technopolis group

September 2021

End-of-grant evaluation Medicines Patent Pool (MPPII)

Final report

September 2021

End-of-grant evaluation Medicines Patent Pool (MPPII)

Final report

Dr Thyra de Jongh, Liana Petrosova, Veerle Bastiaanssen, Erika van der Linden, Geert van der Veen

Table of Contents

Figures

Tables

Acronym List

Abbreviation	Meaning
ABC	Abacavir
APIs	Active Pharmaceutical Ingredients
ATMF	Access to Medicine Foundation
ARV	Anti-Retroviral medicine
ATV	Atazanavir
BDQ	Bedaquiline
BIC	Bictegravir
CAB	Cabotegravir
CHAI	Clinton Health Access Initiative
CSO	Civil Society Organisation
COBI	Cobicistat
CL	Compulsory Licensing
C-TAP	COVID-19 Technology Access Pool
COVAX	COVID-19 Vaccines Global Access initiative
CSO	Civil Society Organisations
CSR	Corporate Social Responsibility
DAA	Direct-Acting Antiviral
DAC	Daclatasvir
DOR	Doravirine
DTG	Dolutegravir
EML	Essential Medicines List
ETC	Emtricitabine
EU	European Union
EVG	Elvitegravir
FDA	Food and Drug Administration
FDC	Fixed-Dose Combination
FTC	Emtricitabine
G/P	Glecaprevir/Pibrentasvir
GAP-F	Global Accelerator for Paediatric Formulations Network
Global Fund	The Global Fund to Fight AIDS, Tuberculosis and Malaria
HCV	Hepatitis C Virus
HIC	High Income Country
IP	Intellectual Property

IFPMA	International Federation of Pharmaceutical Manufacturers & Associations
ITPC	International Treatment Preparedness Coalition
KPI	Key Performance Indicator
LA	Long-acting
LPV/r	Lopinavir, ritonavir
LIC	Low Income Country
LMICs	Lower and Middle Income Countries
L-MIC	Lower-Middle Income Country
MedsPaL	Medicines Patents and Licenses database
MoU	Memorandum of Understanding
MPPI	Medicines Patent Pool first Unitaid grant
MPPII	Medicines Patent Pool second Unitaid grant
MDR-TB	Multidrug-resistant Tuberculosis
MSF	Médecins Sans Frontières
NCD	Non Communicable Diseases
NGO	Non-Governmental Organisation
PMP	WHO Prequalification of Medicines Programme
PQ	Prequalification
QRM	Quarterly Review Meeting
RAL	Raltegravir
SDC	Swiss Agency for Development and Cooperation
SC	South Centre
SDG	Sustainable Development Goal
SRA	Stringent Regulatory Authority
TAF	Tenofovir Alafenamide
TB	Tuberculosis
TDF	Tenofovir Disoproxil Fumarate
TRIPS	Trade-Related Aspectsof Intellectual Property Rights
TB	Tuberculosis
TWN	Third World Network
U-MIC	Upper-Middle Income Country
USD	United States Dollars
VL	Voluntary Licensing
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation

Executive Summary

Introduction

Voluntary licensing as a mechanism for access to medicine

Whilst innovative medicines and health technologies have been developed at a fast pace over the last few decades, relatively few have become available in low- and middle-income countries (LMICs). The reasons for this lack of access to affordable medicines include, but are not limited to:

- The resource constraints of LMICs for procuring high-priced innovative medicinal products
- Limited commercial interest of innovator companies to directly register and market products in LMICs
- Limited capacity of health systems in LMICs to support delivery and scale-up of innovative medicinal products
- The structure of intellectual property (IP) systems, which grant a time-bound exclusive market right to patent holders. Whilst IP protections give innovators the opportunity to recoup investments, they also delay the development of lower cost generic versions of medicines which are important for ensuring access in countries with limited purchasing power. It also precludes other companies from developing new formulations of the still-patented medicine that are better suited for use in low-resource settings or for specific patient populations, such as children.

The barriers formed by the combination of limited commercial interest for direct marketing and IP protections can be addressed in part through voluntary licensing (VL). This is a mechanism whereby a patent holder grants a licence to another company to develop and market its own version of the medicine in markets where the patent holder has no interest. Licences can be bilateral (i.e. directly between an originator and generic manufacturer) or multilateral (i.e. via a third party such as MPP). Patents can be licensed through a patent pool, from which any company that wants to use, produce or develop medicines can seek a licence in return for the payment of royalties.[1] The pooling of licences has multiple benefits. The main one is that generic manufacturers only need to deal with one party when they seek to produce multiple medications in the same treatment regime. A patent pool is essentially a 'one-stop-shop' for all parties, which facilitates the legal and bureaucratic processes involved in obtaining licences, reduces transaction costs and increases access to IP needed to make important medicines.[2,3]

Originator companies choose to get involved in voluntary licensing for different reasons. The approach is often part of corporate strategies to cover LMICs that are not considered of significant commercial interest. Through voluntary licensing, these countries can still get access

[1] Bermudez, J., & Hoen, E. T. (2010). The UNITAID patent pool initiative: bringing patents together for the common good. The open AIDS journal, 4, 37.

[2] Burrone, E. (2018). Patent pooling in public health. The Cambridge Handbook on Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development.

[3] Simmons, B., Cooke, G. S., & Miraldo, M. (2019). Effect of voluntary licences for hepatitis C medicines on access to treatment: a difference-in-differences analysis. The Lancet Global Health, 7(9), e1189-e1196.

and the patent holder receives royalties while the production and marketing are done by generic manufacturers. Voluntary licensing can also play a part in a company's Corporate Social Responsibility (CSR) practices.

The Medicines Patent Pool

The Medicines Patent Pool (MPP) was established in 2010 by Unitaid to expand access to quality, appropriate, affordable, safe and effective medicines and technologies in LMICs. MPP operates as an independent non-profit organisation that negotiates voluntary licences with patent holders, holds these in a patent pool and in turn issues sub-licences to generic manufacturers who are enabled to develop generic versions and make these available in a defined set of countries.[4] MPP currently consists of a team of around 30 people, led by an Executive Director.[5] It has a Governance Board and an Expert Advisory Group.[6]

Unitaid is the main funder of MPP. A first five-year grant from Unitaid lasted from mid-2010 to end 2015.[7] MPP entered its second Unitaid grant period of five years in 2016. The budget of the second grant was just over USD 29 million.[8]

The key activities that MPP conducts can be divided into prioritisation, in-licensing, out-licensing and alliance management. **Prioritisation** is the process of determining which medicines should be prioritised to be included in the patent pool. Once these medicines have been identified, the actual process of **in-licensing** begins. If negotiations are successful, this process is concluded with a license agreement between MPP and the patent holder. In-licensing also includes possible renegotiation of existing licences to improve the terms and conditions and expand the geographic territory of the licence.

The **out-licensing** process is the process whereby MPP publishes a call for Expressions of Interest from prospective manufacturers and selects sub-licensees to develop and manufacture generic versions of the licensed medicines. After the out-licensing, the **alliance management** process starts. This encompasses the work MPP does to engage with licensors, sub-licensees, and other relevant parties to maximise impact of the licenses. An important set of activities within this relates to the monitoring and enforcement of compliance with the legal obligations of the license, referred to as **licence management**. Licence management covers both the product development phase and the period post-approval when the product is on the market. MPP offers sub-licensees technical support during development and with identifying priority markets for registration and monitors the development timelines to encourage new products become available as rapidly and in as many markets as possible. Once a product is on the market, MPP continues its close involvement with sub-licensees to ensure compliance with all licensing terms and calculates royalties from licensees to be paid to the licensors in cases where product sales are subject to royalties. Sales data are monitored to generate market forecasts

---

[4] Bermudez, Jorge, and Ellen 't Hoen. 2010. "The UNITAID Patent Pool Initiative: Bringing Patents Together for the Common Good." The Open AIDS Journal 4 (January): 37–40. https://doi.org/10.2174/1874613601004020037.

[5] Medicines Patent Pool (2021) The Team. Available via: https://medicinespatentpool.org/who-we-are/governance-team#The-Team/

[6] Medicines Patent Pool (2021) Governance Board. Available via: https://medicinespatentpool.org/who-we-are/governance-team#Governance-Board/

[7] Memorandum of Understanding between Medicines Patent Pool Foundation and Unitaid, 2016

[8] Memorandum of Understanding between Medicines Patent Pool Foundation and Unitaid, 2016

to support further scale-up and, where royalties are applicable, these are calculated based on the sales data. MPP furthermore engages with other parties to support uptake of products produced under license from MPP and communicate on the impact of its licences. Licence management is a continuous activity that covers the entire lifetime of the licence agreement. In addition to its licensing work, MPP has developed and manages **MedsPal**, an online medicines patents and licenses database where users can find information on the intellectual property status of medicines in LMICs.

