OVERVIEW

By 2017, 80% of pregnant women living with HIV were receiving antiretroviral therapy (ART) to prevent the transmission of the virus to their children, averting 1.4 million new infections since 2010 [1]. In spite of this, there are still an estimated 1.8 million children (ages 0-14 years) living with HIV worldwide, and only 52% of them are receiving ART [2]. Without treatment, 50% of those born with the virus will die before their second birthday [3].

The UNAIDS 90-90-90 and Start Free, Stay Free, AIDS Free Framework for Ending AIDS Among Children, Adolescents and Young Women targets will not be met unless efforts to increase children’s access to lifesaving treatment are intensified [4,5]. Effectively increasing treatment coverage for children presents a number of significant challenges. In particular, the development of optimal ART formulations adapted to the specific needs of children lags far behind that for adults by 8 to 10 years. Consequently, of those children who are on treatment, many are receiving suboptimal and age-inappropriate drugs or formulations, leading to high rates of virological failure and HIV drug resistance in these children [6]. New and better-formulated paediatric treatment options are therefore urgently needed.

The many challenges of developing drugs appropriately formulated for children are compounded by a series of market factors that make these efforts costly and complex, discouraging drug manufacturers – especially generic drug manufacturers – from prioritizing investments in new paediatric treatment options. This brief explores the concept of advance procurement as a method for reducing uncertainty within the paediatric ART market and spurring investment in adapted child-friendly drug formulations.

Large antiretroviral (ARV) buyers – most notably national governments (particularly the Government of South Africa), the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) – are uniquely positioned to assert tremendous influence on the global paediatric HIV treatment market. In light of the slow progress in developing and increasing access to new and better formulated drugs for children, there is significant potential for these actors to reduce market uncertainty and catalyse investment in research and development (R&D) through advance purchase commitments of priority paediatric ARVs. Used in conjunction with other market-shaping approaches (such as those implemented by other stakeholders like Unitaid), and together with other proven methods for reducing the cost of development and increasing access to essential medicines, advance procurement has the potential to help close the persistent gap between adult and paediatric treatment coverage.
When developing new treatment options for children, pharmaceutical companies face a range of unique demographic, structural, regulatory, technical, economic and ethical challenges [7,8]. These include ethical issues due to the potential risk of harm associated with the active pharmaceutical ingredients for newly developed drug formulations; this has led to a stepwise approach to clinical trials. This situation could be simplified in the near future as there has been some evolution recently, with regulators considering parallel enrolment of children at the same time as adults in clinical trials, in addition to increasingly recognizing the value of pharmacokinetic modelling approaches for initial dose selection for paediatric populations [9,10]. In any case, undergoing various tests and having blood samples taken may be stressful for children and their caregivers. Globally, recruitment of sufficient numbers of children for clinical studies also remains a barrier.

Technical challenges [i] become barriers to industry’s contribution when attractiveness of the paediatric market is limited, as is the case for HIV and other infectious diseases affecting children located primarily in low- and middle-income countries. As a result, the study of these drugs in children continues to be delayed, and off-label use of adult formulations in paediatric populations remains a too common reality. To help alleviate some of these technical challenges, the World Health Organization (WHO) convened Paediatric ARV Working Group (PAWG), in collaboration with Unitaid, IMPAACT, PENTAid and other key stakeholders recently developed a toolkit for R&D of paediatric ARVs [ii]. However, even in the cases where an adapted formulation is made available, children are often on suboptimal regimens because of delays in their introduction and sustainable uptake at the country level. This is caused by complex factors, such as: insufficient health infrastructure; a lack of sufficient numbers of trained health workers; nutrition and sanitation challenges; and other structural issues that hamper access to medicines and provision of quality care.

[i] Many technical challenges are related to the requirement to develop oral solid dosage formulations that can be split, crushed, sprinkled or dispersed into food and liquid because of children’s inability to swallow pills. Oral liquid formulations should be avoided because of a number of associated logistical challenges, including in terms of transport, storage and cold-chain requirements.

