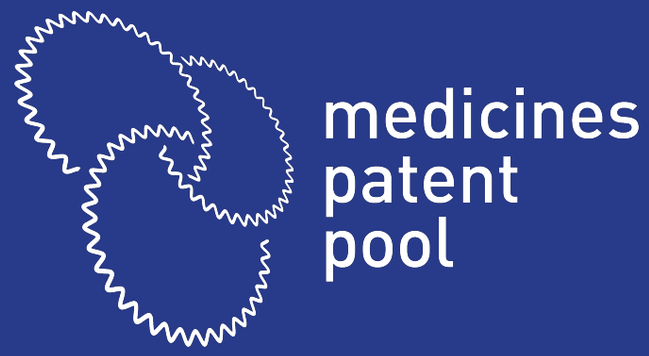
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UPDATE ON PROGRESS OF MPP SUBLICENSEES

June 2020

SUMMARY

This presentation showcases the progress made by MPP licensees (generic pharmaceutical companies).

To date, MPP has signed agreements with ten patent holders for 13 HIV antiretrovirals, three hepatitis C direct-acting antivirals, one tuberculosis treatment and one HIV technology platform.

Licensed products are developed by multiple MPP licensees, with an aim of encouraging competition, reducing market prices and providing faster access to medicines for people living with HIV, hepatitis C (HCV) and tuberculosis (TB) in low- and middle-income countries (LMICs).

Generic medicines are developed and filed with stringent regulatory authorities such as the U.S. Food and Drug Administration (USFDA) and the World Health Organization prequalification (WHO-PQ), ensuring availability of quality assured products in LMICs.

This presentation gives a snapshot of the development of each licensed product and when the product may be filed with regulators. It also shows which countries the local filing is taking place in and when – thereby providing a clearer picture of availability of new formulations in each country.

PARTNERSHIPS WITH INNOVATORS

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abbvie	Boehringer Ingelheim	Bristol-Myers Squibb	GILEAD	janssen	MSD	NIH	Roche
lopinavir ritonavir (adults) lopinavir ritonavir (paediatrics)	nevirapine (non-assert)	atazanavir	bictegravir cobicistat elvitegravir emtricitabine tenofovir alafenamide tenofivir disoproxil	darunavir (paediatric non-assert)	raltegravir (paediatric)	darunavir related	valganciclovir (pricing agreement)

UNIVERSITY OF LIVERPOOL	ViiV Healthcare	abbvie	Bristol-Myers Squibb	PHARCO CORPORATION	JOHNS HOPKINS UNIVERSITY	Pfizer
Solid drug nanoparticles technology	abacavir (paediatrics) dolutegravir (paediatrics) dolutegravir (adults)	glecaprevir/ pibrentasvir	daclatasvir	ravidasvir	sutezolid	

● HIV ● Hepatitis C ● Tuberculosis

medicines patent pool

SNAPSHOT OF MPP SUBLICENCES

	adcock ingram	BC	Aurobindo Limited	AUROBINDO	BEXIMCO PHARMA	CELLTRION	Cipla	DESANO	Emcure	HETERO	LOOΨS	LAURUS Labs	LUPIN	MACLEODS	STANDARD	MICRO LABS LIMITED	Mylan	NATCO	Strides Shasun	SUN PHARMA	TB ALLIANCE	Zydus Cadila	
abbvie — **lopinavir, ritonavir** (LPV/r)	●		●	●				●	●	●			●							●			8
lopinavir, ritonavir (LPV/r) paed							●			●													2
glecaprevir, pibrentasvir (G/P)																	●						1
Bristol-Myers Squibb — **atazanavir** (ATV)				●			●	●	●	●							●						6
daclatasvir (DAC)					●		●			●		●					●	●				●	7
GILEAD — **bictegravir** (BIC)	●	●	●	●				●	●			●	●	●									9
cobicistat (COBI)	●	●	●					●	●				●	●									7
elvitegravir	●	●	●											●									5
emtricitabine (FTC)	●	●	●	●				●	●			●	●	●		●		●					11
tenofovir alafenamide (TAF)	●	●	●	●				●	●		●	●	●	●		●		●					12
tenofovir disoproxil fumarate (TDF)	●	●	●																				3
MSD — **raltegravir** (RAL) paed										●			●										2
ViiV Healthcare — **abacavir** – paed (ABC)				●																			1
dolutegravir – adult (DTG)	●	●	●	*		●	●	●	●	●	●	●	●	●	●	●	●		●	●			17
dolutegravir – paed	●	●		*		●	●	●	●	●		●	●	●		●	●		●	●			14
JOHNS HOPKINS UNIVERSITY — **sutezolid**																					●		1
TOTAL	9	8	8	6	1	2	5	8	8	7	2	6	8	7	1	4	5	3	2	3	1	1	

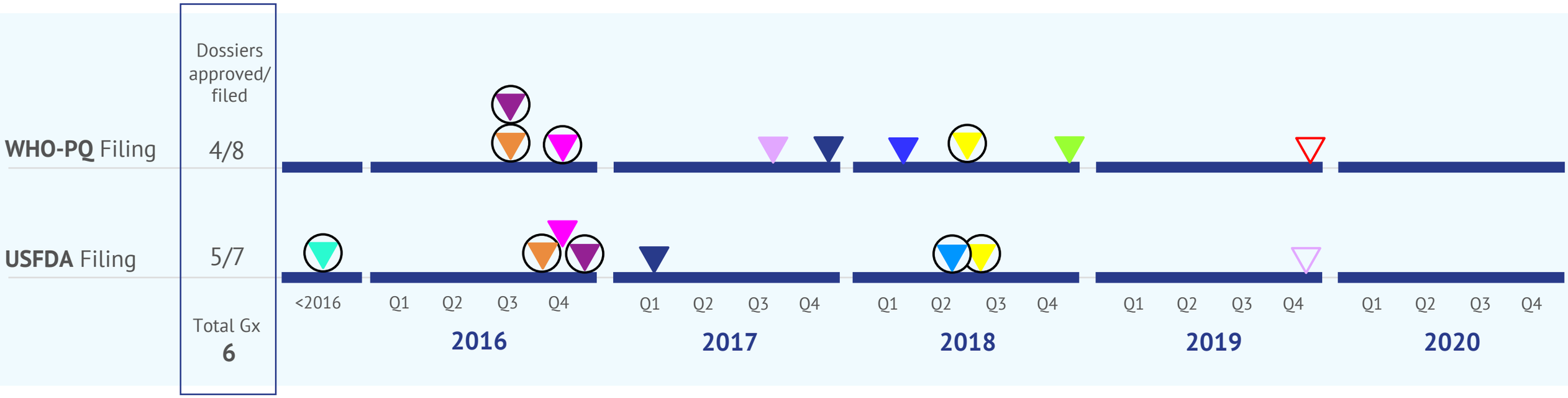
105 SUBLICENCES WITH 22 MANUFACTURERS – **146 ACTIVE PROJECTS**

● HIV ● Hepatitis C ● Tuberculosis

*Aurobindo is a direct Licensee of ViiV. A tripartite agreement Aurobindo-ViiV-MPP has been signed. For the purposes of the following presentation only, Aurobindo will be referred to as an MPP DTG Licensee