Under its second grant, MPP extended its original focus on HIV medicines to include several new areas. Medicines for treatment of Hepatitis C Virus (HCV) and Tuberculosis (TB) were added to its scope. The MPP grant was reprogrammed to include expansions into Long-Acting technologies[9] and selected medicines featured on WHO's Essential Medicines List (EML).[10] Following the outbreak of the COVID-19 pandemic, the MPP governance board agreed to expand MPP's mandate to include any health technology that could contribute to the global response to COVID-19. This work was not officially covered by the MPPII grant, but was nonetheless funded by Unitaid in 2020.[11]

Evaluation methodology

This evaluation has been conducted through a combination of desk-review and stakeholder interviews. The desk review consisted of an analysis of internal documentation produced by Unitaid and MPP and external publications produced by other organisations, including but not limited to project plans, annual and semi-annual reports, publications of MPP and other relevant organisations in the global health arena, academic publications and documentation pertaining to activities of other actors in the field to ascertain synergies and overlap. In total, 27 interviews were conducted with various groups of stakeholders to collect sufficient information on the evaluation questions and allow triangulation of information from different perspectives and sources.

All interview and desk research data were coded according to the thematic areas of this evaluation, which allowed for comparison of gathered evidence across the data collection methods and supported us in drawing grounded conclusions for this evaluation.

Evaluation findings

The end-of-grant evaluation assessed MPP's performance under the second Unitaid grant in six separate domains: relevance, coherence, efficiency, effectiveness, impact and sustainability. Additionally, it sought to draw lessons from MPP's past experiences that can be used to inform future programming decisions.

Relevance

In the first years of its existence, MPP has had to carefully carve out its position in a landscape of conflicting perspectives about the value of voluntary licensing. For some advocacy

[9] Unitaid (2019) Approval of MPP's reprogramming request for the exploratory phase of the Long-acting Collaboration Hub

[10] Unitaid (2020) Approval of MPP's reprogramming request to introduce an exploratory phase for inclusion of select medicines featured on WHO's Essential Medicines List (EML)

[11] Medicines Patent Pool (2020) COVID-19 presentation to Unitaid Board

organisations, the VL model MPP promotes was not far-reaching enough whilst pharmaceutical companies argued that patents are not the main obstacle to access to medicine in LMICs.[12]

Against this backdrop, the first grant period of MPP was essentially a proof-of-concept phase. Consequently, the focus during this grant was strongly on obtaining relevant licences. Anti-retrovirals (ARVs) against HIV were the logical entry point as there were multiple ARVs on the market for which patents formed a major barrier to wide-scale access to treatment for people in LMICs. HIV is also one of the main points of attention for most global health actors and there has long been strong HIV treatment advocacy by civil society organisations. All of this helped to create an enabling environment for MPP. During the first grant period, MPP secured licences for 10 ARVs and issued 38 sub-licences. Thus, MPP was able to demonstrate the viability of the patent pool / VL model and its potential for improving access to medicine. Under its second grant, MPP sought to build on this success and expand the model to other disease areas.

Overall, it is concluded that the objectives, design and scope of MPP during its second grant were all highly relevant and were aligned with the needs of MPP's main beneficiaries: people in need of access to key medicines in LMICs. As patents form an important barrier to access to essential medicines, MPP's work has relevance not only in HIV but also in the new areas that MPP has brought within its scope (HCV, TB, patented products on the WHO EML and long-acting technologies). It is widely recognised that MPP provides a unique and important service in the field of global health. Whilst MPP has not replaced bilateral licensing, there is a wide sense that MPP has facilitated voluntary licensing for both originators and generic manufacturers and that, as a result, the use of voluntary licensing has increased.

MPP has been able to secure additional licences and renegotiate terms on many of its existing licences because of the value it can offer originator companies. This value is derived partly from the work that MPP undertakes as part of its licence management to monitor compliance with licence obligations and reduce the administrative burden on originators. In addition, originator companies gain reputational capital from working with MPP.

To generics companies, the value in working with MPP is manifold: through the patent pool, companies can gain access to licences they may otherwise not be able to obtain against conditions that may also be more favourable. In addition, sub-licensees can benefit from MPP's technical support and market intelligence during product development and registration, as well as post-approval. The relevance of these services to sub-licensees differs, with less experienced companies benefitting from it to a greater extent.

To maximise its potential for impact, MPP also works with other key public health stakeholders, such as procurement agencies and national governments. The relevance of this work is in drawing greater attention among these parties to the possibility to procure medicines developed under licence from MPP. Additionally, MPP engages with in-country and civil society organisations to ensure complementary between their work and that of MPP.

Coherence

MPP does not exist in a vacuum but operates within a diverse field of actors and organisations with the common goal of improving access to medicine for people in LMICs. To understand how and where MPP brings value into this system, it is important to understand the coherence

[12] IFPMA's Policy paper on the subject suggests that the barrier is not IP, but the inability of generics manufacturers to operate sustainabily either because there is no commercial market or the cost of doing business is too high.

between the activities of MPP and that of others. This includes some of Unitaid's other IP grantees as well as multilateral health organisations, bilateral development organisations, non-governmental and civil society groups. Furthermore, whilst originator and generic companies are direct stakeholders of MPP, they can also conduct activities aimed at improving access that do not involve MPP. Such actions have therefore also been considered in the assessment of MPP's coherence.

Within the landscape of actors that work on promoting and accelerating access to medicines in LMICs, MPP takes a unique place. It is the only organisation that works on voluntary licensing as a mechanism for access. MPP's approach is to create a competitive market with multiple producers of generic medicines to bring down the prices of these products. Whilst MPP works upstream to promote availability and affordability of medicines in LMICs, other organisations working further downstream take responsibility for these products being procured and distributed to target populations. MPP thus forms an important link in the greater access chain. In terms of its thematic priorities, MPP' work is highly aligned with that of all main global health actors.

Although MPP's pooling and voluntary licensing approach is unique, it is not the only organisation focused on overcoming IP-related barriers to access. Various other organisations, including several Unitaid grantees, work in parallel to MPP to draw attention to IP-barriers and offer countries support in addressing these. Their work is primarily focused on building the capacity of governments and other actors to make use of TRIPS flexibilities. The work of these organisations and that of MPP is complementary in that other access mechanisms can be applied alongside voluntary licensing, particularly when companies have not engaged in such licensing or if the terms of the licences do not sufficiently provide access. Conversely, these organisations help create the environment that encourages companies to work with MPP. Although there are at times some tensions between the work of these organisations and that of MPP, there is a recognition of the value of having multiple complementary approaches.

Complementarities exist also between MPP and non-governmental and civil society organisations that are focused on promoting access to medicine. These organisations can promote the impact of MPP's work by raising awareness of the MPP licences in target countries and by creating political support for the introduction of licensed medicines. Importantly, these organisations can act publicly as access advocates and even call out originator companies for failure to license products, whilst this position is difficult for MPP to take without jeopardising its standing with originator companies as a neutral broker. MPP maintains good and mutually beneficial relationships with other non-governmental organisations.

The work of MPP has contributed to originator companies increasingly making use of voluntary licensing as part of their access strategies for LMICs. Companies with comprehensive access strategies, however, typically include voluntary licensing alongside other access mechanisms, such as differential pricing or access programmes.

Overall, it is concluded that the work MPP has done as part of its second grant fits well within the landscape of other interventions and organisations that are aimed at increasing access to medicine in LMICs. MPP has sought to align itself with major global health organisations and works closely with WHO. Areas of possible duplication are relatively minor. Stakeholders are not all aligned in their expectations for MPP and the role it should take. Whilst some fear that MPP's prominent position in the global health space could crowd out other voices in the discussion on IP and access to medicine, others would like to see MPP take a more active role itself in this discussion. Divergence of perspectives is unavoidable in this highly contentious field and MPP appears to have taken a cautious and pragmatic position as an independent implementer.

Efficiency

An important question for this evaluation is how MPP has allocated its resources across its activities, whether this allocation is optimised for the fulfilment of MPP's objectives (allocative efficiency) and whether MPP has made efficient use of resources (technical efficiency). For this analysis, the focus has been on MPP's four key licensing activities: prioritisation, in-licensing, out-licensing, alliance management.