AN UNATTRACTIVE MARKET

Complex and costly R&D challenges for any paediatric formulation are compounded by a market that has been far less responsive to the needs of children living with HIV than to those of adults. With children accounting for less than 5% of all people living with HIV, the paediatric ARV market is relatively small and fragmented across a large number of low- and middle-income countries (and very limited in high-income countries), making the development of new paediatric formulations an unattractive venture to much of the pharmaceutical industry [11]. For example, almost 15 years passed between approval of abacavir (ABC) and lamivudine (3TC) for use in children and availability of sufficient quantities of generic versions in child-friendly formulations in low- and middle-income countries [7]. In addition, a short-product life cycle is not uncommon in the HIV space as new products emerge into the market that present better clinical profiles, shortening the time for manufacturers to recoup their investment.

The welcome progress in expanding access to prevention of mother-to-child transmission services and subsequent successes in reducing the number of new HIV cases among newborns has also increased uncertainty around future demand within the paediatric ART market, further disincentivizing investments in the development of new products. As a result, while the generic ARV market in lower middle-income countries grew to $1.76 billion in 2017, paediatric formulations accounted for only $110 million [12]. However, as treatment coverage is increased towards treatment targets (and despite attrition from overall reductions in the number of children living with HIV from prevention of mother-to-child transmission, mortality and those ageing out to adult care), the actual market for paediatric formulations is projected to increase moderately until at least 2022 – below treatment targets – to around 1 million children on treatment (see Figure 1) [12]. These children will be split across several weight bands, so individual products will still correspond to smaller, fragmented markets. In addition, while the market will moderately increase for a few years, it will later most probably stagnate or start decreasing.

Figure 1: Number of paediatric patients (ages 0-14 years) on ART (actual and projected numbers) and paediatric ART coverage in generic-accessible low- and middle-income countries. Adapted from [12].
REGULATORY FRAMEWORKS

Regulatory measures exist to incentivize the development of paediatric drug formulations for new chemical entities. The European Medicine Agency’s (EMA’s) Paediatric Investigation Plan (PIP) is aimed at ensuring adequate data collection in paediatric studies and supporting the authorization of medicines for children in Europe [13]. In the United States, the Food and Drug Administration (FDA) has implemented a similar system, the Pediatric Study Plan (PSP), as a result of the Pediatric Research Equity Act and the Food and Drug Administration Safety and Innovation Act [14,15,16]. These legal frameworks guarantee the inclusion of paediatric studies in drug R&D plans. Despite the implementation of legal requirements and incentives that give innovator companies extended patent exclusivity in exchange for completing certain requested paediatric studies, the gap between adult approvals in high-income countries and paediatric access in low- and middle-income countries remains. Pragmatic approaches to fill this gap are urgently needed.

To overcome these barriers, a number of measures have been taken to encourage and accelerate the development of safe and effective paediatric drugs. These include various considerations in paediatric trials: the acceptance of studies with fewer participants; requiring less frequent clinical visits for children and their caretakers during studies; the introduction of regulatory measures; and the use of modern technologies that allow for less invasive diagnostic tests. A number of push (development) and pull (purchase) market incentives have also been deployed, including “advance procurement” (also known as “advance purchase commitment” or “advance market commitment”). Push incentives include the work of the Pediatric HIV Treatment Initiative (PHTI [iii]) and the Clinton Health Access Initiative (CHAI, see Box 1). Different push mechanisms may be required depending on technical aspects of the desired drug formulation and the market to be served. In addition, these should be complemented with large-scale pull incentives, such as advance procurement of priority paediatric ARV formulations.

