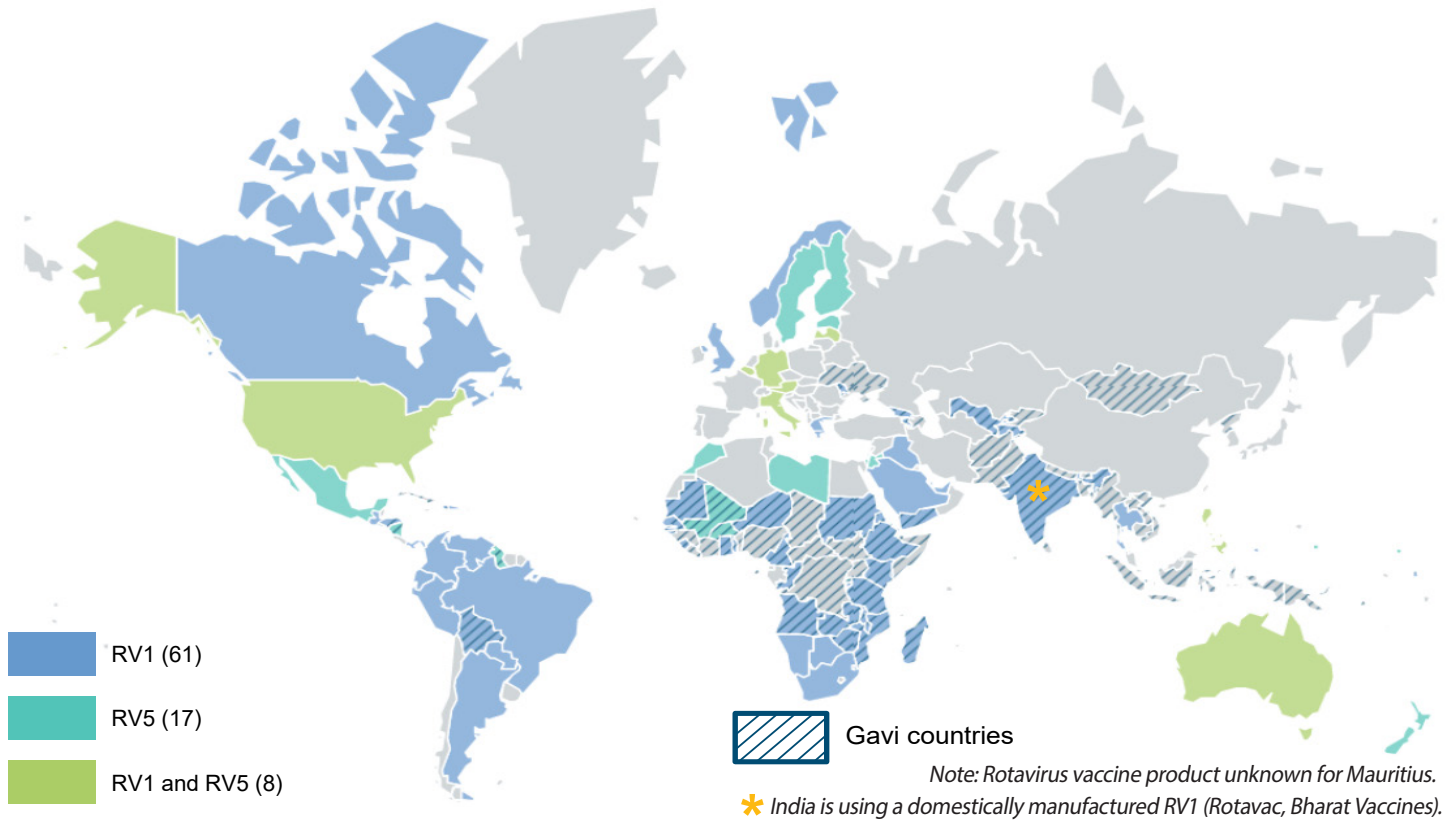
Global Rotavirus Vaccine Introduction Status

As of March 2016, 87 countries have introduced rotavirus vaccine into their National Immunization Program; seven of these countries have introduced subnationally. Twenty-seven countries have announced plans to introduce rotavirus vaccine into their NIP. Two countries (Cyprus and Singapore) are known to have widespread coverage through the private market. Seventy-eight countries have yet to make a decision regarding introduction.

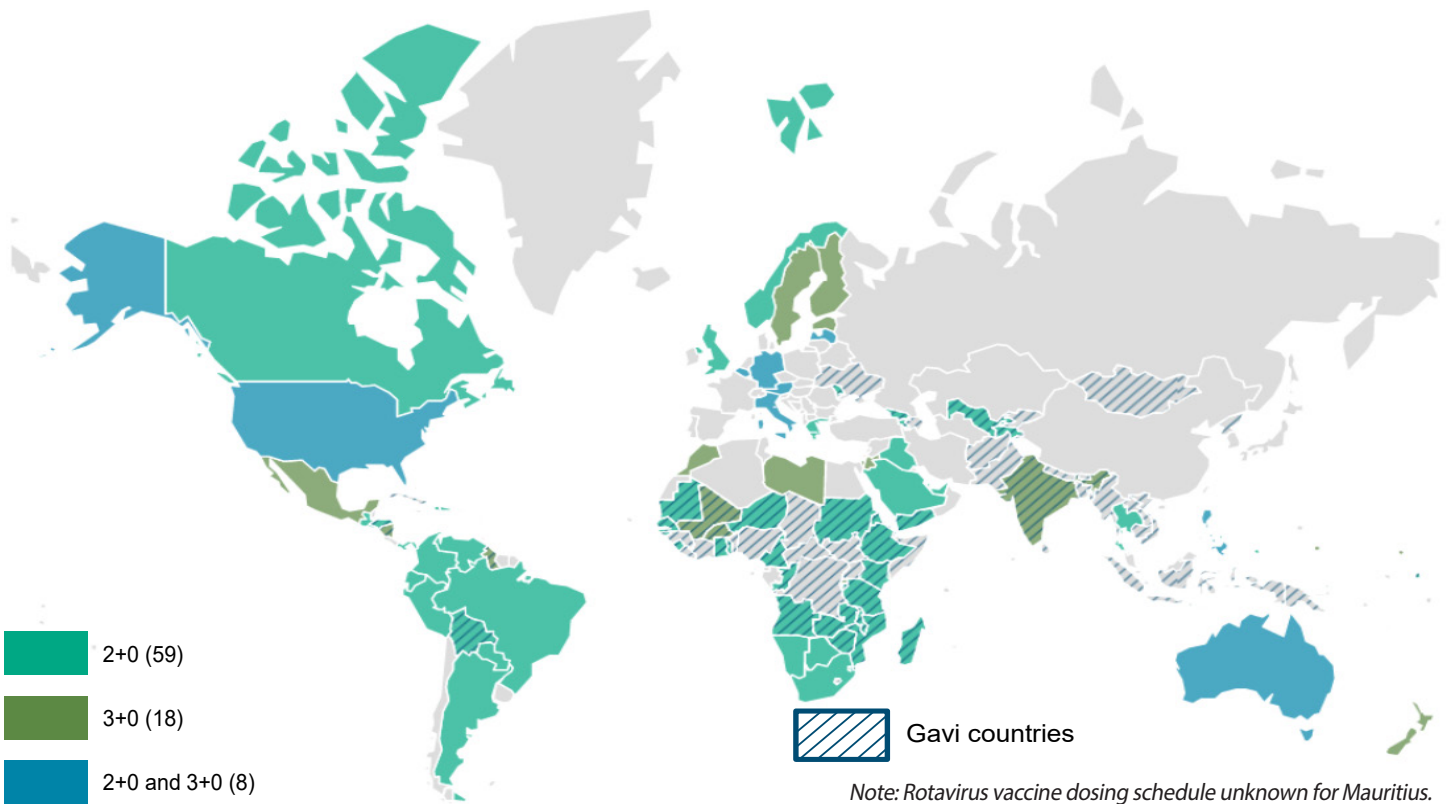
A map of countries that have introduced rotavirus vaccine is below.