MPP's allocation of resources, including that of staff efforts, across its main activities appears to be broadly in line with its priorities and informed by evolving needs. Under MPPII, resources allocated to licence management have increased significantly, whilst fewer resources were devoted to in-licensing than under MPPI. These shifts have been necessitated by the growing numbers of licences, sub-licensees, and development projects MPP has had to manage on the one hand, and by fewer new licences being negotiated. MPP has indicated that resource allocation across activities is driven both by strategic choice and by opportunity. As such, MPP does not set fixed budget caps on individual activities but rather allocates its resources according to need.

It is not possible to determine to what extent each of the activities MPP conducts translate directly into results and impacts that could not have been achieved without it. Qualitative findings suggest that some activities, in particular those tied to monitoring and enforcement of licence obligations, are fundamental to MPP's ability to effectively negotiate and conclude licences with originators. Other activities, such as technical support and sharing of business intelligence, can act as useful catalysts to MPP's objective of accelerating affordable access to essential medicines but are not always needed the same way across all licences or sub-licensees. Nonetheless, the importance of such activities should not be underestimated as they contribute to MPP's overall value-add and encourage generic companies to work with MPP rather than seek bilateral agreements.

MPP's allocation of resources across its activities has remained fairly stable over the second grant, in part because of (self-reported) efficiency gains. These efficiency gains include, but are not limited to, automation of several processes such as the sales data collection and tracking US FDA manufacturing alerts, reducing the number and duration of in-person QRM meetings and reducing in-person attendance by MPP's head of business development, and increased online participation to conferences instead of physical participation. MPP has also shifted more responsibilities from its Geneva-based staff to its staff in India. Because of MPP's unique operating model, there are no obvious benchmarks against which MPP's efficiency could be measured. The assessment of MPP's efficiency thus largely relies on stakeholder perspectives. Since most of these come from people working within MPP, there is an inherent subjectivity to statements about increased efficiency and the desired balance between activities. Nonetheless, there are no obvious indications to dispute claims of increased efficiency in MPP's operations.

Between the first and second grant, MPP has significantly increased its scope of operations but has remained a relatively small and focused organisation. Whether some activities, in particular aspects of its licence management, could be done more efficiently if they were outsourced or left to other organisations remains unclear, but there is a risk that MPP would diminish its relevance and attractiveness to companies if it significantly reduced the value it adds through performing these activities in-house. In the absence of direct benchmark organisations, the assessment of MPP's efficiency remains rather subjective but it appears that MPP has made prudent and efficient use of available resources to achieve its impact.

Effectiveness

To track progress against MPP's objectives under its second grant, Unitaid and MPP have agreed on a set of Key Performance Indicators (KPI). For the purposes of this evaluation, effectiveness has been assessed against the access barriers that are covered by KPI1 (Innovation and Increased Availability) and KPI2 (Access: Affordability).

Under its second grant, MPP has signed fewer new licences than under the first grant but was nonetheless able to add five more licences to the pool. These successes have come in the areas of HIV (bictégravir) and HCV (glecaprevir/pibrentasvir, ravidasvir), with two more licences for a TB candidate medicine (sutezolid). Some of the products that had been prioritised for licensing during the second grant were later deprioritised, either for clinical reasons or because the originator had already signed an exclusive bilateral licence. For products that remain a priority for MPP, but for which it has not yet been able to secure licences, it appears that MPP has thus far not been able to convince the patent holders of the existence of a proper business case. Where MPP has not yet been successful is in its recent expansion into patented products on the WHO EML, undertaken during the last year of the MPPII-grant period. It has also not yet been able to play any role in the licensing of COVID-19 vaccines or technologies for apparent lack of interest from originators. The expansion of the scope to include COVID-19 has also happened during the last year of the MPPII-grant period. In addition to new licences, MPP was also able to renegotiate for territorial expansion on many of its existing licences, thereby increasing the number of countries that can benefit.

Stakeholders are generally positive about the contribution MPP has made thus far on improving access to medicines in LMICs and expect this to increase further as new products developed under sub-licences from MPP will become available. MPP has significantly helped to speed up the development and registration of generic medicines against HIV and HCV, thereby accelerating access to these important medicines for people in LMICs. It is estimated that during MPPII, MPP licenses have supplied 39.5 million patient years of HIV treatment and 1.1 million patient years of HCV treatment.[13] Additionally, MPP's intervention has enabled the development of new formulations, including paediatric HIV treatments, that are set to bring substantial public health benefits. All distributed MPP licensed products have received approval from stringent regulatory authorities.

MPP's goal to make medicines more affordable has been partially achieved: whilst for HIV medicines the desired cost reduction has been achieved, for HCV medicines prices have remained somewhat above MPP's own target. The cost reductions have been achieved by granting sub-licences to a sufficient number of generic manufacturers to introduce competition in the market. This approach has thus far worked reasonably well because all products developed under sub-licences from MPP are small molecule medicines that are relatively easy to manufacture and do not require extensive technology transfer. Whether this approach will also work for more complex products, such as biological medicines (including vaccines) and long-acting technologies, is still unproven. The main question is whether for such products there will be enough generic manufacturers with the right expertise and manufacturing capacity to produce them and introduce competition.

Despite MPP's successes in stimulating and accelerating the development and registration of new affordable (generic) medicines, it cannot fully control whether these products reach the

[13] CEPA (2020) Impact of MPP Licensing

target populations. By working closely with not only its sub-licensees but also with procurement agencies, governments and organisations in the countries included in its licences, MPP aims to support the wide uptake of developed products. However, MPP is itself not responsible for in-country distribution and systemic weaknesses in pharmaceutical distribution chains and health systems remain important barriers to access in many of MPP's target countries.

One of the key success factors behind MPP's effectiveness likely is its pragmatic approach. MPP is sometimes willing to accept certain compromises on the terms and conditions of the licences, if the agreement reached can still be considered to be in the best interest of access. This may apply to the countries MPP is able to include in the territory of the licence, the royalties levied by the originator companies or the disclose of specific information. MPP recognises that a less-than-perfect agreement can still be preferable over no agreement at all. After the initial licence agreement, MPP can and often does continue to aim for better terms and conditions. Most stakeholders understand and appreciate this approach, although there are some concerns that these compromises could mark a change in MPP's practices that some view as undesirable.

Impact

For this evaluation no new quantitative data were gathered on the impact achieved under the MPPII grant, as MPP had already contracted CEPA in 2020 to conduct a separate impact assessment. Among stakeholders there is a clear sense that MPP has meaningfully contributed to increased access to medicines for people in LMICs, in particular for HIV, and that this already has translated into substantial health gains and savings and will continue to do so.

Sustainability

To fully realise the impact potential of its licences, MPP has worked with partners to ensure uptake and enhance access to the products by those who need them. MPP promotes product adoption through communications with procurement entities and governments in the countries covered by the licences, as well as with NGOs and CSOs that can advocate for access to these products and put pressure on decision-makers.

Because for most of the licences for which there currently is development/commercialization activity the last-to-expire patent is still in force, it is difficult to predict how access to the medicines produced by MPP sub-licensees will evolve once these products come off patent. This situation is set to arise during the third grant as patents on several of MPP's licences will expire within the next five year. Once patents expire (or are abandoned), the support of MPP to sub-licensees may become redundant, although MPP intends to continue its policy/advocacy work to support uptake of products and facilitate access in additional countries. It is unlikely that current MPP sub-licensees would discontinue production or withdraw from markets simply because their contractual relationship with MPP ends if there remains sufficient commercial incentive. Moreover, as long as MPP is able to keep adding new relevant licences into the pool and expand its existing ones, it will likely continue to generate impact.

Since the start of the MPPII grant, MPP has successfully diversified its funding base, attracting funds for additional projects from the Swiss Agency for Development and Cooperation (SDC), the Wellcome Trust and the Government of Japan. This somewhat reduces MPP's reliance on Unitaid, even though Unitaid is expected to remain its largest funder for the coming years.

Since its founding, MPP has matured into a stable and professional organisation that is widely recognised as such. Among stakeholders there are somewhat different expectations about the future direction of the organisation and the roles it should take. Whilst some argue for a limited scope of activities, strongly centred on its licensing work, others have urged for MPP to take on

a more outspoken position as access advocates. MPP itself intends to maintain its identity as a relatively small and focused organisation that acts as a neutral liaison between patent holders and generic manufacturers to facilitate access.