TRIANGLE CHARTS: A SNAPSHOT

Triangle charts represent a comparative analysis of each MPP licensee's filings with WHO-PQ and/or USFDA for each product country



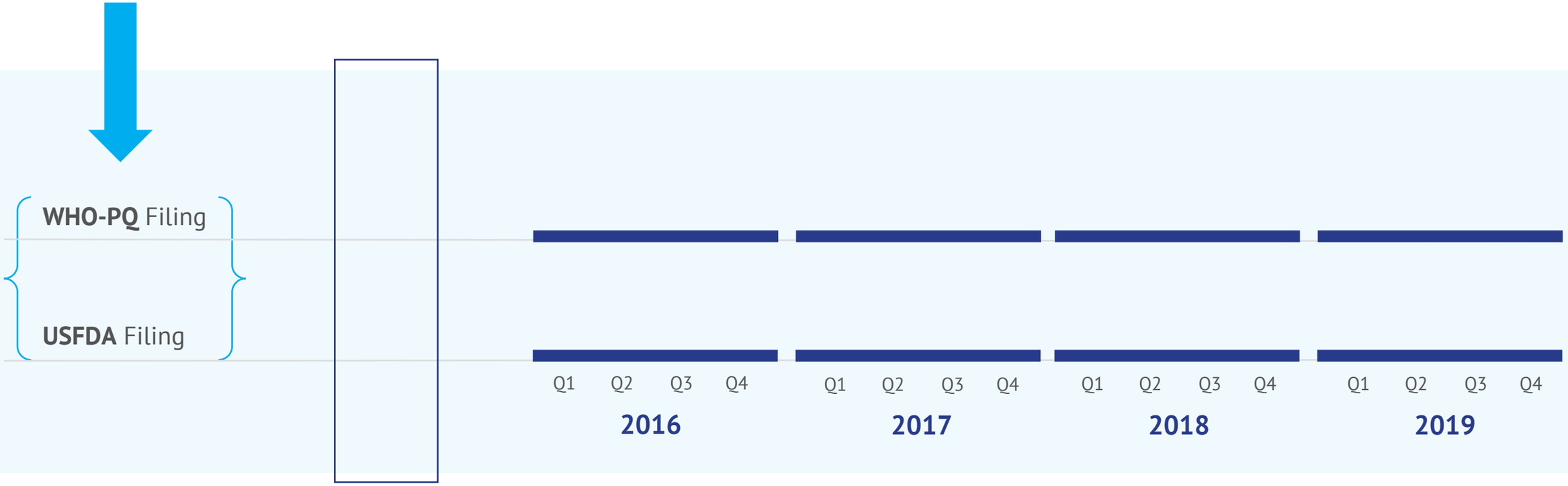
Companies approved ▼ Companies filed ▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

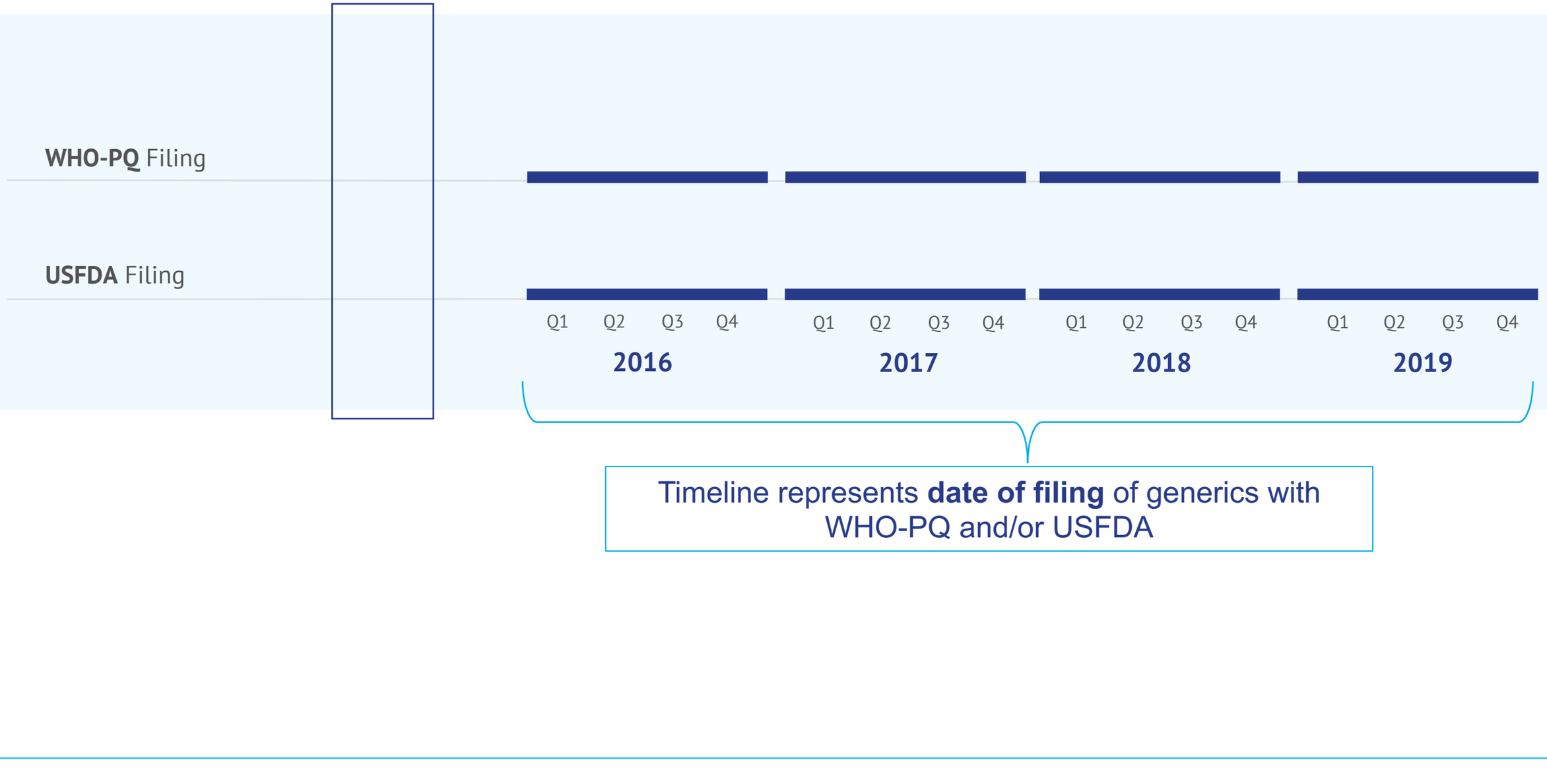
See following slides for explanation

TRIANGLE CHARTS EXPLAINED (1/7)