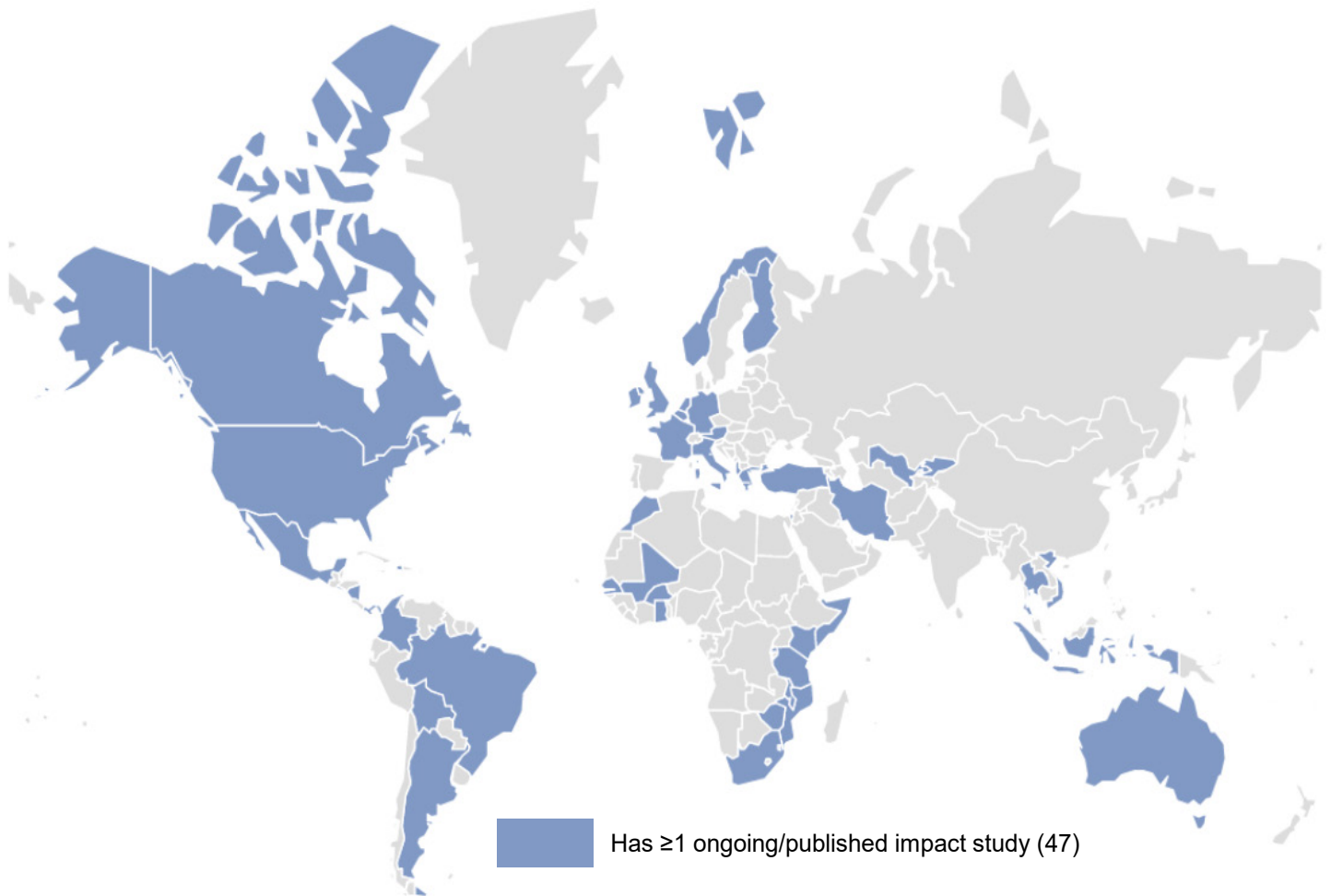
Rotavirus Vaccine - Current Product



Rotavirus Vaccine - Current Dosing Schedule



Countries Conducting Rotavirus Vaccine Impact Evaluation



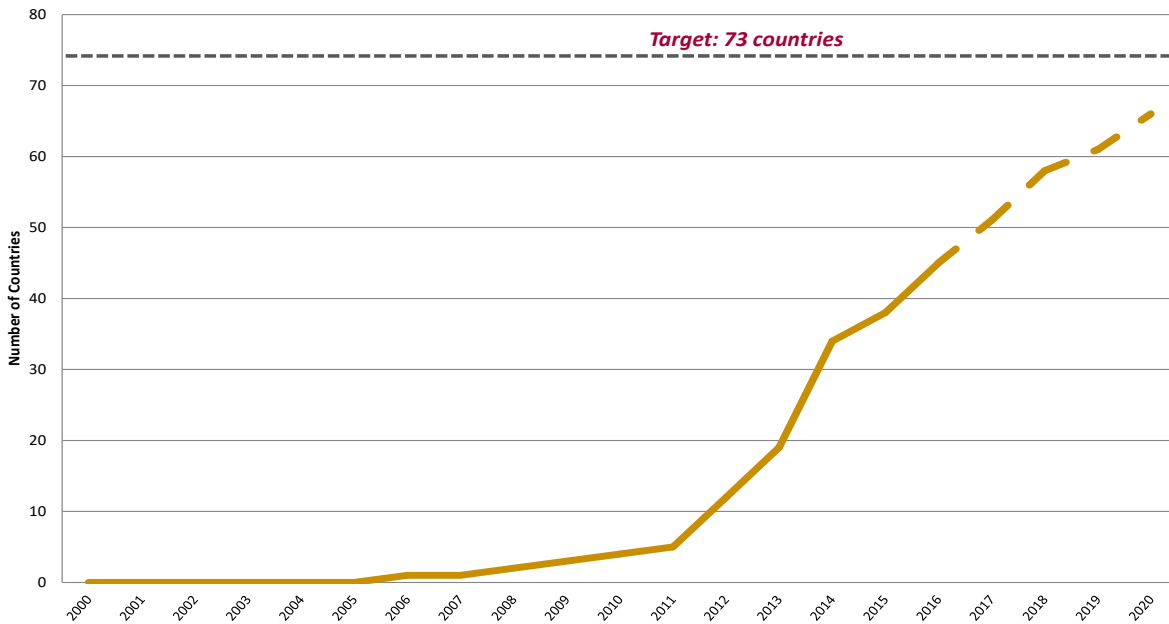
Shown above are countries that have ongoing or published studies evaluating rotavirus vaccine impact, as of March 2016. These include studies on the health and/or economic impact of rotavirus vaccine use in routine immunization programs, as well as studies modeling the potential economic impact of rotavirus vaccine in countries that have yet to introduce the vaccine.

Of the 47 countries evaluating rotavirus vaccine impact, 37 countries are currently using the vaccine in their NIPs and 10 countries (Albania, France, Indonesia, Iran, Ireland, Kyrgyzstan, Netherlands, Somalia, Turkey, and Viet Nam) are conducting economic impact studies, but have not yet introduced the vaccine.

Note: Excluded from this map are ongoing studies designed to measure rotavirus vaccine impact in settings where the vaccine has not been introduced into the NIP (with the exception of economic impact studies). Countries collecting such pre-introduction data that we are aware of include Bangladesh, Nepal, Pakistan, and Viet Nam.

For any countries with PCV impact studies not shown on the map above, please email Linh Nguyen at linh.nguyen@jhu.edu to provide this information.

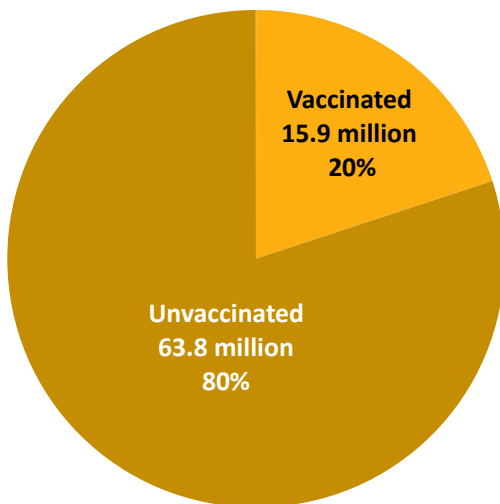
Gavi Rotavirus Vaccine Introduction by Year



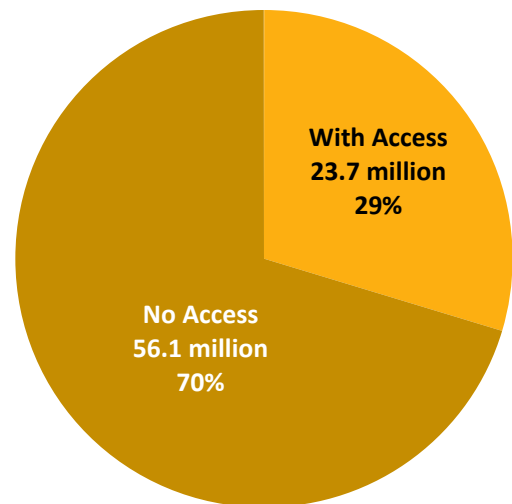
An estimated 80% of infants in Gavi countries (63.8 million) are not receiving rotavirus vaccine, according to 2014 WHO/UNICEF estimates of national immunization coverage. These children are unvaccinated because either their country has not yet introduced the vaccine (n=34), or they are not being reached by the routine immunization services in their country.