Lessons learnt

Over the course of its second grant, MPP has made various changes to its design and operational structures to further improve itself and maximise the impact of its activities. This has translated into improved perceptions of MPP's professionalism among stakeholders. Licensors and sub-licensees have also noted a marked improvement in the quality of communication by MPP, with MPP providing more timely and relevant information. Changes made to its internal processes have been institutionalised and will continue to be applied in its next grant phase.

During the MPPII grant the organisation has extended its product and disease scope, recognising the potential of its model beyond its initial focus on HIV. This willingness to stretch itself aligns with the expectations of the stakeholders and shows that the organisation has been flexible and attentive to the needs of its target beneficiaries. Despite these efforts, though, MPP has struggled to secure licences in areas beyond its initial focus on HIV. These difficulties are not entirely unexpected and relate in part to MPP's external environment. With its early work on HIV medicines, MPP was able to capitalise on strong public pressure on pharmaceutical companies, which created an environment in which MPP represented an acceptable compromise. Other disease areas have not been characterised by the same degree of public pressure. This relative lack of an enabling environment challenges the replicability of MPP's model beyond its core areas. To successfully expand its scope, MPP needs the support of a network of allies who can show the importance of licensing of pharmaceutical patents beyond HIV medicines.

A key lesson learnt during the second grant is that MPP's role goes beyond that of an administrative intermediary between licensors and sub-licensees. The value MPP brings to these parties is substantially derived from MPP's work on management of the licences. This includes both activities that are mandated by the licensor as conditions of the licence agreement and activities that are more voluntary, but which are carried out in the interest of accelerating and increasing access. With every new licence MPP secures, the need for licence management to ensure that all licences and development projects are properly managed increases substantially. This in turn places greater demands on MPP's time and resources. Throughout the grant period, MPP has worked to improve the efficiency of its licence management activities in various ways. As the number of licences is expected to further increase, it will be essential for MPP to continue looking for efficiencies and tailor its efforts to the needs of individual sub-licensees and development projects, considering potential risks from reducing its direct involvement.

Conclusions

This evaluation concludes that under the second grant, MPP has successfully built on the successes it achieved during its first grant and has shown that voluntary licensing and patent pooling can be used effectively to promote access, whilst creating proper (economic and non-economic) incentives for all parties involved. MPP has further developed into a professional organisation that is valued by companies, global health organisations and countries. Its work is appropriately aligned with that of other key actors working on global health and access to medicine and its efforts are largely complementary to that of other, more locally operating organisations.

During the grant period, new licences have been signed for one HIV medicine, two HCV medicines and one TB candidate medicine. The number of new licences signed has been substantially reduced compared to the first grant. Although in the last year of the MPPII grant MPP's scope was extended to include products on the WHO EML and COVID-19 treatments, it has not yet secured any licences for products in these areas. These findings suggests that, whilst in its first phase MPP was able to pick more 'low hanging fruit', it is now experiencing a diminishing rate of return on its in-licensing efforts and that its foray into new disease areas is challenging due to by a relative lack of public advocacy and different market dynamics. MPP also successfully renegotiated to extend the territory for eight of its HIV licences. As a result, many of the licences now cover countries that are home to around 90% of people living with HIV in low- and middle-income countries.

Through its new and expanded licences, MPP has significantly improved access to priority medicines in the areas of HIV and HCV. Importantly, the pool of licences has also facilitated the development of new formulations and combination products for introduction in LMICs that likely would not have been possible without MPP's intervention. The development and introduction of affordable versions of the medicines licensed to MPP has delivered very substantial benefits to affected populations in LMICs, both in terms of health impacts (improvements in quality of life, reductions in burden of disease and disease mortality) and economically. These impacts are expected to continue and increase further.

MPP has been able to secure new licences and improve on its existing ones because originator companies recognise the added value of working with MPP compared to bilateral licensing. This value is derived partly from the fact that MPP takes over the management of the licence and the interactions with sub-licensees, reducing the administrative burden of this on the companies. Additional value is derived from the outside recognition that originator companies receive for licensing patents to MPP. Nonetheless, the difficulties in securing licences in new product categories demonstrate that these benefits may not be enough to incentivise originator companies to grant MPP licences. This shows the importance for MPP to continuously invest in working with innovator companies to understand their needs and concerns. To generic manufacturers, MPP offers convenient access to a varied portfolio of licences. Generic manufacturers also benefit from MPP's licence management activities, including its technical support during development and market intelligence.

The **MedsPal database** that MPP maintains meanwhile adds value to the work of different groups of stakeholders, from treatment advocacy organisations to generic manufacturers and medicines procurement agencies, by providing an overview of important patent-related information that is often difficult to find.

MPP's increasing allocation of resources to effectively manage its licences has raised the question of whether the organisation has moved too far away from its core business of in- and out-licensing. The range of activities it performs as part of its licence management is extensive and the value of different activities is not always apparent to some parties. Nonetheless, it appears that the benefit that companies derive from working with MPP is closely tied to many of these activities. Whilst the lack of comparators mean that it is challenging to determine whether MPP's allocation of resources is fully optimised, MPP gives due consideration to the value added by all its activities and is continuously seeking to optimise its efficiency.

Overall, MPP has been rather effective in achieving its goals set under the second grant. Notwithstanding its important achievements, MPP now faces some challenges as it moves into its next funding phase. These challenges relate primarily to the disease scope and how to replicate its early successes in new areas.

Strategic recommendations

Based on identified challenges, several strategic recommendations have been formulated for further reflection as MPP embarks on its third grant period. It should be noted that many of these are not calling for introduction of new activities or organisational aspects but rather for building further on what is already there.

Creating the environment for scalability of MPP

The progressive extensions to MPP's scope are much welcomed by stakeholders. Many have suggested that MPP considers all technologies (not limited to medicines) for which there is a clear global health need within its mandate. However, thus far, MPP has struggled to effectively replicate its early success in the HIV space to its complete scope expansion. A suitable balance thus needs to be struck between the reach of its scope and the focus of its specific priorities to identify the main products and disease areas where MPP can make a difference.

Whether under its third grant MPP will be able to make greater in-roads with priority medicines in other areas will likely also depend on whether sufficient momentum can be created to push for access to these medicines. To achieve this, MPP may need to build relationships with a new set of originator companies and strategically use its network of allies to broker first contact with executive management of such companies. A related question for MPP during its next phase will be what role it should play itself in helping to create greater momentum for treatment advocacy in areas beyond HIV. At present, MPP is mostly recognised as a neutral intermediary between originator companies and generic manufacturers and less so as an outspoken access advocate. MPP has taken this position deliberately as the effectiveness of its work depends on the willingness of originator companies to engage. This willingness likely would reduce if MPP were critical of the industry. The challenge for MPP will thus be to make proper use of the voice of other organisations to advocate for treatment access in the areas targeted by MPP whilst clearly articulating its own position on the importance of access to these medicines and communicating the value of the MPP model.

It is thus recommended that MPP:

- Continues to expand the disease scope to include all areas where MPP could reasonably be argued to make a difference but clearly prioritise specific products and/or disease areas within this broad scope
- Draws public attention to MPP's specific priorities rather than to its broad mandate to help create treatment advocacy for these products/areas
- Involves a sufficiently diverse group of experts in the prioritisation process, with expertise beyond the current focus areas of MPP
- Increases involvement of experts with knowledge of the commercial aspects of pharmaceutical development and marketing in the prioritisation process
- Makes more strategic use of partners and allies to advocate for treatment access and make high-level contact with originator companies

Distribution of efforts

MPP has gradually dedicated a greater amount of effort to the management of its licences. As some of the activities that fall under licence management are legally required by the licence terms, this part of the work is largely unavoidable and key to MPP's ability to secure licences. In addition to this, MPP assists its sub-licensees throughout the development and registration process and continues to offer market intelligence and support post-approval. Generic companies are generally happy with this support, but it is difficult to judge whether this is because it is freely available to them or because they genuinely require this assistance. It is

clear, however, that not every company needs the same extent of support. For efficient use of resources, it will thus be important for MPP to conduct a careful needs assessment for each new licence and sub-licensee and tailor the work it conducts accordingly.

A more critical outlook on licence management would be to suggest limiting this activity of MPP altogether and concentrate instead on more focused prioritisation of medicines and in-licensing. However, whilst MPP has secured notably fewer new licences in its second phase, there are no indications this is due to in-licensing receiving insufficient priority or allocation of resources. Rather, it seems to be the somewhat predictable result of MPP having already secured the main licences in the area of HIV and finding it more difficult to do the same in other areas. Thus, whilst it may be tempting to recommend greater priority be given to in-licencing, where necessary by deprioritising licence management, it is uncertain that this would translate into greater effectiveness for MPP. Rather, the work on licence management should be seen as part of the relationship management that is needed to demonstrate MPP's value to companies and encourage them to work with MPP.