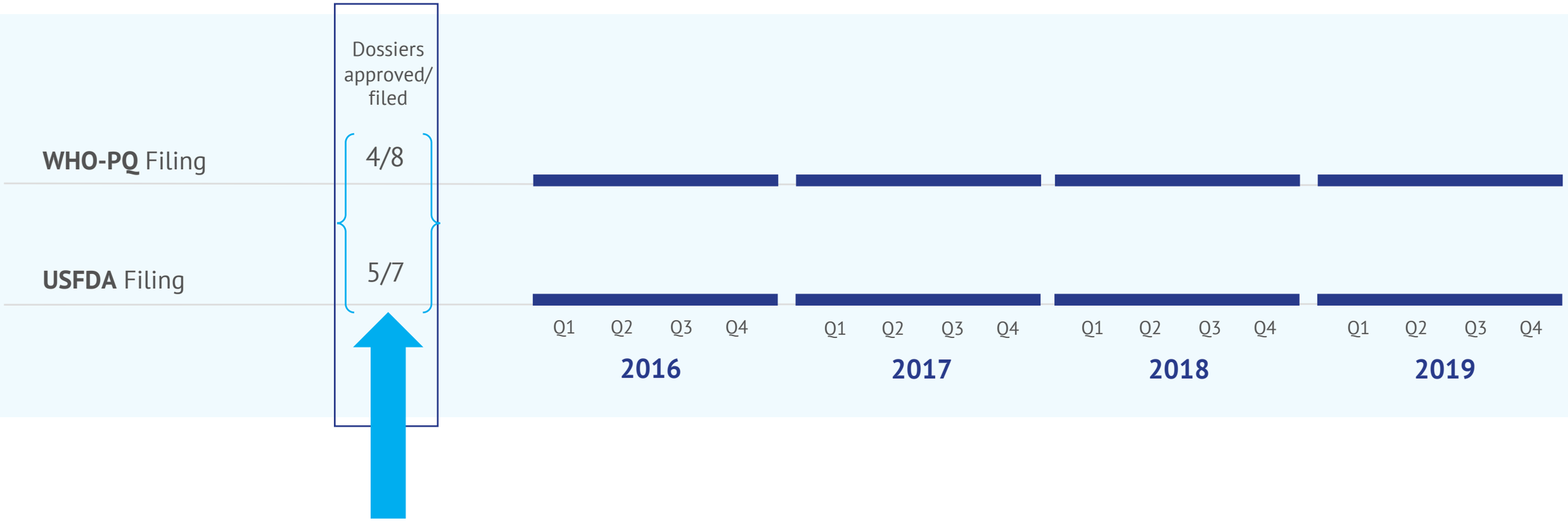
Stringent Regulatory Authorities
for filing the product



TRIANGLE CHARTS EXPLAINED (2/7)



TRIANGLE CHARTS EXPLAINED (3/7)



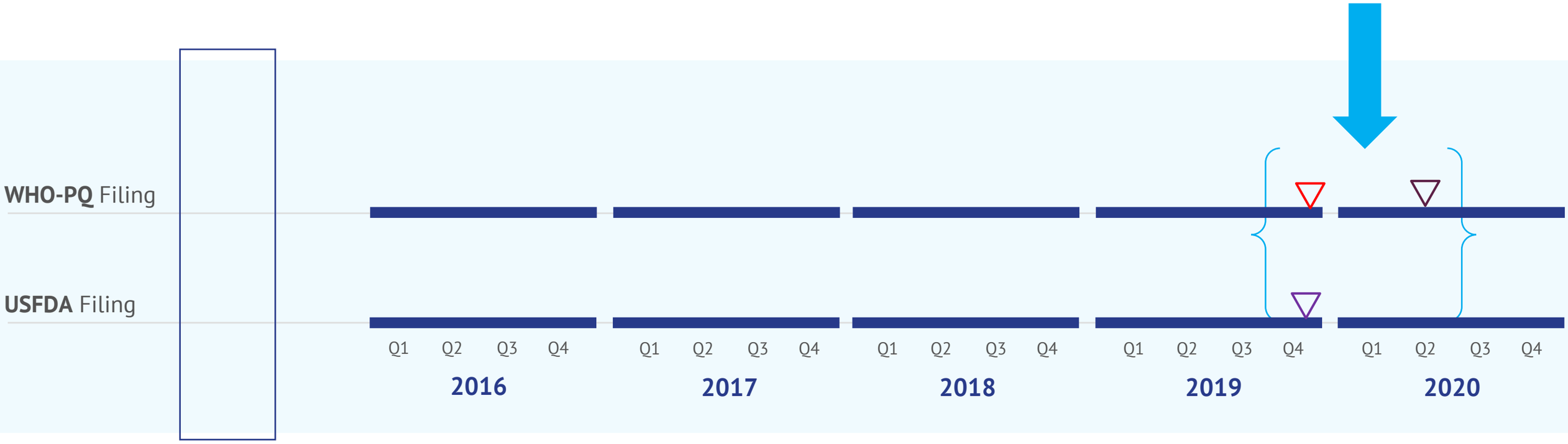
No. of companies that have **received approval out of total companies filed** with WHO-PQ/USFDA

TRIANGLE CHARTS EXPLAINED (4/7)

Total no. of **companies** that **have been approved by** WHO-PQ/USFDA

TRIANGLE CHARTS EXPLAINED (5/7)

Outlined triangles (▽) represent companies **developing the product** and **planning to file** with WHO-PQ and/or USFDA