An estimated 70% of infants in Gavi countries (56.1 million) live in countries or regions that have not yet introduced rotavirus vaccine into their National Immunization Program (n=34).

Rotavirus Vaccine Coverage (Gavi Surviving Infants)



Rotavirus Vaccine Access (Gavi Surviving Infants)

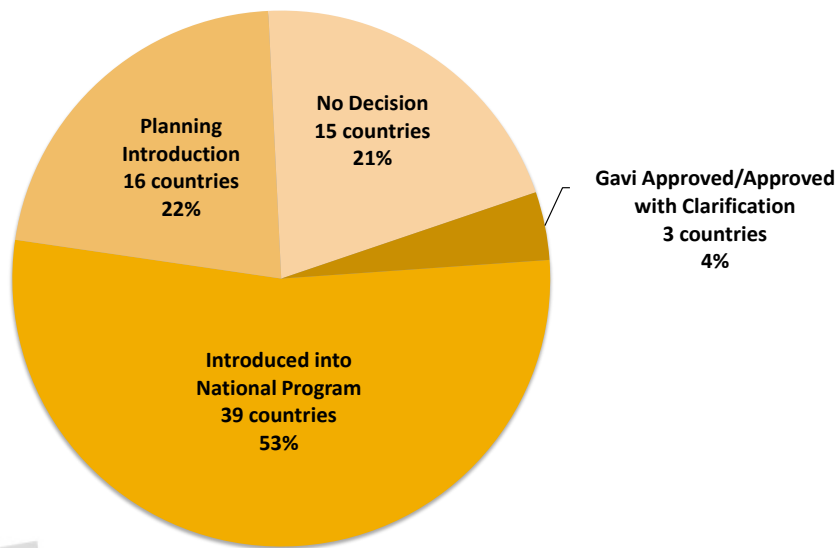


Rotavirus vaccine coverage is calculated as the number of surviving infants covered by the last dose of rotavirus vaccine in Gavi countries or subnational regions within Gavi countries that have introduced rotavirus vaccine. In the absence of rotavirus vaccine coverage data for 2014, DTP3 coverage was used as a proxy to estimate rotavirus vaccine coverage.

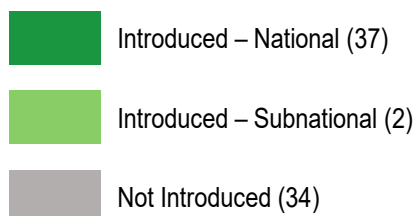
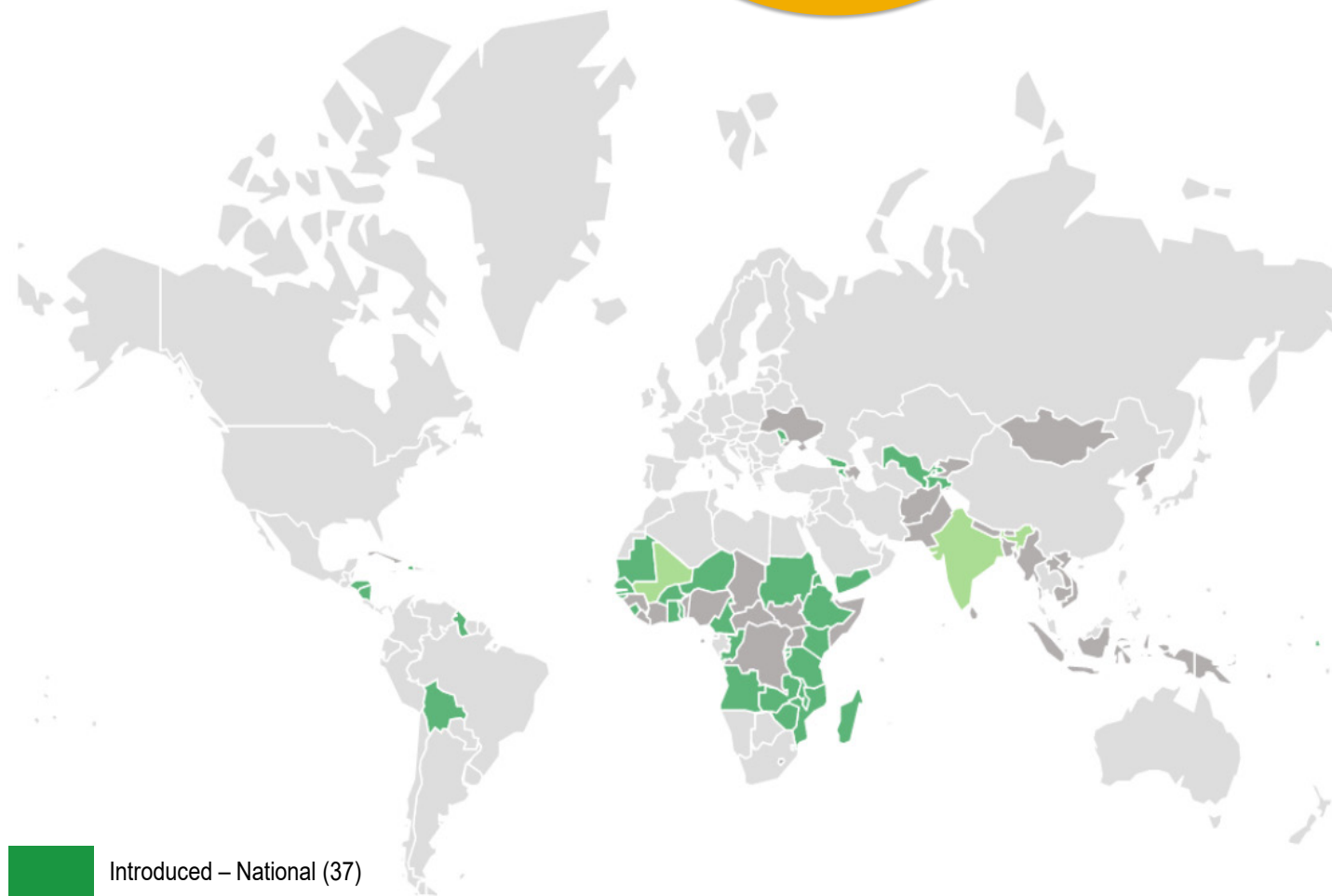
Rotavirus vaccine access is calculated as the number of surviving infants that live in Gavi countries or subnational regions within Gavi countries that have introduced rotavirus vaccine.

Gavi Rotavirus Vaccine Introduction Status

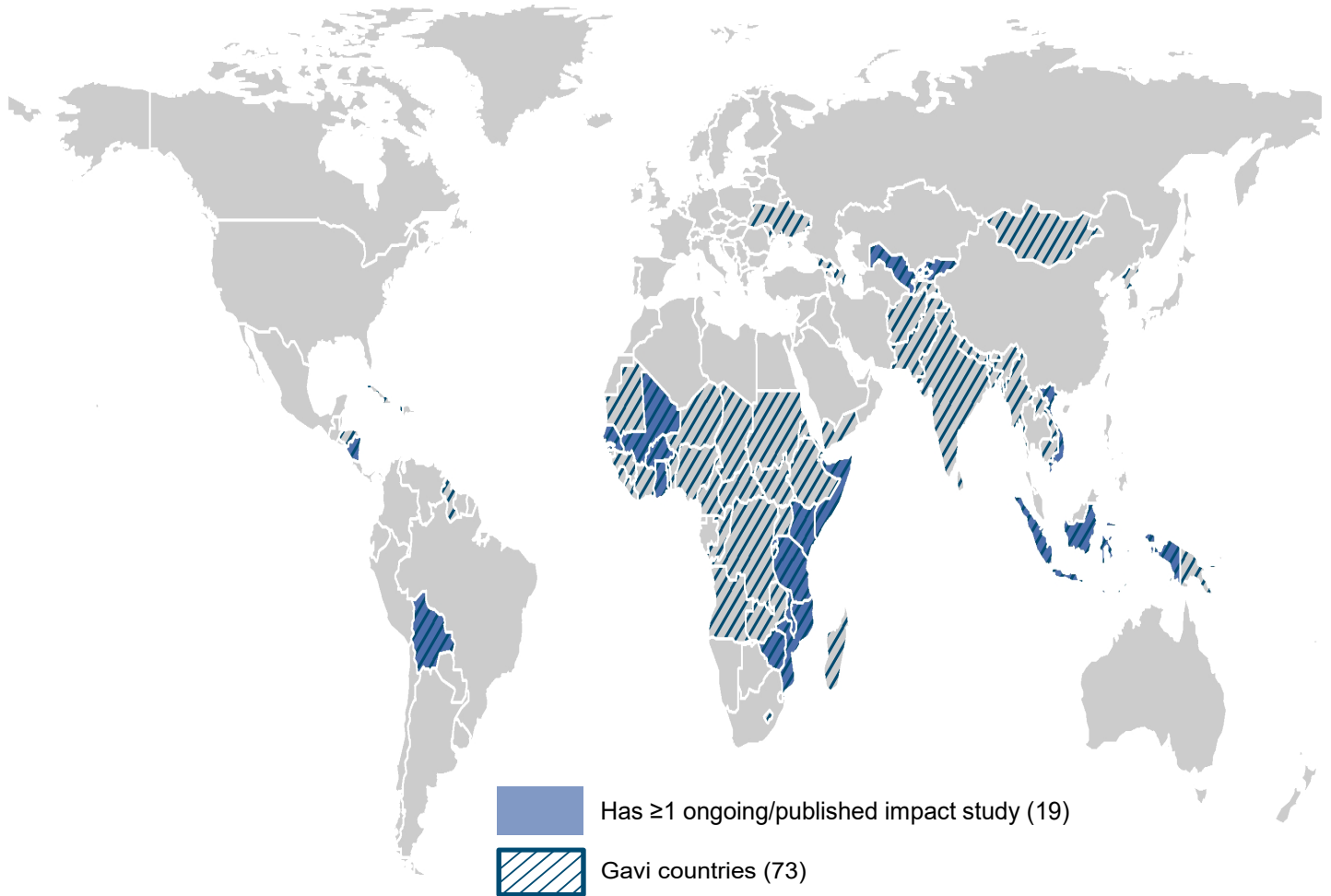
As of March 2016, 39 countries have introduced rotavirus vaccine into their National Immunization Program, two of which (Mali and India) introduced in a phased manner. Three countries are approved, with or without clarification, for Gavi support to introduce. Sixteen countries have announced plans to introduce rotavirus vaccine into their NIP. Fifteen countries have yet to make a decision regarding introduction.