Box 1: CHAI’s Optimal ARV Project

As part of its Unitaid-supported project entitled “Accelerating Patient Access to Optimal Antiretrovirals (Optimal ARV Project)”, CHAI has an ongoing collaboration with ViV Healthcare to expedite the development of affordable and sustainable generic formulations of innovative paediatric products containing dolutegravir (DTG) for the treatment of HIV and to enable their rapid market entry and broader availability to children in resource-limited settings. In November 2017, CHAI released a request for proposals for grants to support development, regulatory filing and commercialization of a DTG 10mg scored dispersible tablet formulation [17]. In July 2018, it was announced that Mylan Laboratories Limited and Macleods Pharmaceuticals Limited were awarded the incentive through the Unitaid-funded grant. Work is ongoing with both generic companies to develop and file the DTG 10mg scored dispersible formulation.

[iii] The PHTI is a collaboration of Unitaid, CHAI, Drugs for Neglected Diseases initiative (DNDi) and the Medicines Patent Pool (MPP); it includes WHO as a technical partner.
**ADVANCE PROCUREMENT**

Advance procurement is aimed at reducing investment uncertainty by ensuring that a minimum market will exist once a drug becomes available for purchase, thereby providing an incentive for manufacturers to invest in developing new products in accordance with a given target product profile or agreed specifications. Advance procurement has already been used to incentivize the development of pneumococcal vaccines (see Box 2).

### Box 2: The Advance Market Commitment for Pneumococcal Vaccines

In 2009, several countries (Canada, Italy, Norway, Russia and the UK) and the Bill & Melinda Gates Foundation agreed to fund an advance market commitment framework for these vaccines [18]. The project is aimed at accelerating the development, availability and uptake of pneumococcal vaccines that meet the needs of developing countries while also serving as a test of the effectiveness of advance procurement as an approach to address market failures. The project, now in place for almost a decade, guarantees an initial purchase price for a defined quantity of new vaccines, thereby stimulating manufacturers’ interest to invest in this area and scale up their production capacity. It also ensures predictable prices for these vaccines (since companies agree to supply vaccines at long-term and sustainable prices); this is beneficial not only for industry, but also for funders (including target countries) as it increases market predictability and reduces risks. By the end of 2017, it was estimated that more than 149 million children had been immunized with the incentivized pneumococcal vaccines since the project started in 2009, with an estimated 655,000 deaths prevented by 2020.

In advance procurement, a buyer commits to fund purchases of drugs that meet certain predefined conditions (that is, characteristics of a target product profile and issues related to production scale and access model). The success of this approach relies on a number of criteria that must be met, including:

- **Target product profile:** Technical specification of the new formulation (related to dosing frequency and pill burden, acceptability, dosage, formulation, stability, regulatory approvals [iv] and production capacity – see criteria on manufacturing rate and scale below)

- **Price guarantee:** A set price guarantee for a fixed amount of products procured over a defined period of time

- **Timeframe of activity:** A set timeframe during which the targeted product will be subject to advanced procurement, after which other products might be included in procurement by the donor, so competition can take place

- **Legal basis:** Legally binding commitment that ensures that funders cannot renge on their commitment, thereby providing initial market predictability

- **Generic production:** Commitment from innovators to facilitate development of generic formulations: through providing technical support, sharing data, facilitating timely registration in a defined list of countries, and licencing through public health-oriented approaches (for example, through the Medicines Patent Pool, or MPP [v])

- **Manufacturing rate and scale:** Commitment from manufacturers to develop the product at a specified pace and to manufacture at agreed scale and scale-up rates (or ensure scale-up production from third parties), in addition to timely registration and adequate distribution matching demand of the product in a defined list of countries.

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[iv] Initially, approval by US FDA, EMA and WHO Prequalification should be considered, with commitment to registering the product in a set list of countries after awarding advance procurement to the manufacturer (see criteria on manufacturing rate and scale).