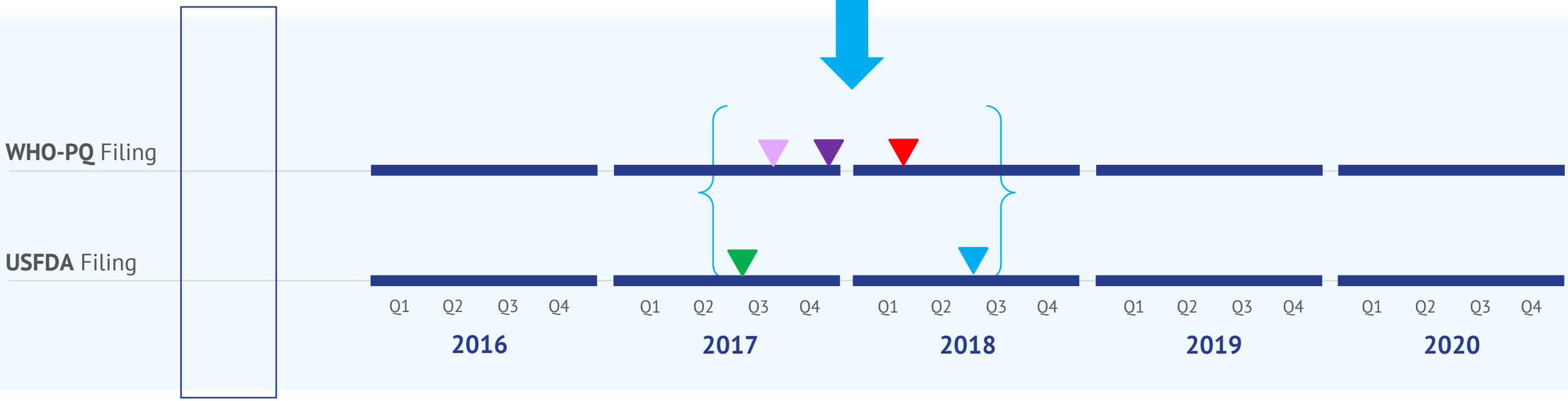


▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

TRIANGLE CHARTS EXPLAINED (6/7)

Filled triangles (▼) represent companies who have **completed the product development** and have **filed** with WHO-PQ and/or USFDA

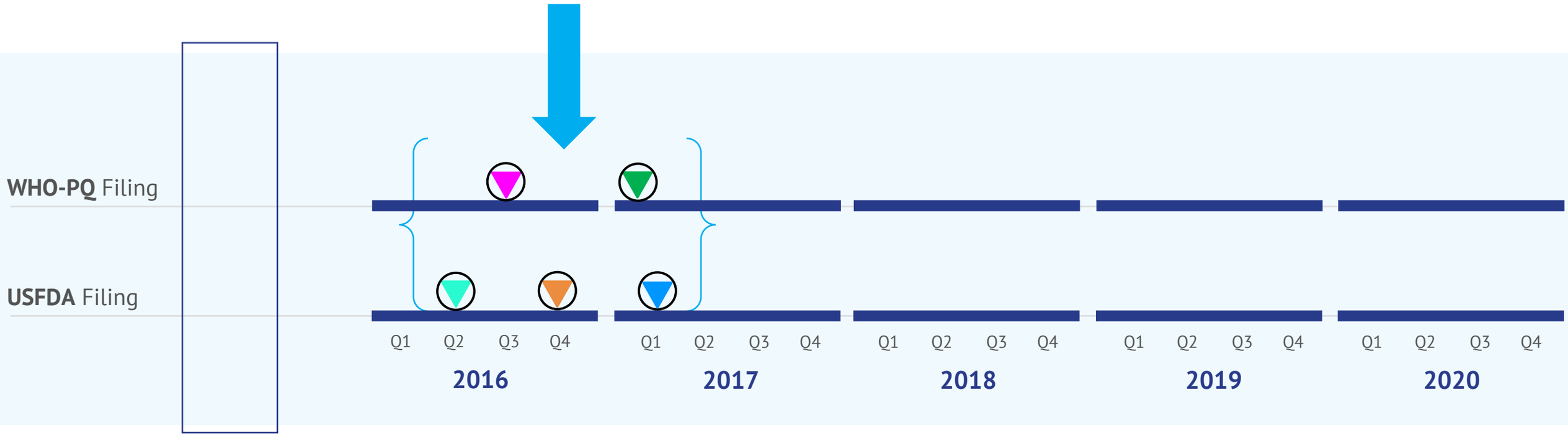


▼ Companies filed

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

TRIANGLE CHARTS EXPLAINED (7/7)

Circled triangles ▼ represent companies who have **completed the product development** and have **received approvals** from WHO-PQ and/or USFDA



▼ **Companies approved**

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

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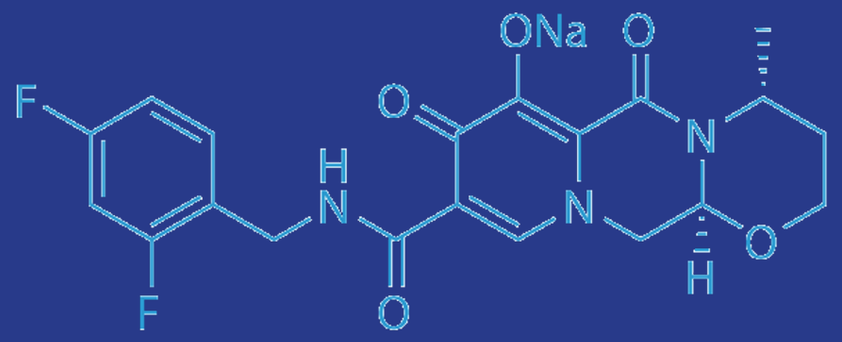
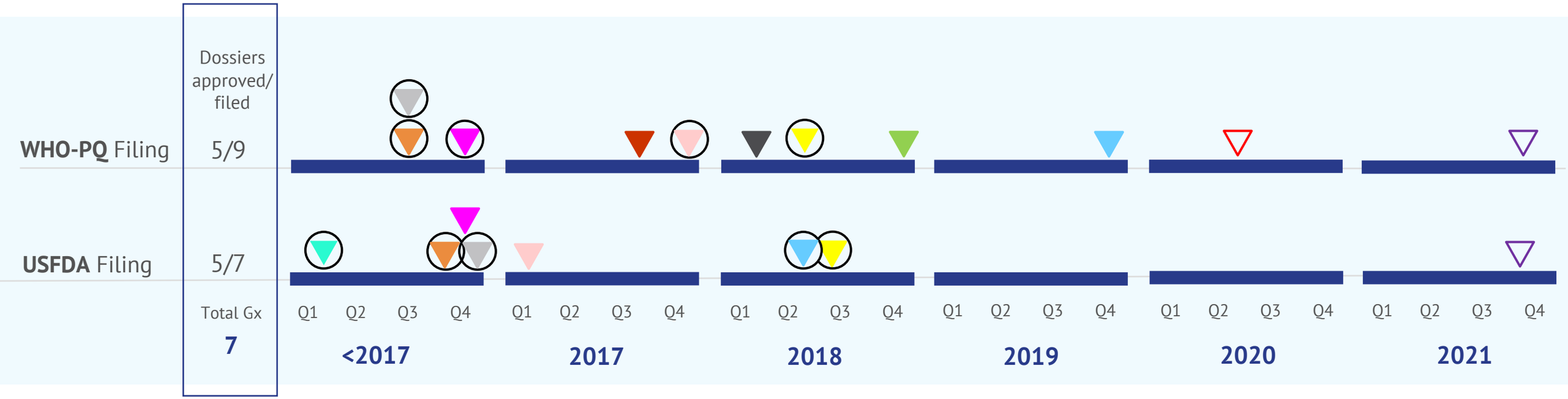
DOLUTEGRAVIR