A map of Gavi countries that have introduced rotavirus vaccine is below.



Countries Conducting Rotavirus Vaccine Impact Evaluation: A Closer Look at Gavi Countries

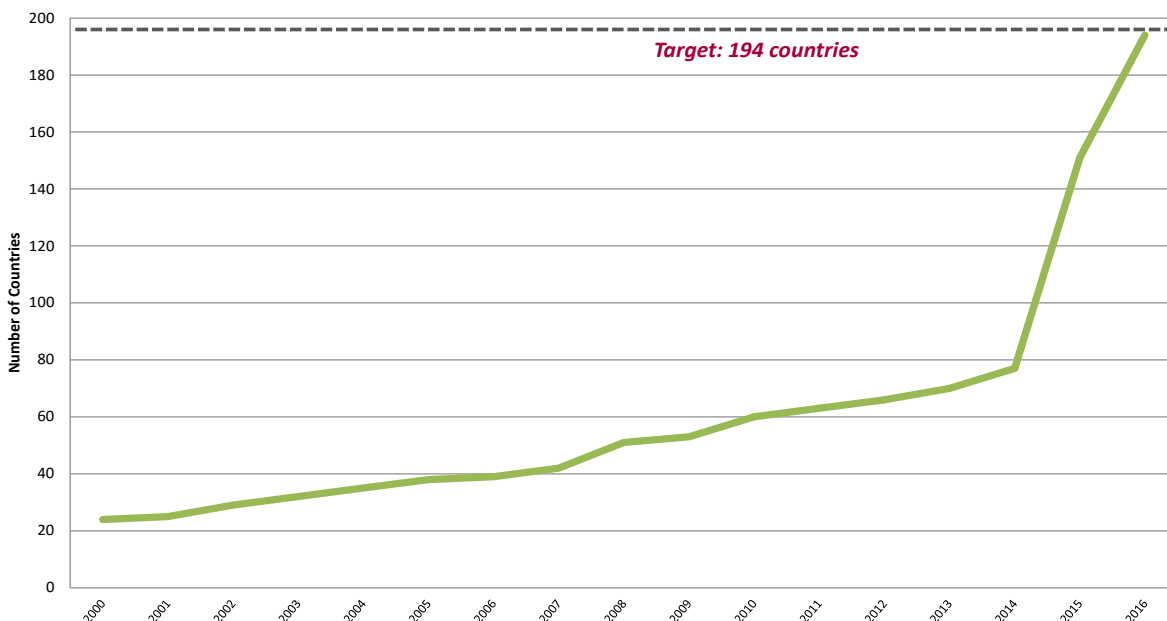


Nineteen of the 47 countries evaluating rotavirus vaccine impact globally are Gavi countries. This includes 15 Gavi countries that are both using rotavirus vaccine and evaluating its impact, and 4 Gavi countries (Indonesia, Kyrgyzstan, Somalia, Viet Nam) that are measuring the potential economic impact of rotavirus vaccine, but have not yet introduced the vaccine.

Note: Excluded from this map are ongoing studies designed to measure rotavirus vaccine impact in settings where the vaccine has not been introduced into the NIP (with the exception of economic impact studies). Gavi countries collecting such pre-introduction data that we are aware of include Bangladesh, Nepal, Pakistan, and Viet Nam.

For any countries with PCV impact studies not shown on the map above, please email Linh Nguyen at linh.nguyen@jhu.edu to provide this information.

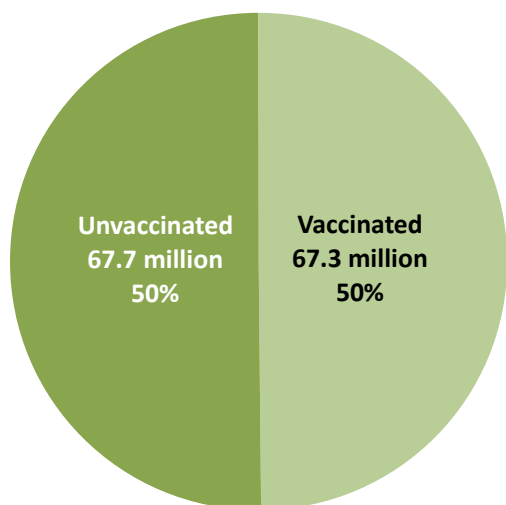
Global IPV Introduction by Year



An estimated 50% of the world’s infants (67.7 million) are not receiving IPV, according to 2014 WHO/UNICEF estimates of national immunization coverage. These children are unvaccinated because either their country has not yet introduced the vaccine (n=31), largely because of supply constraints (since all countries have made the decision to introduce), or they are not being reached by the routine immunization services in their country.

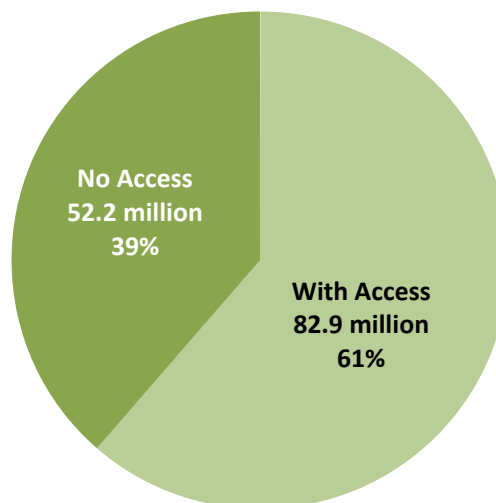
An estimated 39% of the world’s infants (52.2 million) live in countries or regions that have not yet introduced IPV into their National Immunization Program (n=31).

IPV Coverage
(Global Surviving Infants)



IPV coverage is calculated as the number of surviving infants covered by IPV in countries or subnational regions within countries that have introduced IPV. For countries using only IPV (and not OPV) in their schedule, polio3 WUENIC rates were used. For countries using both IPV and OPV, DTP3 rates were used as a proxy to estimate IPV coverage.