[v] For most low- and middle-income country, licences are often available for paediatric use of ARVs, in particular through the MPP (see https://medicinespatentpool.org).
Advance procurement may represent one potential mechanism to incentivize the development of some of the most-needed paediatric ARV formulations (see Box 3) by providing a minimum guaranteed purchase volume after the development of specific, highly needed paediatric ARV formulations. However, advance market commitments alone are not enough to create the conditions needed to most effectively motivate new R&D or ensure that the fruits of such efforts will be increased and that there is equitable access to treatment. Indeed, the opportunity costs barrier for manufacturers to invest in the paediatric ARV market may remain high, and further innovative incentives may be necessary [vi]. Public health-oriented licencing can contribute to incentivizing innovation since generic development allows exploration of new combinations and delivery mechanisms not used by innovators. Government and philanthropic subsidies and the continued use of Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) flexibilities, for example, also remain essential to incentivizing innovation and scaling up generic access. Moreover, swift uptake of these priority paediatric formulations at the country level should be supported to avoid downstream implementation delays and ensure that advance procurement impacts are reached. To maximize coordination, large ARV buyers, drug manufacturers and country-level implementers (including policy makers, regulators and programme managers) should liaise early on with existing initiatives. This includes the ARV Procurement Working Group (APWG) under the umbrella of the Global Accelerator for Paediatric Formulations (GAP-f), a platform bringing together the main work streams focused on expediting development and uptake of the most-needed drugs and formulations for children [vii].

Box 3: Prioritizing the most-needed paediatric ARV products

Since 2013, the World Health Organization (WHO) convened the Paediatric ARV Drug Optimization (PADO) group [19]. The purpose of this group is to take stock of the progress made and to advance the paediatric HIV treatment optimization agenda. PADO brings together regulators, researchers, clinicians, programme managers and other stakeholders. It provides a forum to foster coordination across the continuum of drug development, from discovery to uptake. PADO recommendations represent the basis from which recommendations for advance procurement should derive. The latest PADO recommendations are available from the GAP-f website at www.gap-f.org [viii].

[vi] This, for example, could include adding to advance procurement frameworks a set of advantages relevant for tenders in the adult market.

[vii] The Global Accelerator for Paediatric Formulations (GAP-f, www.gap-f.org) aims to promote a faster, more efficient and more focused approach to paediatric formulation development. It is a collaborative framework that can get better paediatric products to the market quicker by: prioritizing products; streamlining the generation of clinical evidence; incentivizing manufacturers; accelerating product development and introduction; and coordinating procurement. The GAP-f formalizes collaboration across sectors to ensure accelerated development and uptake of the most-needed drugs and formulations for children. The GAP-f is an evolving collaboration between a number of partner organizations, which are listed on its website.

[viii] The Paediatric ARV Drug Optimization Meeting 4 (PADO 4) is taking place from 10-12 December 2018. Objectives are to: review medium- and long-term priorities for the development of new ARV drugs and formulations for paediatric HIV treatment and prevention; identify research gaps to be addressed and inform optimal use of ARVs in infants, children and adolescents to enable future development and uptake of priority products; and identify evidence gaps and key principles to guide investigation of ARVs in pregnant and lactating women. Outcomes will be disseminated by the GAP-f.
THE ROLE OF SCALE-UP FUNDERS IN THE PAEDIATRIC ARV SPACE

Generating and guaranteeing a certain level of demand is the cornerstone of advance procurement. As such, purchasers of ARVs play a central role in the success of the concept. National governments (in particular the Government of South Africa), PEPFAR and the Global Fund are among the largest buyers of paediatric ARVs, accounting for more than 80% of all ARV purchases in low- and middle-income countries [20,21]. With market fragmentation as a key factor discouraging investment in R&D (and the fact that the paediatric ARV market may never on its own be highly profitable), large purchasers can have considerable influence over the perceived paediatric ARV market’s attractiveness to drug manufacturers. Large purchasers may remove some of the uncertainty and reduce financial risks, reassuring manufacturers willing to invest into this area because they believe that it is the right thing to do (even if it is not profitable for them) and allowing them to spend time and energy on manufacturing drugs that will actually be used. A number of key organizations have already committed to exploring advance procurement to support the development of priority paediatric ARV formulations (see Box 4).