medicines patent pool

DTG 50mg *(DOLUTEGRAVIR)*



Companies approved ▼ Companies filed ▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

10 MPP LICENSEES HAVE DEVELOPED GENERIC DTG 50MG, OF WHICH, 8 COMPANIES ARE READY TO SUPPLY THE PRODUCT

Licensees Approved*: Aurobindo, Cipla, Emcure, Hetero, Laurus Labs, Micro Labs, Mylan, Strides (GF ERP valid through Aug 2020)

4 licensees awaiting WHO-PQ approvals | **2** licensees awaiting USFDA approvals | **2** licensees developing the product

*USFDA, WHO-PQ and/or Global Fund ERP

Data as of March 2020

DTG 50mg: COUNTRY-WISE FILING STATUS

Generic DTG 50mg has been filed in **62** countries, of which approval has been received from **44** countries.
Filings have occurred in countries where **90.3%** of PLHIV covered by the licence reside

APPROVED (44)
85.3% PLHIV covered

Anguilla*	**Eswatini**	**Mauritius**	**South Africa**
Antigua and Barbuda*	**Ethiopia**	Montserrat*	**St. Lucia***
Bahamas*	**Ghana**	**Mozambique**	**St. Vincent & the Grenadines***
Barbados*	**Grenada***	**Myanmar**	**Tanzania**
Botswana	**Guatemala**	**Namibia**	**Thailand***
Cambodia	**India**	**Nicaragua**	Turks and Caicos*
Congo, Dem. Rep.	**Indonesia**	**Niger**	**Uganda**
Congo, Rep.	**Iran, Islamic Rep.***	**Nigeria**	**Ukraine**
Costa Rica*	**Kenya**	**Peru***	**Uzbekistan**
Côte d'Ivoire	**Lesotho**	Philippines	**Zambia**
Dominica*	**Malawi**	**Rwanda**	**Zimbabwe**

FILED (18)
5% PLHIV covered

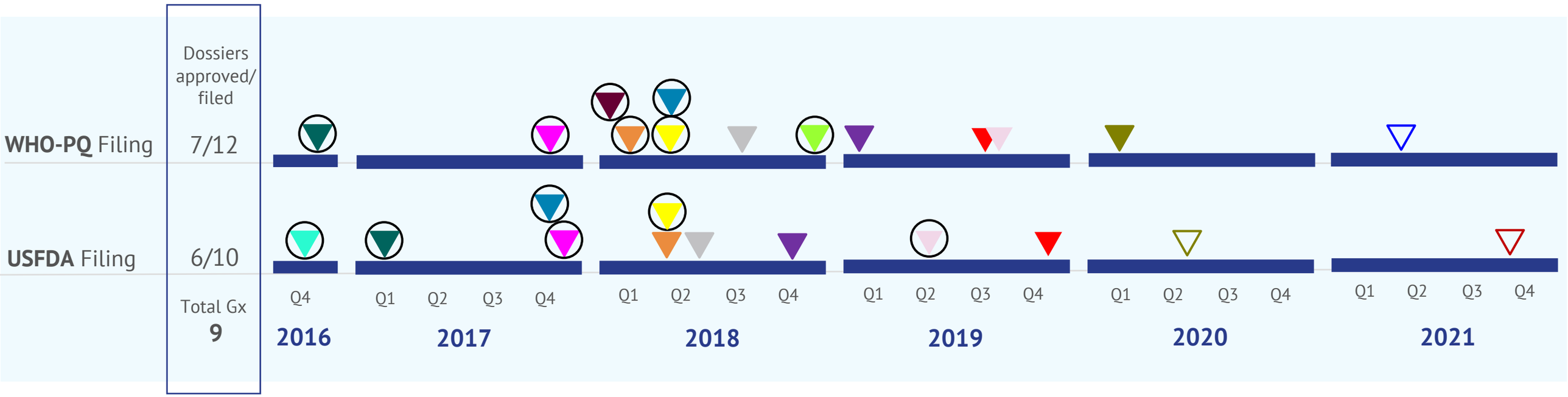
Benin	**Jamaica***
Burkina Faso	**Kyrgyz Republic**
Burundi	**Lebanon***
Cameroon	**Mali**
Chile*	**Pakistan**
El Salvador	**Senegal**
Gabon	Sri Lanka
Guyana	**Tajikistan**
Honduras	Vietnam

1. New filings and approvals in green *vis-à-vis last update (Q4-19)*
2. Countries not included in DTG Adult licence but supply by MPP licensees permitted if no patent is being infringed in that country (*)
3. Countries where DTG has been sold indicated in **bold type**

Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of March 2020

TDF/3TC/DTG (TLD)
(TENOFOVIR DISOPROXIL / LAMIVUDINE / DOLUTEGRAVIR)



Companies approved ▼ Companies filed ▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

13 MPP LICENSEES HAVE DEVELOPED TDF/3TC/DTG, OF WHICH, 9 COMPANIES ARE READY TO SUPPLY THE PRODUCT:

Licensees Approved*: Aurobindo, Celltrion, Cipla, Hetero, Laurus Labs, Macleods, Mylan, Sun Pharma, Strides

5 licensees awaiting WHO-PQ approvals | **4** licensees awaiting USFDA approvals | **2** licensees developing the product

*USFDA, WHO-PQ and/or Global Fund ERP
Recent approvals: Celltrion (USFDA-April 2020), Macleods (WHO-PQ-May 2020), Strides (WHO-PQ-June 2020)

Data as of March 2020

TDF/3TC/DTG: COUNTRY-WISE FILING STATUS

Generic TLD has been filed in **63** countries, of which approval is received from **44** countries.