IPV Access
(Global Surviving Infants)



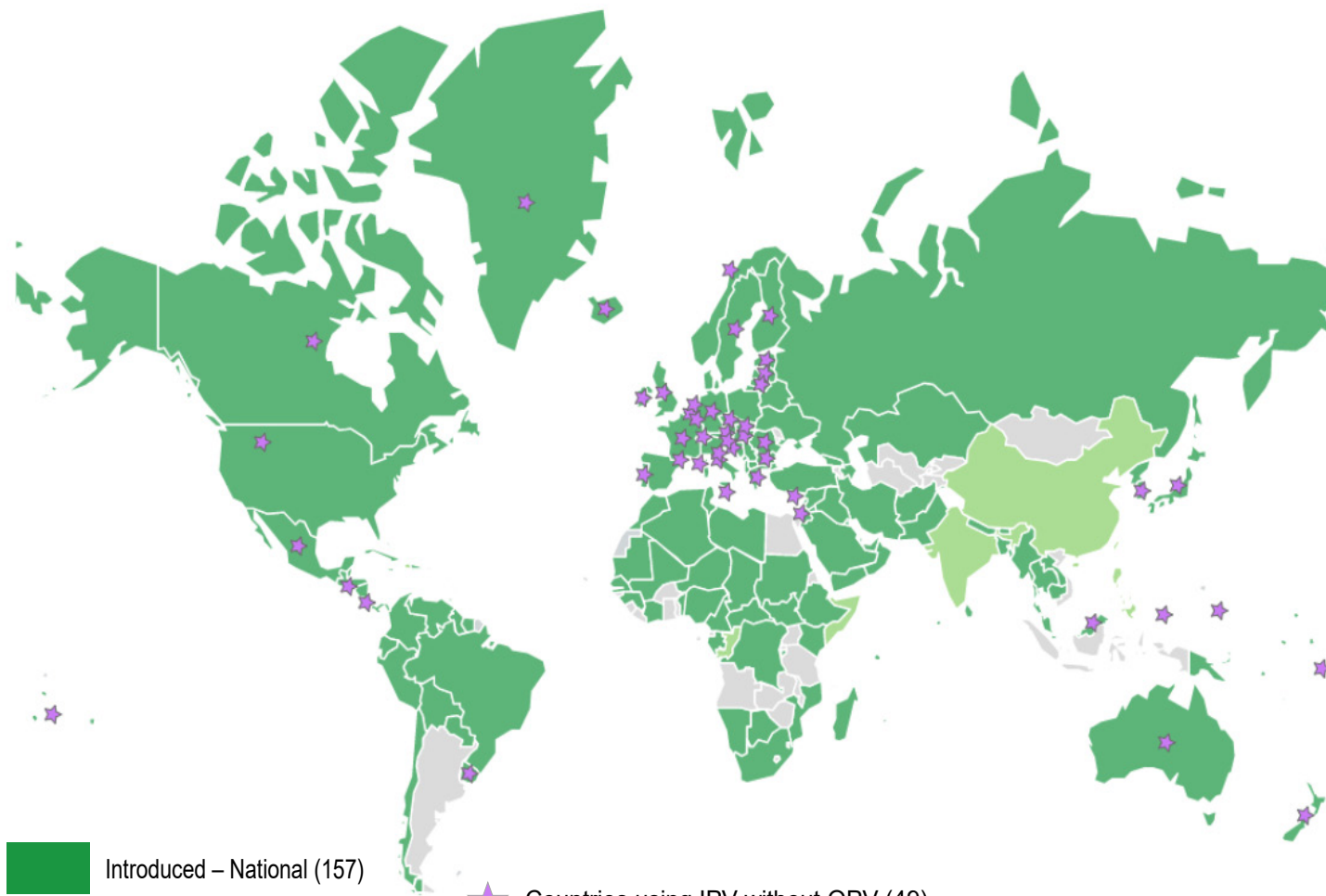
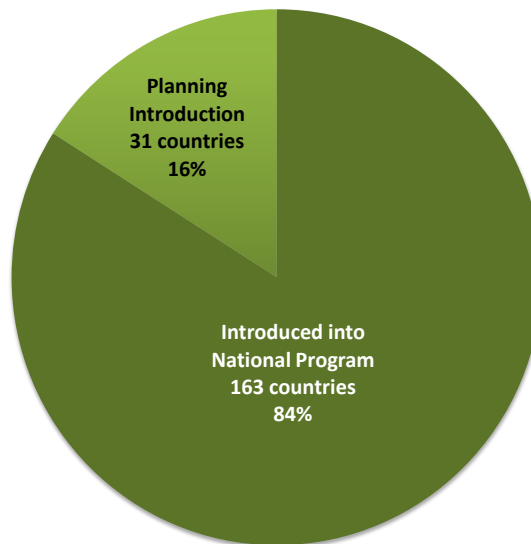
IPV access is calculated as the number of surviving infants globally that live in countries or subnational regions within countries that have introduced IPV.

Global IPV Introduction Status

As of March 2016, 163 countries have introduced IPV into their National Immunization Program; among these, six countries have introduced subnationally. Thirty-one countries have announced plans to introduce IPV into their NIP.

Currently, 49 countries are using IPV exclusively and 114 countries are using both IPV and OPV in their national immunization schedule.

A map of countries that have introduced IPV is below.

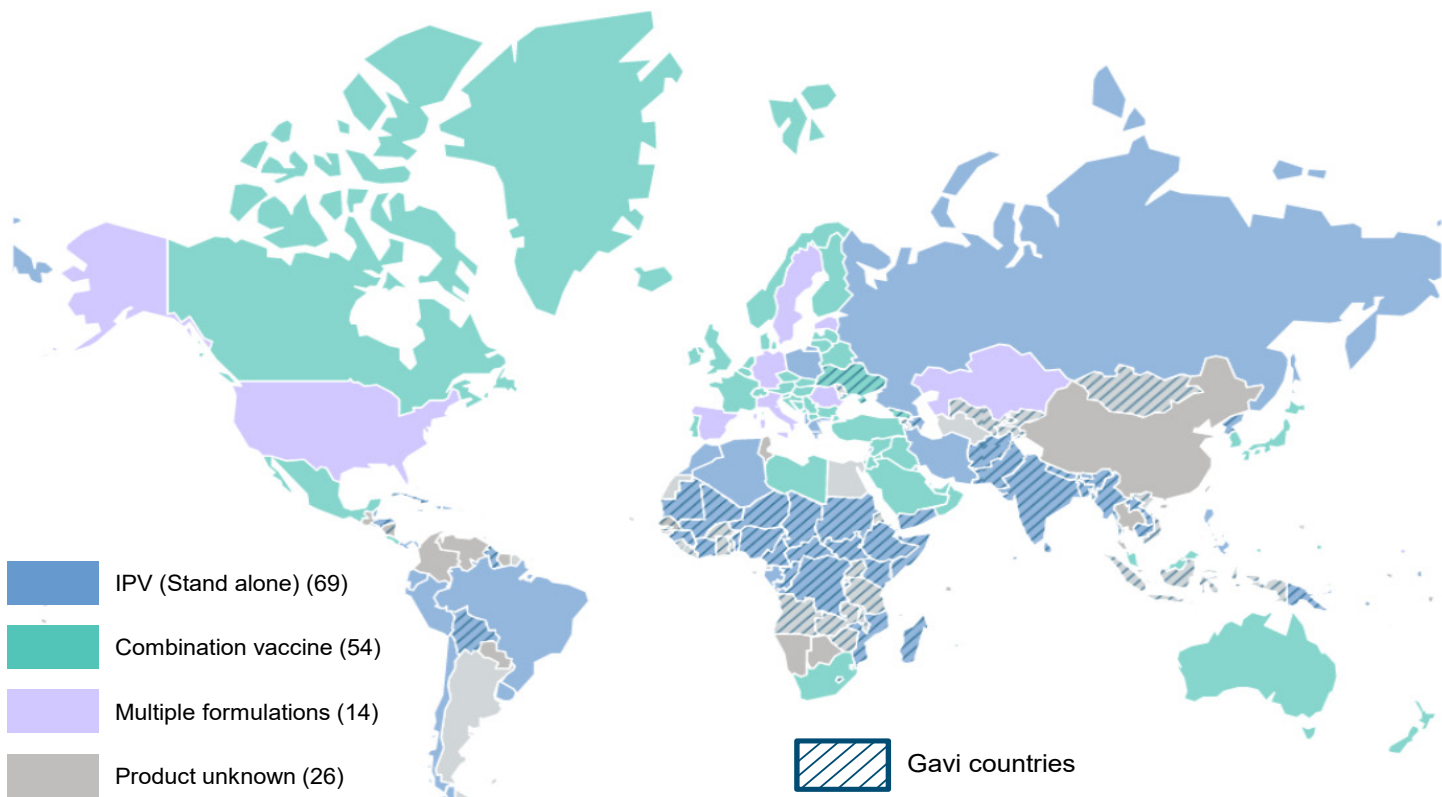


- Introduced – National (157)
- Introduced – Subnational (6)