Box 4: Committing to explore advance procurement of priority paediatric ARV formulations

In November 2017, a High-Level Dialogue at the Vatican on Scaling Up Early Diagnosis and Treatment of Children and Adolescents took place. Key principles of the GAP-f set the basis of discussion, which led to an action plan, including a broad list of commitments from the biomedical industry, regulators, UN agencies, research networks, funders, governments, faith-based organizations, the Holy See and other stakeholders [ix]. The Rome Action Plan promotes three key principles: focusing on priority paediatric drugs and formulations (see Box 3); accelerating development, review and introduction of paediatric formulations; and collaborating to expedite the development and introduction of paediatric products [22]. Under the collaboration element, one commitment of all stakeholders is to “identify alternative incentives and innovative financial mechanisms for the research, development and sustained supply of paediatric formulations, including advanced purchase commitments or other interventions” [x].

[ix] See the full list of participants at https://www.paediatrichivactionplan.org.

PEPFAR

PEPFAR is the largest international funder of the global AIDS response and remains the largest contributor to the Global Fund. As of September 2017, PEPFAR had supported 14 million people on ART, of whom approximately 1 million were children [26]. As the single largest buyer of ARVs for low- and middle-income countries, PEPFAR allocated more than $427 million to drugs in 2017 [27]. The sheer scale of PEPFAR’s investment in treatment has given it tremendous influence over the low- and middle-income country ARV market.

In 2014, PEPFAR, the PHTI and the Global Fund unveiled the Global Pediatric Antiretroviral Commitment-to-Action. Designed to address the various market-based challenges to developing priority paediatric ARV formulations, the commitment-to-action sought to advance the following priorities by 2017 [21] [xi]:

- Accelerate the development of new, high-priority and child-adapted formulations through PHTI with the aim of delivering the highest priority paediatric fixed-dose formulations for first- and second-line treatment by 2017.
- Publish periodic reviews of progress and establish “public recognition awards” for relevant generic and originator pharmaceutical companies.
- Support rapid and streamlined regulatory approval of new paediatric ARV formulations.
- Ensure earlier eligibility for procurement of paediatric ARVs through rapid review of high-priority products for children.
- Ensure improved product-specific demand forecasts and market-sizing data.
- Secure firm financing commitments for paediatric ARVs.
- Support demand creation and uptake of optimal formulations through technical support to national programmes.

Also in 2014, in partnership with the Children’s Investment Fund Foundation (CIFF), PEPFAR launched the $200 million Accelerating Children’s HIV/AIDS Treatment (ACT) initiative with the goal of initiating 300,000 children on ART in nine sub-Saharan African countries over two years [28]. By the initiative’s end date, 557,000 children had been initiated on treatment [29].

National governments

As governments in many low- and middle-income countries invest more in their countries’ HIV programmes, domestic resources are accounting for an increasing proportion of total funding for the global HIV response. In 2017, 56% of all global funding for HIV programmes in low- and middle-income countries came from domestic sources (either public or private) [23]. As a result, national governments are playing a larger role in shaping the global ART market.

With the world’s largest national HIV treatment programme, South Africa purchased more than $420 million of ARVs in 2017 [24]. Of that, 97% was procured by the government, making it a unique example of a middle-income country with an ARV market primarily funded by its own government. In contrast, Nigeria – home to the world’s second largest HIV epidemic – procured less than 1% of the $112 million in ARVs in FY2016 (1 October 2015 until 30 September 2016) through the government, with the remaining 59% and 40% purchased by PEPFAR and the Global Fund, respectively [25].

Though South Africa currently has the greatest ability of any single country to shape the global ARV market (including paediatrics), this is poised to change in the coming years. A growing number of governments will begin financing a larger share of their national ART programmes as they grapple with reduced funds from international donors and, in some cases, prepare to transition out of donor support for their HIV programmes. As a result, low- and middle-income countries will assert greater influence over the course of the global ARV market. However, the impact that such shifts in the global health funding landscape will have on buyers’ power over the trajectory of drug R&D is largely unexplored.