Filings have occurred in countries where **92%** of PLHIV covered by the licence reside

APPROVED (44)
83.6% PLHIV covered

Anguilla*	**Congo, Rep.**	**Madagascar**	St. Lucia*
Antigua & Barbuda*	**Côte d'Ivoire**	**Malawi**	St. Vincent and the Grenadines*
Argentina*	Dominica*	**Mali**	**Tanzania**
Bahamas*	**Eswatini**	**Mauritania**	**Thailand***
Barbados*	**Gabon**	Mauritius	**Turks & Caicos Islands***
Benin	**Ghana**	Montserrat*	**Uganda**
Botswana	Grenada*	**Mozambique**	**Ukraine**
Cambodia	**India**	**Namibia**	**Uzbekistan**
Cameroon	**Kenya**	**Nigeria**	**Vietnam**
Chad	**Kyrgyz Republic**	**Rwanda**	**Zambia**
Congo, Dem. Rep.	**Lesotho**	**South Africa**	**Zimbabwe**

FILED (19)
8.4% PLHIV covered

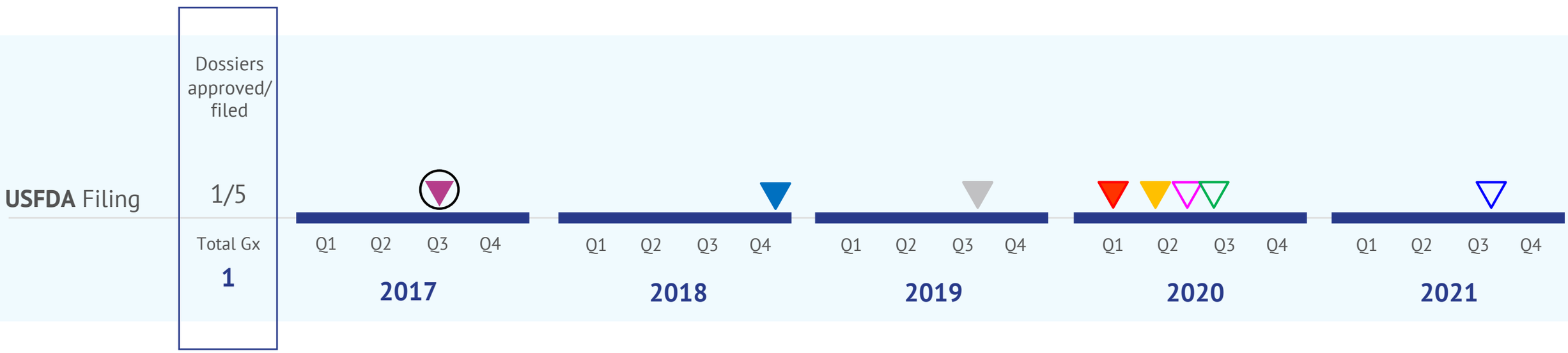
Burkina Faso	**Nicaragua**
Burundi	**Niger**
Chile*	**Pakistan**
El Salvador	**Peru***
Ethiopia	Philippines
Guatemala	**Senegal**
Haiti	**Sierra Leone**
Indonesia	**Sudan**
Lebanon*	**Togo**
Myanmar	

1. New filings and approvals in green *vis-à-vis last update (Q4-19)*
2. Countries not included in TLD licence but supply by MPP licensees permitted if no patent is being infringed in that country (*)
3. Countries where TDF/3TC/DTG has been sold indicated in **bold type**

Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of March 2020

TAF/FTC/DTG
(TENOFOVIR ALAFENAMIDE / EMTRICITABINE / DOLUTEGRAVIR)



Companies approved ▼ Companies filed ▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

5 MPP LICENSEES HAVE DEVELOPED TAF/FTC/DTG, OF WHICH, 1 COMPANY (MYLAN) IS READY TO SUPPLY THE PRODUCT

4 licensees awaiting USFDA approval | 4 licensees developing the product*

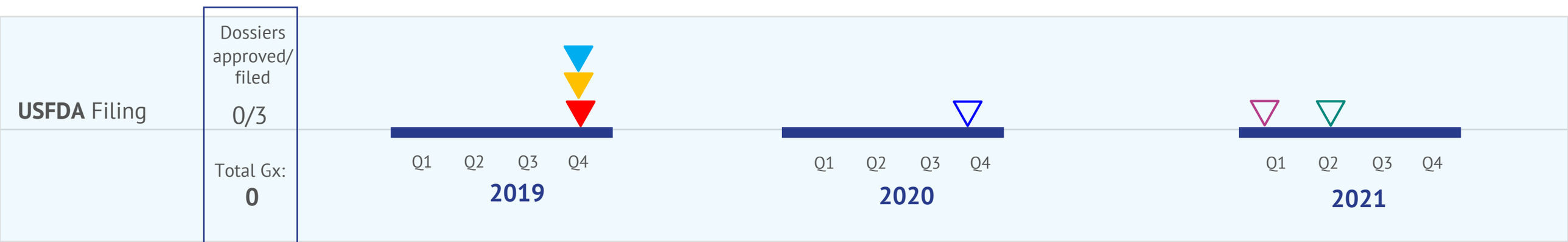
Approved in 8 countries and filed in additional 20 countries | Filings have occurred where 83.5% of PLHIV resides

**We anticipate development by additional licensees to accelerate, once there is an update on WHO's position about use of TAF-containing formulations*

Data as of March 2020

ADDITIONAL FORMULATIONS

TAF/FTC
(TENOFOVIR ALAFENAMIDE / EMTRICITABINE)