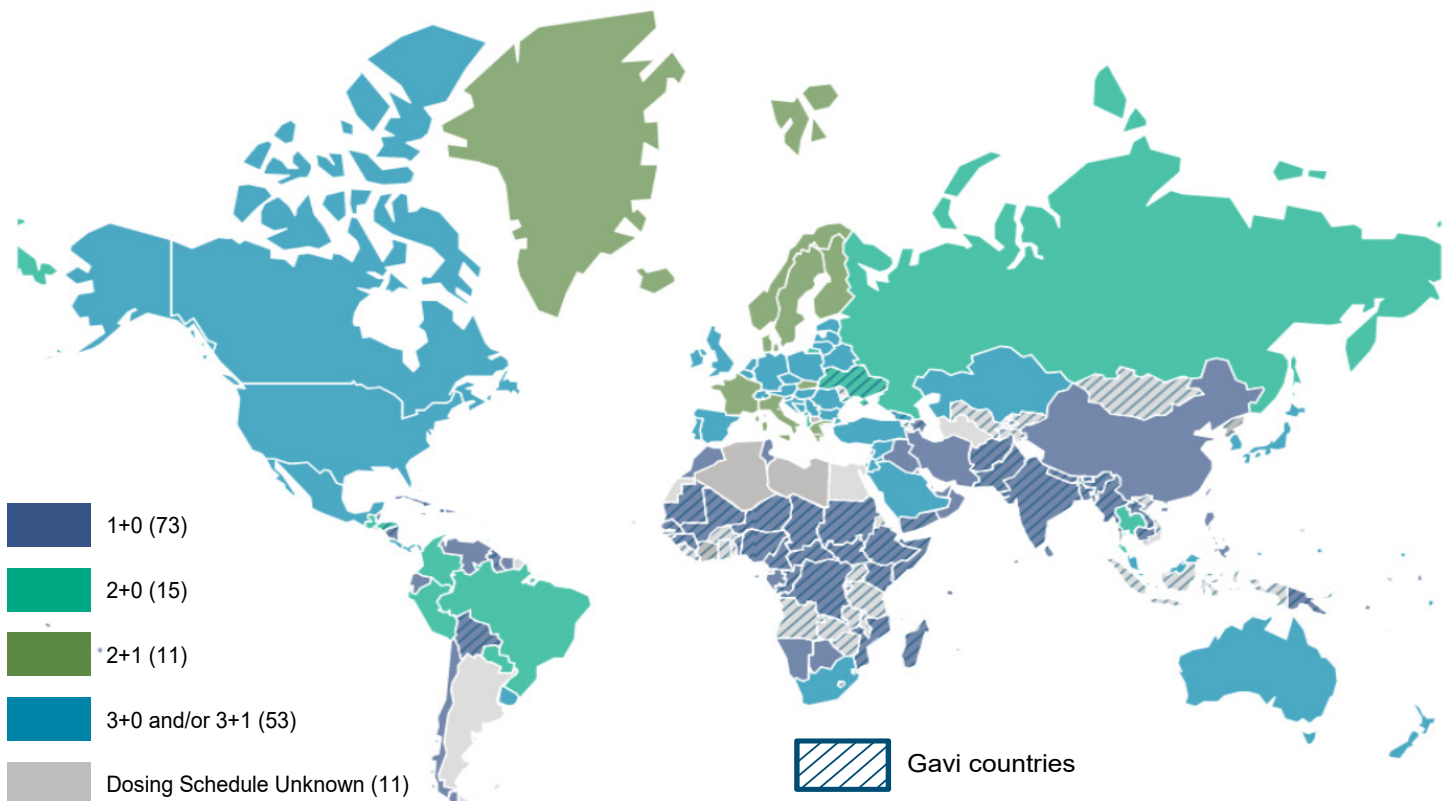
★ Countries using IPV without OPV (49)

Note: All other IPV-using countries are also using OPV in their national schedule.

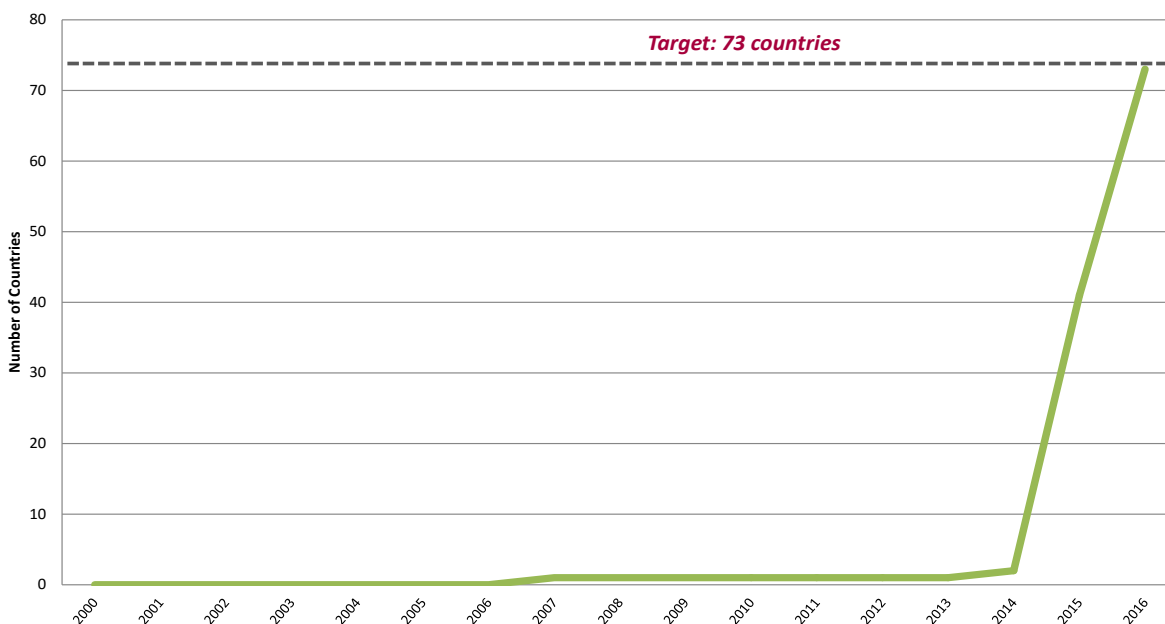
IPV - Current Product



IPV - Current Dosing Schedule



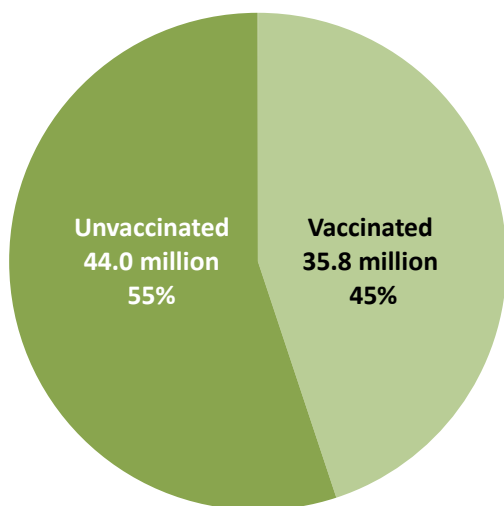
Gavi IPV Introduction by Year



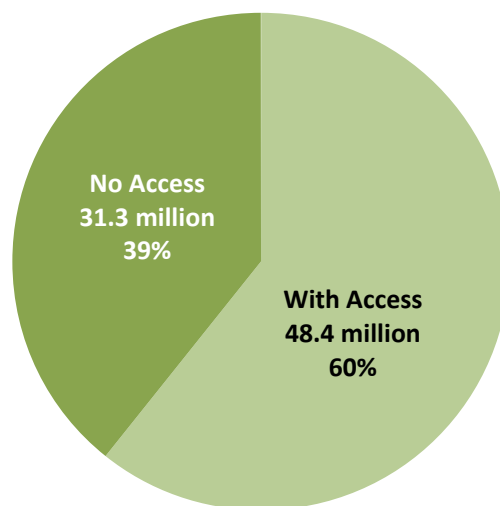
An estimated 55% percent of infants in Gavi countries (44.0 million) are not receiving IPV, according to 2014 WHO/UNICEF estimates of national immunization coverage. These children are unvaccinated because either their country has not yet introduced the vaccine, or they are not being reached by the routine immunization services in their country.

An estimated 39% of infants in Gavi countries (31.3 million) live in countries or subnational regions within Gavi countries that have not yet introduced IPV into their National Immunization Program.

**IPV Coverage
(Gavi Surviving Infants)**



**IPV Access
(Gavi Surviving Infants)**



IPV coverage is calculated as the number of surviving infants covered by IPV in Gavi countries or subnational regions within Gavi countries that have introduced IPV. For countries using only IPV (and not OPV) in their schedule, polio3 WUENIC rates were used. For countries using both IPV and OPV, DTP3 rates were used as a proxy to estimate IPV coverage.