Strategic recommendations in this area thus are to:

- Conduct proper needs assessment for the level of effort devoted to licence management for every licence and sub-licensee and tailor activities accordingly
- Continuously assess where MPP's efforts are most needed and allocate resources accordingly

Maintaining high standards for access and transparency

MPP has become recognised by companies as a neutral "honest broker" that is not unnecessarily dogmatic and is ready to put the overall access objective first, even if that sometimes means accepting terms and conditions that are sub-optimal. Among advocacy organisations, there is some concern that this readiness to compromise could lead to a 'slippery slope' whereby MPP abdicates from its core principles. MPP appears to be sufficiently aware of this risk and to carefully manage this internally through its internal governance structures. However, it also needs to communicate about this clearly to the outside world to avoid the appearance that MPP is compromising too much on its principles and allowing itself to become a tool for industry rather than a mechanism for access.

It has been suggested that MPP could go further in its efforts to promote affordability by adding fair pricing commitments to its licence agreements. The concept of socially responsible licencing, whereby licensors place conditions on sub-licensees about access and affordability, has received increasing attention from research funders and institutions. MPP has indicated the management team would not necessarily be against introducing such obligations in future. Unitaid has requested MPP to include affordable pricing commitments into any sub-licences granted against licences obtained from any of Unitaid's grantees in the area of Long-Acting technologies. It is difficult to predict what the effect of such conditions would be. Whilst it could help further bring down prices, it is conceivable that it would simultaneously have a deterring effect on sub-licensees who would see their ability to financially benefit from the licences further reduced and who could thus opt out of a licencing agreement.

Strategic recommendations in this area are to:

- Maintain regular and transparent discussions internally about the standards and principles to which MPP adheres in its dealings with originator companies to ensure that it does not compromise on these

- Continue striving for transparency as much as possible in all of its transactions; clearly communicating, internally and externally, where and why certain choices have been made
- Consider in what cases additional provisions to ensure access and affordability could add value

1 Introduction

Technopolis Group was selected by Unitaid to conduct an end-of-grant evaluation of the second grant provided by Unitaid to the Medicines Patent Pool (MPPII). The grant ran from 2016 to 2020. This report presents the findings from the evaluation against the agreed evaluation criteria and questions.

1.1 About the Medicines Patent Pool

Limited access to medicines remains a major obstacle to the achievement of Sustainable Development Goal (SDG) 3 ("ensure healthy lives and promote wellbeing") in many countries across the world. Whilst innovative technologies that can bring positive health outcomes have developed at a fast pace over the last few decades, relatively few of them have become available in low- and middle-income countries (LMICs). The reasons for this are complex. They include, but are not limited to:

- The resource constraints of LMICs for procuring high-priced innovative medicinal products
- Limited commercial interest of innovator companies to directly register and market products in LMICs
- Limited capacity of health systems in LMICs to support delivery and scale-up of innovative medicinal products
- The structure of intellectual property (IP) systems, which grant a time-bound exclusive market right to patent holders. Whilst IP protections give innovators the opportunity to recoup investments, they delay the development of lower cost generic versions of medicines which are important for ensuring access in countries with limited purchasing power. It also precludes other companies from developing new formulations of the still-patented medicine that are better suited for use in low-resource settings or for specific patient populations, such as children.

The barriers formed by the combination of limited commercial interest for direct marketing and IP protections, can be addressed in part through voluntary licencing (VL). Voluntary licencing is a mechanism whereby a patent holder grants a licence to another company (usually a generics manufacturer) to develop and market its own version of the medicine in markets where the patent holder has no interest to engage directly. Licenses can be concluded bilaterally, i.e. directly between an originator and generic manufacturer. These can be exclusive to just one licensee or non-exclusive, where the licence is granted to multiple licensees. The licences can also be multilateral, i.e. between a licensors and multiple licensees, as through a patent pool. This is a mechanism where patents (and potentially other forms of IP) are made available through a patent pool, through which any company that wants to use, produce or develop medicines can seek a licence from the pool in return for the payment of royalties.[14]

In 2010, Unitaid established the Medicines Patent Pool (MPP). The goal of MPP is to expand access to quality, appropriate, affordable, safe and efficacious medicines and technologies in LMICs. The MPP is founded on the idea that patent holders can be persuaded to voluntarily

[14] Bermudez, J., & Hoen, E. T. (2010). The UNITAID patent pool initiative: bringing patents together for the common good. The open AIDS journal, 4, 37.

grant non-exclusive licenses for specific products to generic manufacturers if there is an independent third-party that acts as a broker for the licensing process and who can take over some of the administrative tasks associated with the licensing. MPP hereto negotiates voluntary licensing agreements with IP rights holders and grants sub-licences[15] to manufacture the products to selected generic pharmaceutical companies.[16] MPP is the first joint licensing platform for patented medicines.[17]

The Medicines Patent Pool Foundation was established as an independent legal entity in July of 2010 with the support of Unitaid and has been fully operational since November 2010. It is based in Geneva, Switzerland.[18] The Foundation was funded through a first grant from Unitaid (MPPI), which consisted of USD 4.8 million for the period from July 2010 to December 2011 and additional funds up to USD 26.3 million for MPP's activities between 2012 and 2015. In its first phase, MPP focused its attention on antiretroviral (ARVs) medicines, paediatric ARVs and new fixed-dose combinations[19] for treatment of HIV. In November 2015, in the last months of the MPPI-grant, Unitaid approved MPP's expansion to Hepatitis C Virus (HCV) and tuberculosis (TB).[20]

1.2 The MPP model

MPP operates as a non-profit organisation through partnerships with the pharmaceutical industry that facilitate access and promote innovation. It operates by negotiating licences with patent holders and in turn licencing those patents to multiple manufacturers. These manufacturers are then enabled, through the licence and, if necessary, with support provided by MPP, to develop the licensed medicine and make it available in a defined set of developing countries, in some cases in exchange for royalties.[21] Voluntary licensing has the potential to boost timely access to life-saving medicines in LMICs, as highlighted by a 2016 Report of the United Nations High-Level Panel on Access to Medicines because it allows faster and wider entry of generics into markets that are unable to procure these medicines at their original price.[22]

Voluntary licencing is different from compulsory licencing. Compulsory licencing is when a government allows someone else to produce a patented product or process without the

[15] Throughout this report, the terms 'licence' and 'sub-licence' have been used interchangeably to refer to the agreements between MPP and generic manufacturers. Whenever the licence referred to is between MPP and the innovator company, this will have been indicated explicitly.

[16] Bermudez, Jorge, and Ellen 't Hoen. 2010. "The UNITAID Patent Pool Initiative: Bringing Patents Together for the Common Good." The Open AIDS Journal 4 (January): 37–40. https://doi.org/10.2174/1874613601004020037.

[17] Wang, L.X. (2021), Global Drug Diffusion and Innovation with the Medicines Patent Pool. Available at SSRN: https://ssrn.com/abstract=3426554 or http://dx.doi.org/10.2139/ssrn.3426554

[18] Medicines Patent Pool (2011) Annual Report 2010-2011 – First annual report. Available via: https://medicinespatentpool.org/who-we-are/annual-reports/

[19] Memorandum of Understanding between Medicines Patent Pool Foundation and Unitaid, 2016

[20] Medicines Patent Pool (2015) Annual Report 2015: Five Years of Patent Pooling for Public Health. Available via: https://medicinespatentpool.org/who-we-are/annual-reports/

[21] Burrone, E. (2018). Patent pooling in public health. The Cambridge Handbook on Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development.

[22] UN High Level Panel on Access to Medicines. 2016. http://www.unsgaccessmeds.org/final-report

consent of the patent owner. This is possible under the flexibilities in the field of patent protection included in the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement. Compulsary licences can only be issued by a government under certain conditions that are aimed at protecting the legitimate interest of the a third party or the general public. Such conditions can, for instance, arise if voluntary licence negotiations with the patent holder have failed, in the case of public health emergencies or if the patent holder engages in anti-competitive practices. The patent owner still has rights over the patent, including a right to be paid a reasonable compensation for copies of the products made under the compulsory licence [23]. MPP plays no role in compulsory licencing.