[xi] The partners that formed the GAP-f took advantage of political attention to the paediatric drug formulation issue that was made possible by the commitment-to-action to drive progress forward.
The Global fund

The Global Fund accounts for 8% of all funding for the global HIV response and is the second largest international funder after PEPFAR. In 2017, the Global Fund supported 17.5 million adults and children on ART [30].

In its 2017-2022 strategy, the Global Fund affirmed its commitment to “proactively and deliberately leverage its market position to facilitate healthier global markets for health products” [30,31]. The Global Fund’s approach to and outlook on commodity procurement is guided by its Market Shaping Strategy, a central component of which is the Pooled Procurement Mechanism (PPM), which procured approximately $1 billion in health commodities in 2017, 40% of which were ARVs. A total of 49 countries receiving Global Fund grants were utilizing the PPM to purchase ARVs in 2017. A number of countries receiving Global Fund support for ARVs opt not to participate in the PPM and instead use the funds to make purchases through national procurement systems or international procurement agents.

A major contribution of the Global Fund to consolidating the paediatric ARV market has been the coordination of the Paediatric ARV Procurement Working Group (PAPWG) [32]. This group has made pooled procurement possible for the paediatric ARV market, thereby helping the largest procurers (Global Fund, UNICEF, PEPFAR, Médecins Sans Frontières) consolidate orders and reduce market fragmentation, in addition to reducing uncertainty for manufacturers. This has resulted in a stabilization of the paediatric ARV market, with faster order fill times and less stock-outs. Key to this work has been the procurement of formulations limited to those listed on the Optimal Formulary and Limited-Use List for Paediatric ARVs [33]. This list has helped define the minimum number of existing formulations needed for countries to implement WHO recommended regimens. These two mechanisms have also supported the phase out of suboptimal drugs that were still being procured despite clear guidance not to do so.

Because of its success in supporting the small and fragmented paediatric ARV market, the PAPWG has now been expanded to also cover adult drugs with similar market issues; it has been renamed the ARV Procurement Working Group (APWG). Beyond consolidated procurement, adequate forecasting of paediatric ARV needs, by quarter, is critical to the success of this effort; it is especially useful to industry as it plans its investments in different areas [xii].

In 2016, the Global Fund, with support from Unitaid, launched wambo.org [xiii]. wambo.org is an online health commodity procurement platform developed to “provide accessible prices, increased transparency and improved reliability in the supply of medicines, health products and non-health commodities necessary for HIV/AIDS, TB and malaria health programs” [34]. In its current form, wambo.org allows Global Fund principal recipients using the PPM to “search, compare, purchase and track the delivery of transparently priced, quality-assured products” [35]. The Global Fund is currently running a pilot to allow a small number of principal recipients to utilize wambo.org with non-Global Fund funds; in the future, the platform is envisioned to become a “global public good” accessible by non-Global Fund-supported implementers [36]. The introduction and planned expansion of wambo.org may have implications for the PPM and the global ARV market writ large. How it will influence R&D and what role it can play to expand the utilization of advance procurement has gone largely undiscussed, however.

[xii] Several organizations have contributed to supporting better forecasting, including WHO, CHAI (with support from Unitaid) and Avenir Health. Moving forward, the GAP-f is planning to contribute to further improving paediatric ARV forecasts.

All large ARV buyers (national governments, PEPFAR and the Global Fund)

Are advised to implement advance procurement of the most-needed paediatric ARV formulations, and commit to buying predetermined amounts at a certain level of the projected market size, over a defined time period, of priority paediatric ARV formulations [xiv] that meet the following defined requirements:

- **Dosing frequency/pill burden:** One or a few pills given once daily
- **Acceptability:** Acceptable taste, after-taste, appearance, smell and mouth feel (such as texture and cooling effect)
- **Formulation:** Dosage formulations that can be split, crushed, sprinkled or dispersed into food and liquid
- **Stability:** Products must meet stability requirements for the environments in which use is intended; these requirements should be pragmatic to avoid delaying approval and procurement.
- **Regulatory approvals:** Meeting requirements for use of the product in target populations and countries
- **Production:** Manufacturer’s capacity to scale up production to cover the estimated target population.