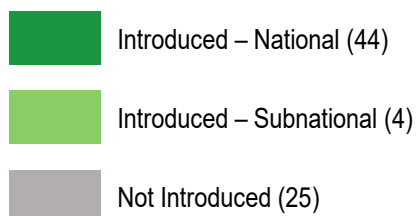
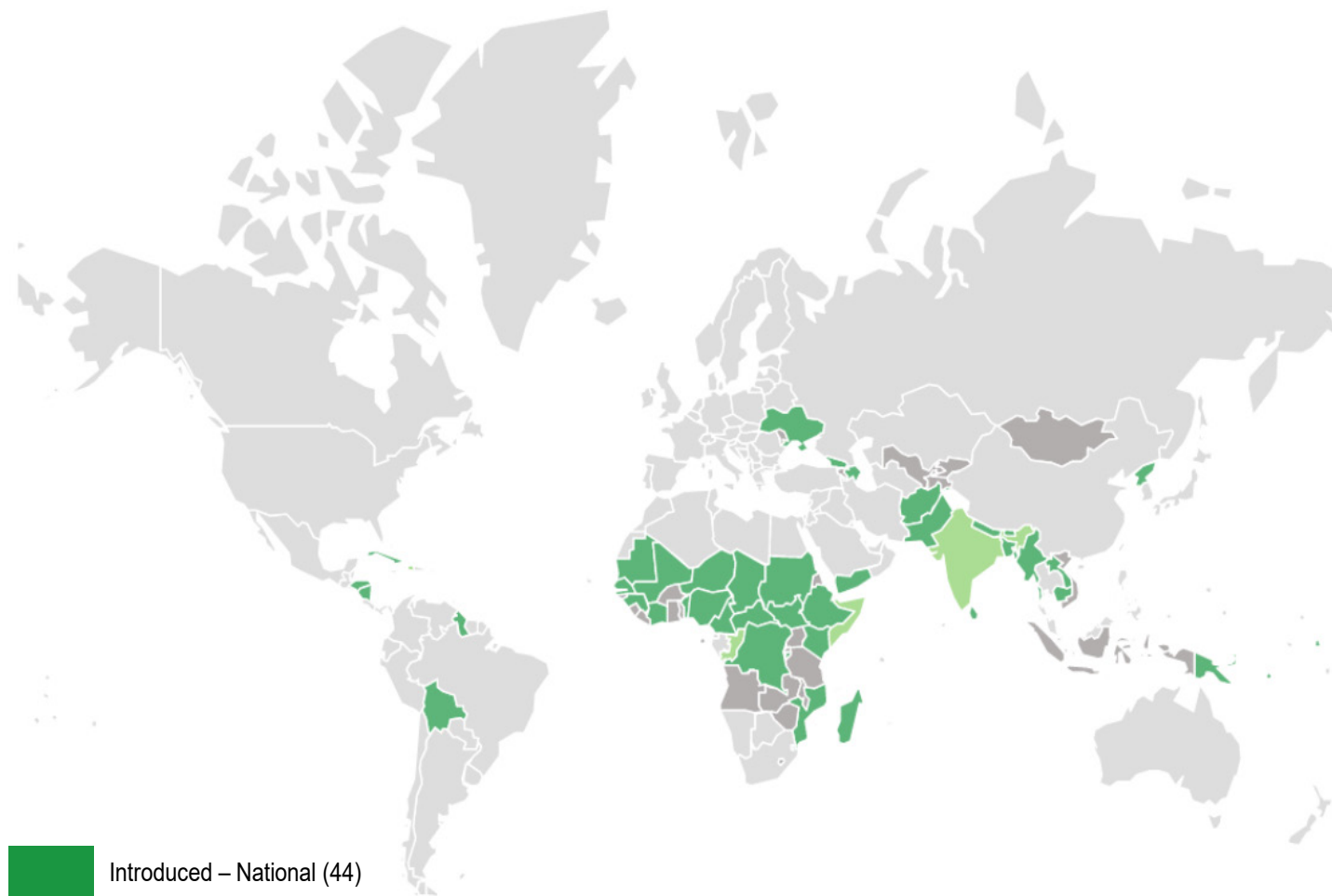
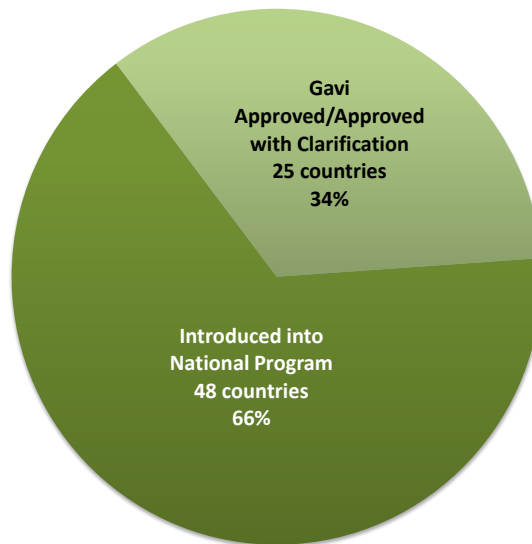
IPV access is calculated as the number of surviving infants that live in Gavi countries or subnational regions within Gavi countries that have introduced IPV.

Gavi IPV Introduction Status

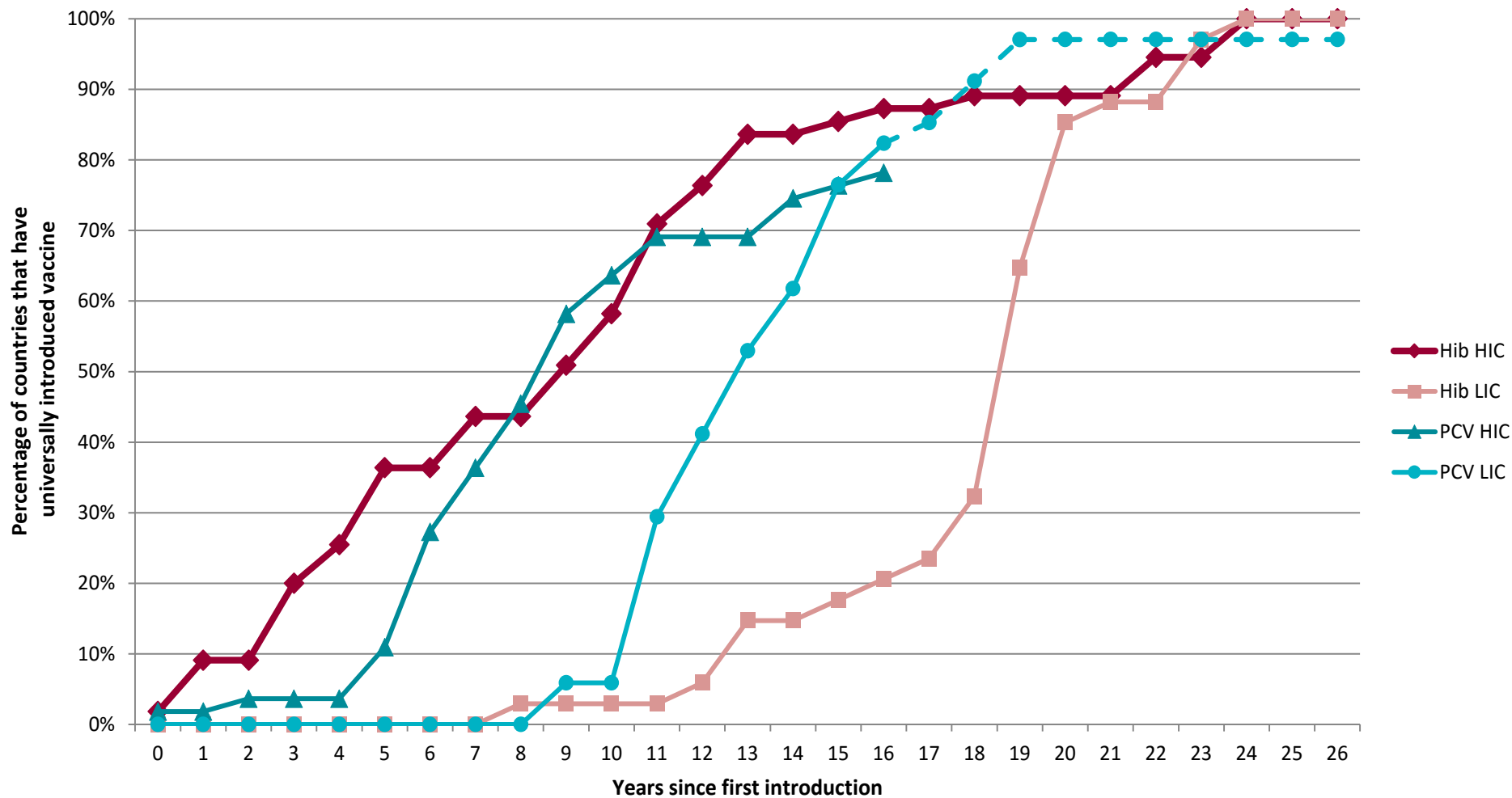
As of March 2016, 48 countries have introduced IPV into their National Immunization Program, four of which have introduced subnationally. Twenty-five countries are approved, with or without clarification, for Gavi support to introduce.