The MPP model of pooling voluntary licences has multiple benefits. The main one is that generic manufacturers only have to deal with one party when they seek to produce multiple medications in the same treatment regime, instead of having to deal with multiple patent holders and thereby decrease transaction costs and risks. A patent pool is essentially a 'one-stop-shop' for all parties, which facilitates the legal and bureaucratic processes involved in obtaining licences, reducing transaction costs and increasing access to IP needed to make important medicines.[24,25] In public health, patent pooling has been put forward as a mechanism that aims to improve access to health technologies, particularly in developing countries.[26]

Originator companies choose to get involved in voluntary licencing agreements for different reasons. The approach is often used as a part of a company business strategy to cover LMICs, which often do not represent major commercial interests due to the countries' lower buying power. By granting a voluntary licence, those countries could still get access and the originator company may still receive royalties, while the production and the marketing is done by generic manufacturers. Pharmaceutical companies also often have access strategies, stemming from principles of Corporate Social Responsiblily (CSR) in which voluntary licences can play an important role. The Access to Medicine Index uses voluntary licences that companies have signed as one of its indicators to assess and rank pharmaceutical companies.[27] Government pressure and pressure from civil society organisations also can play a role in why pharmaceutical companies decide to grant such licences.[28]

---

[23] World Trade Organisation (2021) Compulsory licensing of pharmaceuticals and TRIPS. Available via: https://www.wto.org/english/tratop_e/trips_e/public_health_faq_e.htm

[24] Burrone, E. (2018). Patent pooling in public health. The Cambridge Handbook on Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development.

[25] Simmons, B., Cooke, G. S., & Miraldo, M. (2019). Effect of voluntary licences for hepatitis C medicines on access to treatment: a difference-in-differences analysis. The Lancet Global Health, 7(9), e1189-e1196.

[26] Burrone, E. (2018). Patent pooling in public health. The Cambridge Handbook on Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development.

[27] Access to Medicine Foundation (2021) Are companies engaging in voluntary licensing to expand access? Via: https://accesstomedicinefoundation.org/access-to-medicine-index/results/are-companies-engaging-in-voluntary-licensing-to-expand-access

[28] Baker, Brook K., A Sliver of Hope: Analyzing Voluntary Licenses to Accelerate Affordable Access to Medicines (February 13, 2018). Northeastern University Law Review, Vol. 10, No. 2, pp. 226-315 (2018), Northeastern University School of Law Research Paper No. 314-2018, Available at SSRN: https://ssrn.com/abstract=3123108

1.3 Organisational structure of MPP

MPP is an independent not-for-profit foundation established in Switzerland that is linked to Unitaid via a Memorandum of Understanding (MoU). Unitaid is the main funder of MPP and the sole funder of activities conducted under the second grant. The first five-year MoU lasted from mid-2010 to end 2015, and was followed by a second five-year MoU from 2016 to 2020.[29] The close link to Unitaid has been important to enable MPP to become an integral part of the international response to HIV.

MPP has an Executive Director and a team of around 30 people responsible for the day to day activities of MPP.[30] In addition to its main office in Geneva, MPP has a laison office in Mumbai that plays an important role in licence management.

MPP has a Governance Board that is made up of independent experts who represent a broad base of stakeholders, including members from governments, product development partnerships, international organisations, civil society and patient groups and people with past experience in the originator and generic pharmaceutical industry[31]. The Governance Board is MPP's highest authority for making decisions. Among its key duties are to set MPPs policies and strategies, oversee its work plan and financial matters and to monitor and evaluate its performance.[32]

An Expert Advisory Group (EAG) advises the governance board and the Executive Director on the licences being negotiated. The group has played a central role in the MPP negotiations as part of the necessary checks and balances to ensure that licences negotiated by the MPP maintain high public health standards and are consistent with its mandate and objectives.[33][34]

1.4 Activities of MPP

The activities that MPP conducts as part of its routine operations can be divided into prioritisation, in-licensing, out-licensing and alliance management (Figure 1). MPP estimates that, on average, the whole process takes around two years, with the in-licensing taking around 18 months and the prioritisation and out-licensing each taking about 3 months. In practice, however, these time frames may all very substantially depending on factors such as the relation MPP already has with the licensor and the licence terms MPP is trying to achieve.

The starting point for all of MPP's operations is a determination of which licenses should be **prioritised** to be included in the patent pool. This process informs which medicines and which pharmaceutical companies MPP will be targeting. MPP hereto collaborates with experts,

[29] Burrone, E. (2018). Patent pooling in public health. The Cambridge Handbook on Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development.

[30] Medicines Patent Pool (2021) The Team. Available via: https://medicinespatentpool.org/who-we-are/governance-team#The-Team/

[31] Burrone, E. (2018). Patent pooling in public health. The Cambridge Handbook on Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development.

[32] Medicines Patent Pool (2021) Governance Board. Available via: https://medicinespatentpool.org/who-we-are/governance-team#Governance-Board/

[33] Burrone, E. (2018). Patent pooling in public health. The Cambridge Handbook on Public-Private Partnerships, Intellectual Property Governance, and Sustainable Development

[34] https://medicinespatentpool.org/who-we-are/governance-team#Expert-Advisory-Group/

collects the latest scientific data on the effectiveness of medicines, and assesses the willingness and ability to produce generic versions among potential manufacturers.

Once MPP has identified suitable licence candidates, the actual process of **in-licensing** begins. This includes outreach to governments, civil society organisations (CSOs) and international organisations to develop an environment in which originator companies are encouraged to engage with MPP, and thorough analyses of patent data and market forecasts to develop (preliminary) business cases[35]. MPP reaches out to the patent holders of the products it has prioritised to, where possible, open up a process of discussion and negotiation. If negotiations are successful, the in-licensing process is concluded with a license agreement between MPP and the patent holder, with the agreement detailing the terms and conditions. All license agreements are published.

Although the in-licensing is a cornerstone of the work MPP does, it holds little value if the obtained licences are then not picked up by generic manufacturers through **out-licensing** by MPP. The **out-licensing** process starts with the publication of a call for Expressions of Interest. Potential licensees can apply through an online portal. All applications are reviewed in a blind screening. After the applications are processed and licensees have been selected, the sub-licence agreements are published and executed.

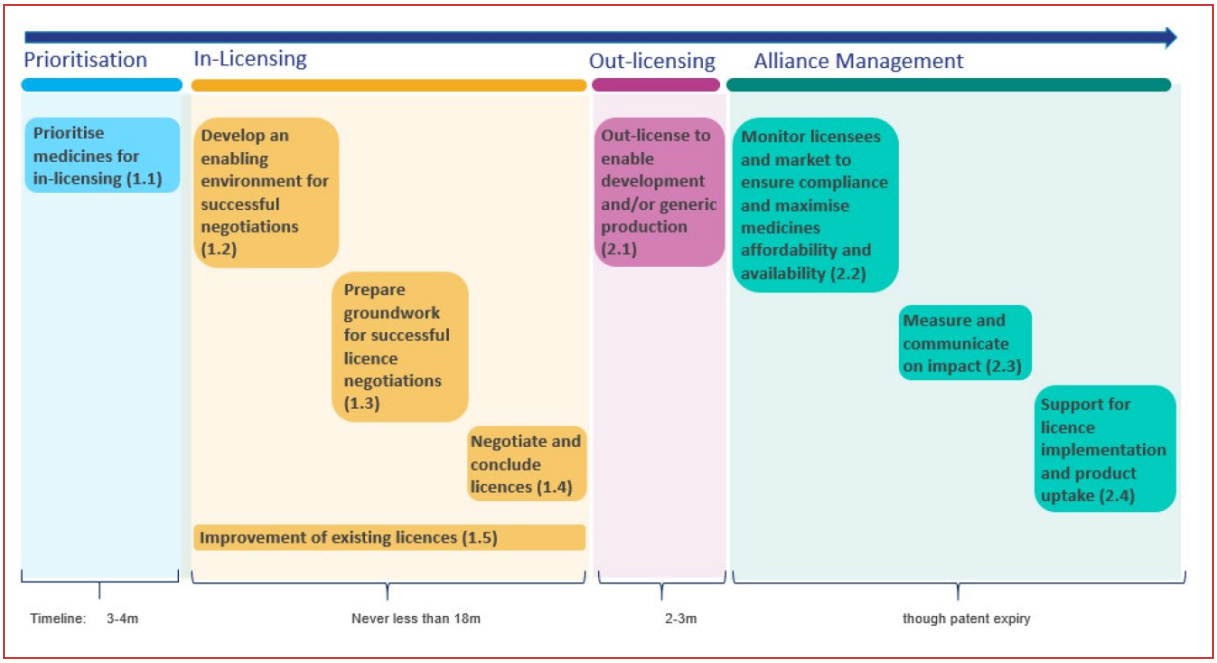
The out-licensing agreement forms the starting point for the **alliance management** process. Alliance management encompasses the work MPP does to engage with licensors, sub-licensees and other relevant parties to maximise impact of the licenses. An important set of activities within this relates to the monitoring and enforcement of compliance with the legal obligations of the license, referred to as **licence management**. Licence management covers both the product development phase and the period post-approval when the product is on the market. Throughout the development process, MPP supports sub-licensees with decisions on, for instance, selection of formulations to be developed and investment decisions regarding the production process (e.g. sourcing of active pharmaceutical ingredients). It also offers generic manufacturers assistance with technical issues, such as filing for product registration and the sharing of data and information. During the development phase, MPP monitors the development timelines to ensure new products are made available as rapidly as possible. Once a product is approved and marketed, MPP continues its close involvement with the sub-licensees to ensure compliance with all licensing terms (e.g. ensure that generic products are not diverted to markets other than those covered by the terms of the licence and comply with trade dress[36] agreements) and monitor sales. Sales data are used to generate market forecasts to support further scale-up. During this time, MPP can also engage with other parties to support uptake of products produced under license from MPP. Another important activity for MPP at this stage is the calculation of royalties to be paid to the licensors for the product sales that are subject to royalties. Sales data are monitored to generate market forecasts to support further scale-up and, where royalties are applicable, these are calculated based on the sales data.