▼ Companies filed ▽ Companies planning to file

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

3 MPP LICENSEES HAVE DEVELOPED TAF/FTC COMBINATION AND ARE AWAITING USFDA APPROVAL

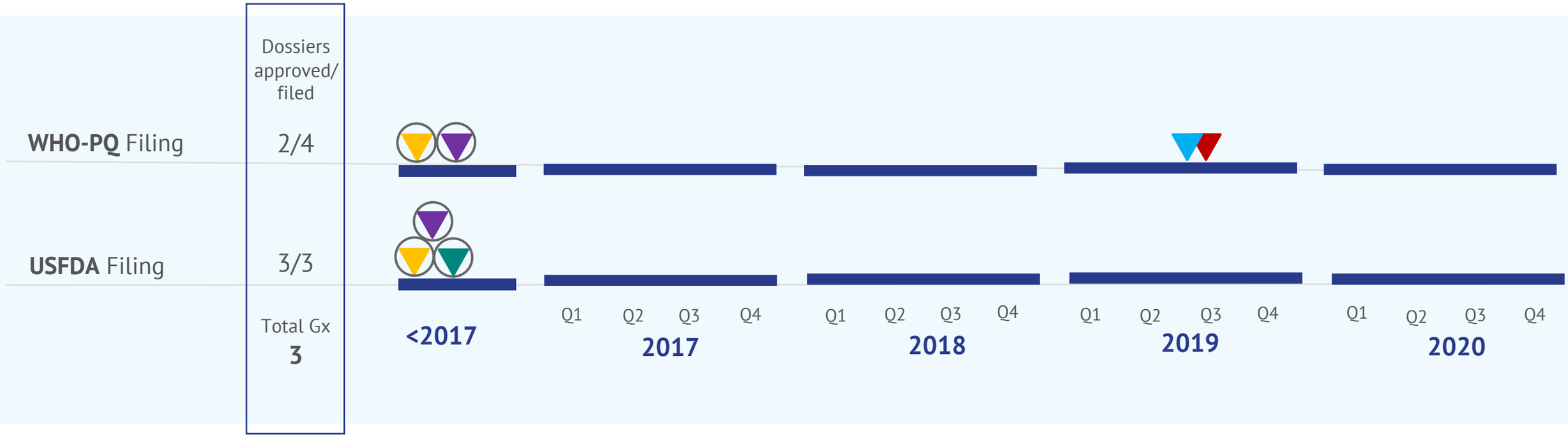
4 additional licensees developing this product*

Note: Gilead has direct licences with additional manufacturers, details of which are not captured here

**We anticipate development by additional licensees to accelerate, once there is an update on WHO's position about use of TAF-containing formulations*

Data as of March 2020

ATV/r
(ATAZANAVIR / RITONAVIR)



Companies approved ▼ Companies filed

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

5 MPP LICENSEES HAVE DEVELOPED ATV/R, OF WHICH, 3 COMPANIES ARE READY TO SUPPLY THE PRODUCT

Licensees Approved*: Cipla, Emcure, Mylan

2 licensees awaiting WHO-PQ approvals

Approved in 35 countries | Filed in additional 13 countries | Filings have occurred where 88.5% of PLHIV reside

*USFDA, WHO-PQ and/or Global Fund ERP

Data as of March 2020

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PAEDIATRIC HIV

PAEDIATRIC PROJECTS

DTG 10mg scored *(dispersible tablets)*	• Two MPP licensees are developing this product; additional licensees plan to initiate development in Q3-20
ABC/3TC/DTG *(60/30/5mg dispersible tablets)*	• Three MPP licensees are developing this product combination; additional licensees plan to initiate development in Q3-20

Data as of March 2020

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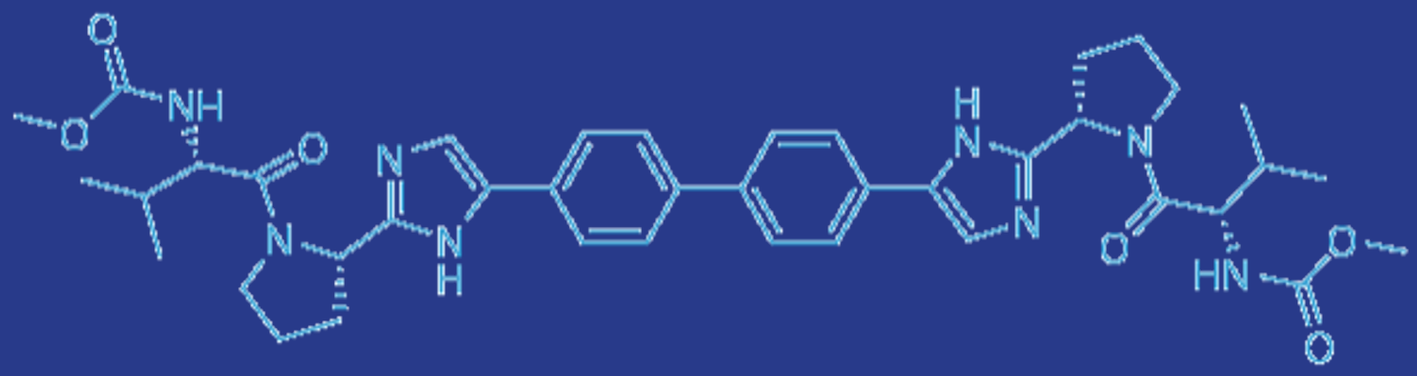
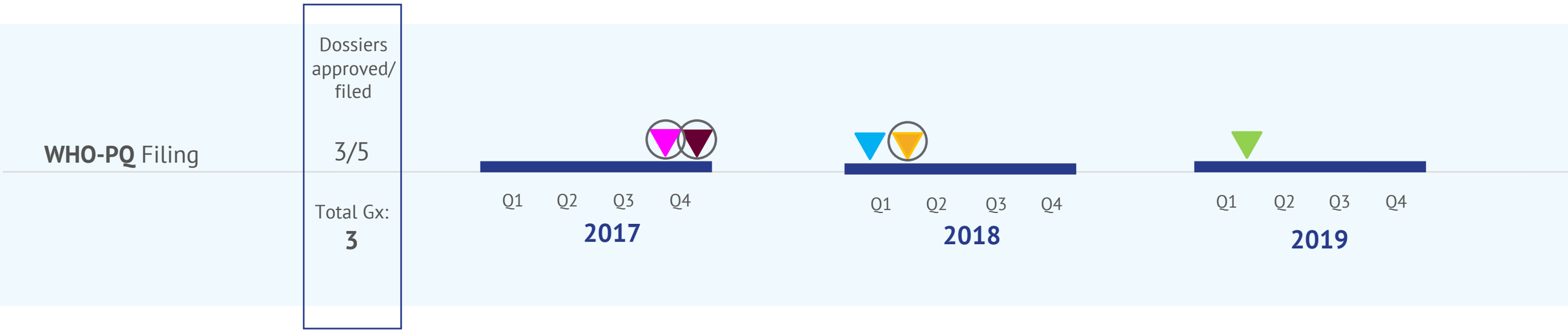
DACLATASVIR