Currently, all 48 Gavi countries that have introduced IPV are using both IPV and OPV in their national immunization schedule.

A map of Gavi countries that have introduced IPV is below.



Vaccine Introduction by Income Group



Note: Limited projections are available for PCV introduction in High-Income Countries

A line graph showing the proportion of high- and low-income countries that have introduced or are projected to introduce PCV and Hib vaccine for infants over time. Year of first introduction is 1989 for Hib vaccine and 2000 for PCV. It took 20 years for Hib vaccine to reach 70 percent of low-income countries. PCV is projected to reach 70 percent of low-income countries five years faster, protecting millions of children sooner from deadly pneumococcal disease.

ACKNOWLEDGEMENTS AND NOTES

This report and VIEW-hub are supported by Gavi, The Vaccine Alliance and the Bill & Melinda Gates Foundation. This report has been generated using data and maps from VIEW-hub, developed and maintained by the International Vaccine Access Center (IVAC) at the Johns Hopkins Bloomberg School of Public Health for use by IVAC and its affiliated projects and partners. VIEW-hub is a new publicly-accessible interactive platform that allows real-time visualization of data on vaccine introduction, use, and impact. Information was gathered from internationally-recognized sources, such as WHO, Gavi, UNICEF, vaccine manufacturers, ministries of health, and news media.

Please note that all projected introduction dates in this report rest on assumptions and actual dates may vary. Vaccine introduction dates do not imply an obligation by Gavi to support coverage.

Disclaimer: The presentation of VIEW-hub maps in this report is not by any means an expression of IVAC's opinion regarding the legal status of countries/territories, their governing authorities, or their official boundaries. On VIEW-hub's website, country borders which are not in full agreement are displayed with dotted lines, which may be difficult to visualize at the global view presented in this report.

Definitions and sources are available within VIEW-hub at www.VIEW-hub.org.

This report and the PowerPoint slides with the report graphics can be found at: <http://www.jhsph.edu/research/centers-and-institutes/ivac/view-hub/>. All maps shown in this report were generated on [VIEW-hub](http://www.VIEW-hub.org) and can be replicated/updated on the site.

For any VIEW-hub-related inquiries, please email Linh Nguyen at linh.nguyen@jhu.edu.

SOURCES

Gavi Eligibility Status	Gavi, The Vaccine Alliance. Gavi Eligible Countries. 2016. Last accessed Jan 2016 at http://www.gavialliance.org/support/apply/countries-eligible-for-support/
DTP3 Coverage Rate	WHO/UNICEF Estimates of National Immunization Coverage. 2014 data as of 10 Jul 2015, update of 11 Aug 2015. Retrieved from: http://www.who.int/immunization/monitoring_surveillance/data/en/
Surviving Infants	United Nations Population Division. World Population Prospects (WPP): 2015 Revision. Retrieved from: http://esa.un.org/unpd/wpp/
Projected Introduction Dates	This information comes from a variety of sources, primarily the most recent Gavi Strategic Demand Forecast and WHO regional projections. For more information, please contact Linh Nguyen at linh.nguyen@jhu.edu .
Dates of Introduction	This information comes from a variety of sources, such as Gavi, WHO, UNICEF, ministries of health, the news media, and IVAC partners/contacts. For more information, please contact Linh Nguyen at linh.nguyen@jhu.edu . It is cross-referenced with WHO information (below). World Health Organization. Immunization Repository. Includes data on introductions through the end of Mar 2016, as of Apr 2016.
Current Vaccine Use Status and Program Type	This information comes from a variety of sources, such as Gavi, WHO, UNICEF, ministries of health, news media, and IVAC partners/contacts. For more information, please contact Linh Nguyen at linh.nguyen@jhu.edu

SELECTED KEY TERMS

For any definitions not provided below, please refer to the data dictionary in [VIEW-hub](#).

Approved: the application meets all the criteria and is approved for Gavi support.

Approved with clarification: the application lacks specific pieces of data, which must be provided generally within a month. Data must be received before the application is considered officially approved for Gavi support.

Children with access: the number of children (based on surviving infants 2015) who live in a country that has introduced the vaccine into the national immunization program. This does not include countries with widespread market use or high-risk programs. For regional introductions, those regions that have introduced may be included and the regions which have not introduced excluded.

Children vaccinated: the number of surviving infants who received the vaccination based on the 2014 coverage rates of countries who have introduced. The WHO/UNICEF estimates of national immunization coverage (WUENIC) coverage rates are used for this figure.

Introduced into national immunization program: the vaccine has been incorporated into the national government's immunization program, either for all children or for special populations at high-risk of disease, and it may include programs that are being phased in over time. This status can apply to any country, regardless of Gavi eligibility. For IPV, this status covers all countries that have introduced at least one dose of IPV into its child national immunization schedule.

Subnational introductions: the vaccine has been introduced into the vaccination schedule for a geographic subset of the country. This status can apply to any country, regardless of Gavi eligibility. Subnational introductions in this report refers to countries with phased national rollouts as well as countries that have introduced only on a subnational level (with no known plans of national scale up).

Gavi application submitted under review: the country has submitted a New and Underused Vaccines Support (NVS) application for this vaccine and is awaiting Gavi evaluation.

Gavi approved/approved with clarification: the country's application to Gavi for New and Underused Vaccines Support (NVS) financing for this vaccine has been approved or approved with clarifications.

Gavi conditional approval to introduce: the application to Gavi for New and Underused Vaccines Support (NVS) for this vaccine does not fulfill specific or significant application requirements. Missing requirements must be provided in a subsequent round to complement the original application. If the conditions are not met within the given timeframe after the first submission, re-submission of a new application is required.

Gavi resubmission: the New and Underused Vaccines Support (NVS) application for this vaccine is incomplete and a full application should be submitted in a future round.

Gavi plan to apply: country has made a public statement (through government or other recommending body on vaccines) that they plan to introduce the vaccine and apply for Gavi New and Underused Vaccines Support (NVS), but has not yet submitted an application.

No decision: the country has not indicated a firm decision to introduce the vaccine into its national immunization program or to apply for Gavi New and Underused Vaccines Support (NVS) for the vaccine.

Non-Gavi planning introduction: a country that is not eligible for Gavi support has plans to introduce the vaccine into its national immunization program and has taken steps to initiate its program, such as contacting the vaccine manufacturer.
OR: A country that is eligible for Gavi support and plans to introduce without it.

Planning introduction: is the combination of countries that have announced plans to apply for Gavi support, Gavi countries that have announced plans to introduce the vaccine without Gavi support, or non-Gavi countries that have announced a plan to introduce.

Risk: program for this vaccine only covers children in special populations at high-risk for disease; this may include children with health conditions, those of vulnerable socioeconomic statuses or ethnic groups, or those living in regions of high risk.

Widespread coverage through private market: most (over half) of the target population is receiving the vaccine through private market use.

APPENDIX

VIEW-hub is a new, interactive data visualization tool, which has replaced IVAC's previous Vaccine Information Management System (VIMS) - developed in 2008. VIMS was a web-based database with key information related to the vaccine introduction, which provided data for the quarterly VIMS Global Vaccine Introduction reports. VIEW-hub has retained important data elements (such as vaccine introduction information) previously found in VIMS, but has expanded both in scope and functionality to better meet the evolving needs of global vaccine stakeholders and decision makers.

Since the launch of VIEW-hub in 2016, the VIMS Global Vaccine Introduction reports developed by IVAC each quarter will now be known as the VIEW-hub reports. The data are continuously updated as information is received, so as to permit real-time reporting.

VIEW-hub was made possible with support from Gavi, The Vaccine Alliance and the Bill & Melinda Gates Foundation.

Use of VIEW-hub:

Through VIEW-hub, users can instantly visualize data on vaccine introductions, product usage, dosing schedules, access, coverage, and more for a number of vaccines. Custom queries and maps, exportable data and graphics, and a map gallery are just some of the interactive features users can access. VIEW-hub extends the functionality and content of the former VIMS, allowing users to track progress and strategize ways to accelerate and optimize vaccine implementation.

Any data on projected introduction dates should not be reproduced or disseminated without prior consent from VIEW-hub personnel.

If data are used in a presentation, please cite VIEW-hub accordingly:

Source: International Vaccine Access Center (IVAC), Johns Hopkins Bloomberg School of Public Health. VIEW-hub Global Vaccine Introduction Report, March 2016. www.jhsph.edu/ivac/view-hub. Accessed: [Day Month Year].

If you have any questions, please contact the Linh Nguyen at linh.nguyen@jhu.edu.