[35] MPP seeks to convince originators or the value of granting a voluntary licence to MPP by demonstrating that this licence will bring value to the company. This value can be both economic and reputational. Economic value is derived from the royalties that originator companies receive from sub-licensees on the sale of products. Key elements of the business case are market projections to show the potential demand for the product and an assessment of the potential willingness of generic manufacturers to enter the market.

[36] Trade dress refers to aspects of the product, such as colour, size and shape, that are not functional but have come to be associated with a specific product or manufacturer. Trade dress protection is a form of trademark law.

Licence management is a continuous activity that covers the entire lifetime of the licence agreement.

Figure 1 Overview of licensing activities



Source: MPP Self-assessment of licensing work (2020)

Apart from the business development activities, MPPII also hosts and manages **MedsPal**, a medicines patents and licenses database. In MedsPal, users can find information on the intellectual property status of medicines in LMICs. Medspal helps to enhance the transparency of the IP status of medicines, which is beneficial for governments and other organisations to base their decisions on. Other activities that MPP is involved with include, communication activities and work on (government) reports. These communication activities are seen as part of the in-licensing and alliance management processes.

1.5 The MPP-II grant

MPP entered its second grant period in 2016. This grant covered 5 years and ended December 2020.[37] MPP received a grant budget from Unitaid of a little over USD 29 million.[38][19] In the MoU that accompanied this second grant period, an expansion in activities was foreseen, from the focus on HIV under MPPI, in the areas of **Hepatitis C Virus (HCV)** and **Tuberculosis (TB)**. MPP had submitted separate proposals for each of these disease areas to the Unitaid board, which were approved in 2015.

[37] Note: The third grant period started January 2021 for a total amount of $34.3 million for the period of 2021-2025

[38] Memorandum of Understanding between Medicines Patent Pool Foundation and Unitaid, 2016

With regard to TB, however, Unitaid asked MPP to first undertake a study on the stewardship of new TB medicines, specifically for multi-drug resistant TB (MDR-TB).[39] Only after the delivery of this report, which was set as a milestone in the project plan, could MPP proceed to negotiate and sign licenses and sub-licences for TB medicines and pipeline products. This milestone was met in December of 2016, nearly a year into the MPPII grant.[40]

In July 2019, Unitaid approved MPP's reprogramming request for the exploratory phase of the Long-Acting Collaboration Hub for the period of July 2019 until December 2020. This allowed MPP to test its value add in the space of long-acting (LA) technologies and medicines as well as the applicability of its operating model that had, up until that point, only been tried on medicines an not on health technologies.[41] Long-acting therapeutics are technologies that offer sustained and controlled release of medicines, thereby reducing the risk of taking medicine incorrectly and the associated increase in drug resistance.[42] This includes, for instance, transdermal patches, implants, depots and intra-uterine devices. LA technologies free patients from daily pills, make it easier to administer the right dose of treatment, and may reduce burden on health systems. Their use is increasing especially in the fields of contraception, harm reduction, diabetes and mental health. MPP's work during the exploratory phase was focused on a mapping of the space, reaching out to IP holders, building an online repository of information on technologies with potential impact and developing a decision tree to form the basis of negotiations with patent holders.

In January 2020, Unitaid also approved MPP's reprogramming request for the exploratory phase for the inclusion of selected medicines featured on WHO's Essential Medicines List (EML) for the last year of the MPPII-grant. This exploration is an equal co-funding agreement between Unitaid and the Swiss Agency for Development and Cooperation (SDC). In this approval, Unitaid also clarified that it intended to include this work as part of the grant agreement for MPPIII.[43] This expansion was supported by the WHO Essential Medicines Committee as well as the G7 and G20 health ministers.[44]

Following the outbreak of the COVID-19 pandemic, the MPP governance board agreed to temporarily expand MPP's mandate to include any health technology that could contribute to the global response to COVID-19 and where licensing could facilitate innovation and access.[45] This work was not officially covered by the MPPII grant, but was nonetheless funded by Unitaid in 2020. COVID-19 is not a part of the MPPIII grant, the successor to the grant evaluated here. From 2021 onwards, MPP's work on COVID-19 is funded by the Japanese government. MPP is still in conversations with the Dutch and German governments to secure further funding. MPP's attention in this area has mainly focused on medications that could treat

[39] Medicines Patent Pool Foundation (2016) TB Stewardship Report.

[40] Unitaid (2016) TB stewardship report and TB licenses.

[41] Unitaid (2019) Approval of MPP's reprogramming request for the exploratory phase of the Long-acting Collaboration Hub

[42] https://medicinespatentpool.org/what-we-do/long-acting-hub/

[43] Unitaid (2020) Approval of MPP's reprogramming request to introduce an exploratory phase for inclusion of select medicines featured on WHO's Essential Medicines List (EML)

[44] Medicines Patent Pool (2021) 2020 Annual Report

[45] Medicines Patent Pool (2020) COVID-19 presentation to Unitaid Board

the COVID-19 infection and MPP has, at the request of WHO, started mapping patents on medicines that are being investigated for COVID-19.[46] MedsPal was expanded to include patent data for therapeutics for COVID-19. In June 2021, VaxPal was launched as a new patent database devoted to COVID-19 vaccines to create greater transparency on patents.[47]

[46] https://medicinespatentpool.org/what-we-do/disease-areas/vaxpal/

[47] https://medicinespatentpool.org/what-we-do/disease-areas/vaxpal/

2 Evaluation methods

This chapter contains a further detailing of the methodology.

2.1 Desk review

Valuable information is contained in internal documentation produced by Unitaid and MPP and in external publications produced by other organisations. Therefore, a review of such documentation has been performed, including:

- Documentation pertaining to the overall MPP strategy and implementation of the MPPII grant. This includes:
  - Log frame and Theory of Change
  - Project Plan
  - Annual and Semi-Annual Reports
  - Evaluation reports including the independent impact assessment commissioned by MPP in 2019/2020 and any other grant-related materials
- Publications pertaining to the operations and impacts of MPPII grant, including publications of MPP and other relevant organisation in the global health arena
- Academic publications pertaining to the activities and results of the MPPII grant
- Documentation pertaining to activities of other actors in the field to ascertain synergies and overlap between MPP and other players

The analysis of the documentation is performed in Atlas.ti[48], a qualitative analysis software package that allows coding of text sections.

2.2 Stakeholder interviews

We collected information from representatives, partners and other key stakeholders through stakeholder interviews, as these can provide the depth of information that is not easily achieved by other means.

In total, 27 interviews were conducted with various groups of stakeholders to collect sufficient information on the evaluation questions and allow triangulation of information from different perspectives and sources (Appendix B). The interviewees were selected following discussions with the Unitaid project team and MPP senior management. They covered the following stakeholder groups: originator companies (licensors), generic manufacturers (licencees), civil society and non-profit organisations, global health organisations and funders, and staff of MPP and Unitaid.

The interviews were semi-structured, using interview guides tailored to each stakeholder group. This format allowed us to collect information that is sufficiently structured to allow for comparison and triangulation of findings, whilst maintaining the flexibility to explore emerging issues.