DAC 30mg and 60mg
(DACLATASVIR)



Companies approved ▼ Companies filed

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

5 MPP LICENSEES HAVE DEVELOPED DAC 30/60 MG, OF WHICH, 3 COMPANIES HAVE RECEIVED WHO-PQ APPROVAL

4 licensees ready to supply product: Cipla, Hetero, Mylan, & Laurus (GF ERP valid till Aug 2020)

2 licensees awaiting WHO-PQ approval

Data as of March 2020

DAC 30mg & 60mg: COUNTRY-WISE FILING STATUS

Generic DAC has been approved in 32 countries and filed in additional 22 countries

Filings have occurred where 51.6% of PLHCV covered by the licence reside

APPROVED (32)
45.6% PLHCV covered

Benin	Guyana	**Pakistan**
Cambodia	**India**	Philippines
Cameroon	**Indonesia**	Tanzania
Chad	Liberia	**Turkmenistan**
Congo, Dem. Rep.	**Libya**	Uganda
Congo, Rep.	Malawi	**Ukraine***
Côte d'Ivoire	**Malaysia***	**Uzbekistan**
Dominican Republic	**Mongolia**	**Vietnam**
Eswatini	**Myanmar**	**Zambia**
Ethiopia	Nicaragua	**Zimbabwe**
Gabon	**Nigeria**	

FILED (22)
6% PLHCV covered

Azerbaijan	**Kazakhstan***
Bolivia	Kenya
Botswana	Namibia
Burkina Faso	**Nepal**
Burundi	Paraguay
Costa Rica	**Rwanda**
Georgia	Senegal
Ghana	**Sri Lanka**
Guatemala	Sudan
Haiti	Suriname
Honduras	Togo

1. New filings and approvals in green *vis-à-vis last update (Q4-19)*
2. Countries not included in DAC 30mg & 60mg licence but supply by MPP licensees permitted if no patent is being infringed in that country (*)
3. Countries where DAC 30mg & 60mg has been sold indicated in **bold type**

Note: Sales may occur in countries in the absence of registration via procurement channels, registration waivers and/or exemptions

Data as of March 2020

DAC/SOF
(DACLATASVIR / SOFOSBUVIR)

Companies approved ▼ Companies filed

Note: *Each triangle represents a manufacturer and timelines represent date of filing*

2 MPP LICENSEES HAVE DEVELOPED DAC/SOF, OF WHICH 1 COMPANY (CIPLA) IS READY TO SUPPLY THE PRODUCT

Licensees Approved by WHO: Cipla (co-pack)

Approved in **9** countries and filed in additional **12** countries | Filings have occurred where **55.7%** of PLHCV reside

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MPP’s Impact

MPP, through licensing agreements has enabled developing countries to benefit from access to affordable, quality-assured generics.
Our impact is measured by calculating savings from the purchase of medicines developed by our licensees in additional countries where such generics sale was earlier not possible.

IMPACT OF MPP AGREEMENTS TILL DECEMBER 2019
(HIV, HCV PRODUCTS)

140 Countries

MPP licensees distributing generics

279 New instances of countries

Benefitted from generic competition through MPP agreements

$1441 million

Savings

72% average drop

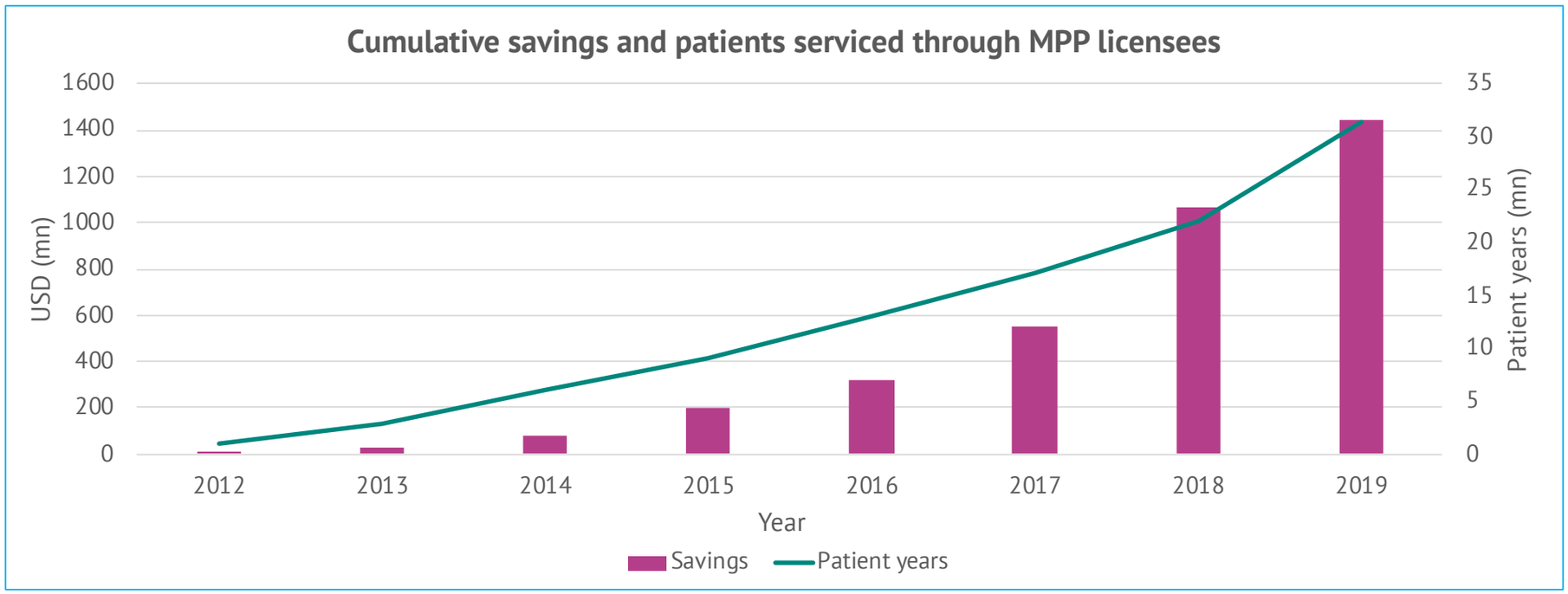
In formulation prices after MPP agreements

31.36 million Patient-years

Serviced by MPP licensees

ASSURED

Review and independent assurance of impact by KPMG*



** Available at:* https://medicinespatentpool.org/uploads/2020/04/KPMG_statement_December_19.pdf

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THANK YOU