National governments

In addition to implementing advance procurement of prioritized paediatric ARV formulations through the APWG, national governments should:

- Adapt national guidelines to match advance procurement timelines. This should be accompanied by training and briefs for healthcare workers to support accelerated uptake.
- Streamline the process for gaining regulatory approval for new paediatric ARV regimens (especially for prioritized formulations defined by PADO – see Box 3).
- Coordinate with funders and other partners to determine how they can best be supported to engage in advance procurement agreements as they begin to finance greater proportions of their national ARV programmes.

PEPFAR

As part of implementing advance procurement [xv] of prioritized paediatric ARV formulations, PEPFAR should:

- Develop an overarching policy to guide its engagement with advance procurement for the purposes of incentivizing investment in priority paediatric ARV formulations. It should clarify what role it can play in making advance procurement commitments and how it can – or is able – to support its implementing partners to do so.
- Model the impact of annual changes in country-level expenditures on the paediatric ARV market. The results of such modelling should be made publicly available and shared with relevant actors during the annual country operational plan (COP) development and review process.
- Regularly report on its engagement with the Global Fund, the Government of South Africa and other notable ARV buyers to more transparently illustrate how efforts to influence and stabilize the paediatric ARV market are being coordinated and executed. This could be included in the programme’s annual report to the US Congress.

The Global Fund

As part of implementing advance procurement of prioritized paediatric ARV formulations, the Global Fund should:

- Initiate a transparent discussion on its engagement with advance market procurement during the development of its next market-shaping strategy. Other large ARV buyers, members of the private sector, civil society and communities affected by HIV should be actively and consistently included in this discussion.
- Consider how its influence on the paediatric ARV market and the course of health commodity R&D may shift as countries “transition out” of Global Fund financing. The Global Fund’s overall impact on the global ARV market and the trajectory of health R&D in the short and long term should be a prioritized topic for consideration as it considers future revisions to relevant policies.
- Investigate and report on the expected impact of any future expansion of the online health commodity marketplace, wambo.org, on the ability of individual governments and their own PPMs to engage in advance procurement agreements.
The exact amounts will depend on specific product characteristics, including the projected costs of R&D, estimated market size (as forecasted by GAP-f partners, see [xx]), and most likely wave duration and duration in national treatment guidelines. This could represent 10–25% of the projected market size over a 2–3 year period. Advance procurement may best focus on drug formulations confirmed as short-term priorities by PADO (see Box 2), clearly when dosing recommendations would also be available.

Although there are perceptions that the US Government may not be able to contribute to innovative financing mechanisms, such as advance procurement, a 2010 report by the Center for Global Development (see http://bit.ly/2GQO50) outlines a more nuanced perspective. US budgetary laws and regulations require an appropriation by the US Congress for the government to commit to any legally binding obligations. In addition, although these amounts are committed for spending in future years, they effectively reduce budgets available for current fiscal year spending. Nevertheless, there are options around this. The US Government may decide to appropriate funds (especially in the case of relatively small amounts compared with overall spending – as may be the case for advance procurement of a limited number of priority paediatric ARV formulations), or it may announce commitment to such a mechanism through a non-legally binding mechanism backed, for more financial certainty, by guarantees from a third party. As rightly pointed out by Towse and Kettler in WHO’s April 2015 Bulletin (see http://bit.ly/3ePOF1H), “The correct structure and design [of an advance procurement mechanism] may only be determined through the process of taking action to set one up.”

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ABOUT THE INDUSTRY LIAISON FORUM

The International AIDS Society (IAS) Industry Liaison Forum (ILF) works to promote and facilitate the full contribution of the biomedical industry to the global HIV response. By organizing a number of bespoke meetings on key topic areas, the ILF brings to the foreground the contribution of an interdisciplinary group on current and emerging issues. The ILF also builds on its collaboration platform to address a range of issues in paediatric HIV – including through its role as a GAP-f partner – and regulatory affairs. A multi-stakeholder ILF Advisory Group guides this work.

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