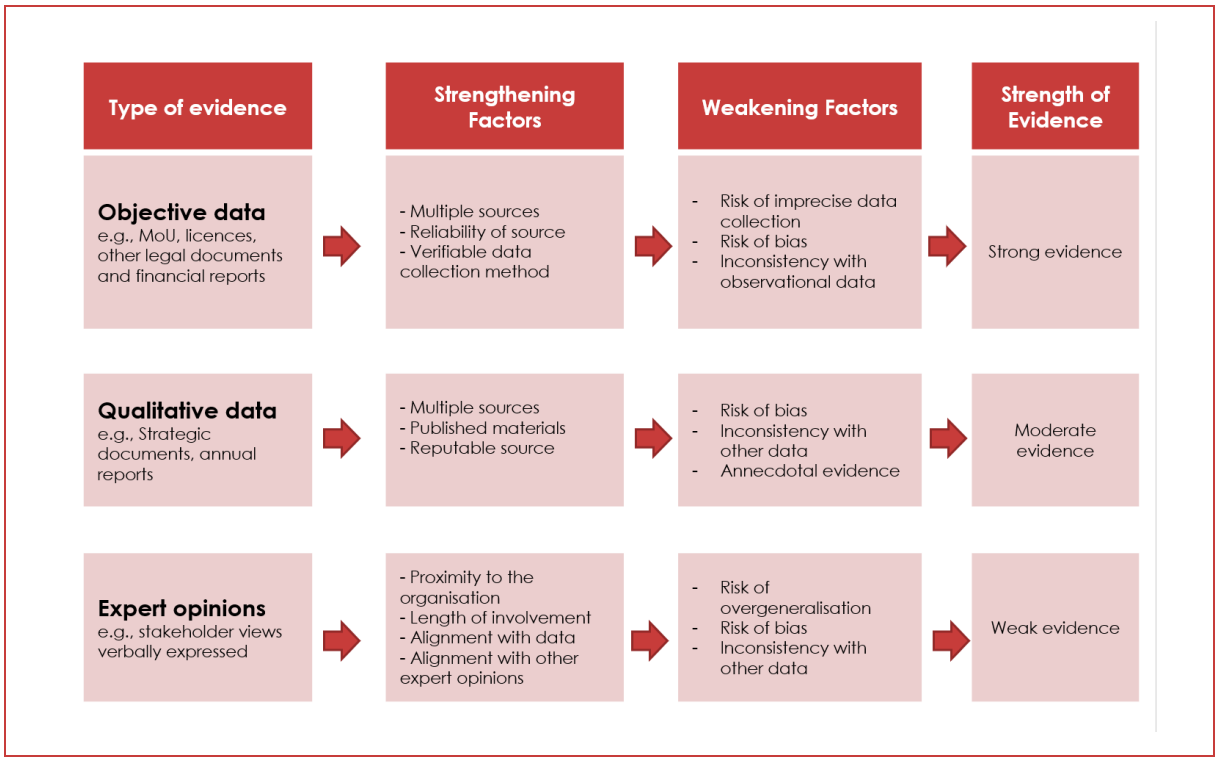
[48] For more insight into the functionalities of the tool, go see: atlasti.com

2.3 Data triangulation approach

We coded all interview and desk research data according to the thematic areas of this evaluation and the respective evaluation questions. This allowed comparison of gathered evidence across the two data collection methods and supported us in drawing grounded conclusions for this evaluation.

In answering the evaluation questions, we have used a framework for evidence assessment that builds on previous work by Dalberg[49], see figure 2.

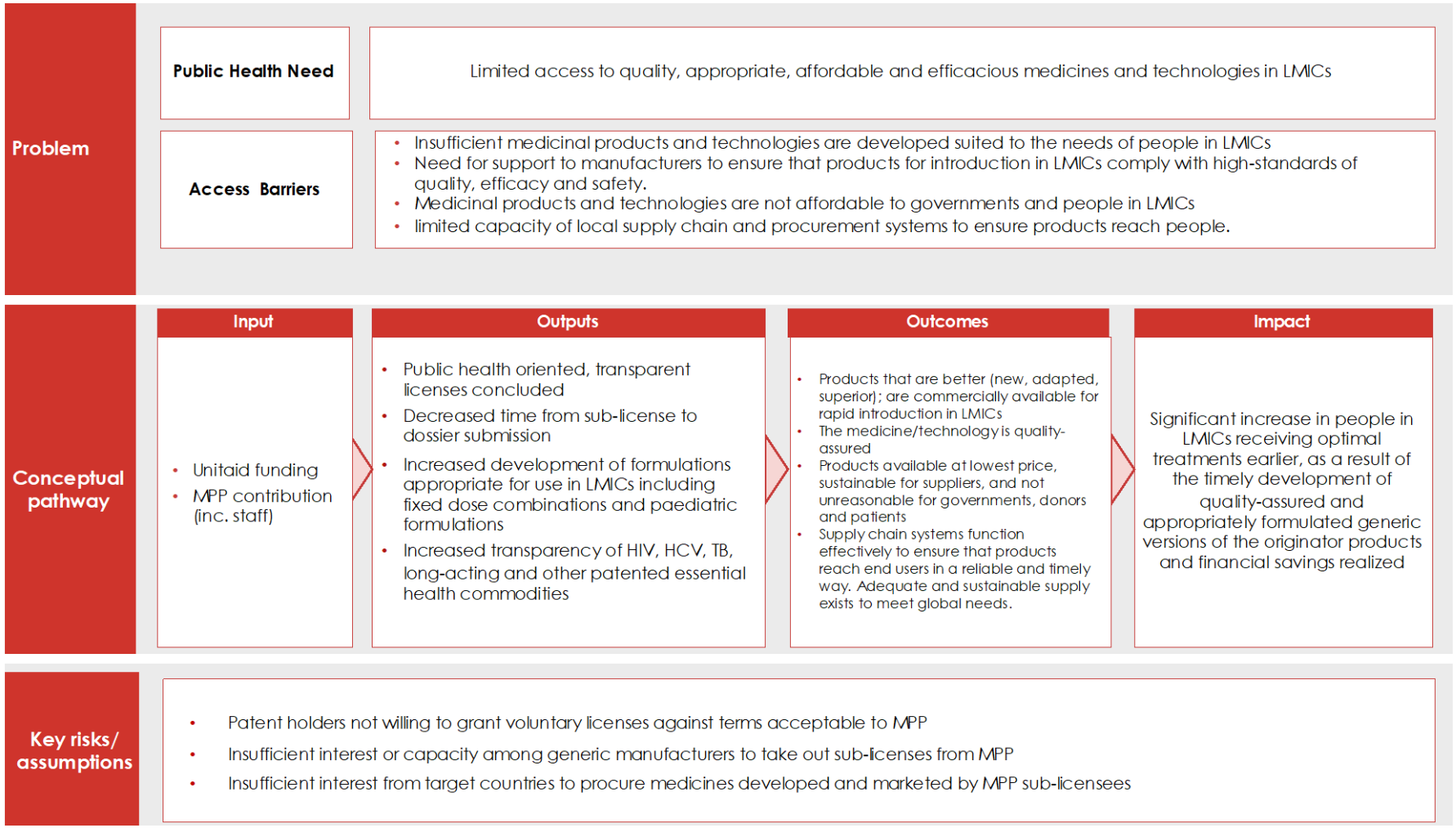
Figure 2 Strength of evidence



Technopolis

[49] Dahlberg (2019) Ensuring access tot he Hepatitis C (HCV) treatment revolution for HCV/HIV co-infected patients in LMICs. Available via: https://unitaid.org/assets/Ensuring-access-to-the-Hepatitis-C-HCV-treatment-revolution-for-HCV-HIV-co-infected-patients-in-LMICs.pdf

Figure 3 MPPII Theory of Change



Source: Technopolis Group elaboration on MPPII Logframe

3 Evaluation findings

3.1 Relevance

MPP originates from the belief that innovative pharmaceutical companies can be persuaded to voluntarily license patents on key medicines that would enable their manufacturing by others. This would then allow generic versions to be sold in markets where the patent holders themselves have insufficient commercial interest to market products. In the first years of its existence, MPP has had to carefully carve out its position in a landscape of conflicting perspectives about the value of voluntary licensing. For some advocacy organisations, the VL model MPP promotes was not far-reaching enough because pharmaceutical companies can still dictate the terms of the license and restrict their scope. Moreover, the VL model does not challenge the patent system but rather works within it, whereas some of these parties prefer a more radical rethink or even abolishment of the pharmaceutical patent system.[50] On the other hand, pharmaceutical companies argued that patents are not the main obstacle to access to medicine in LMICs and thus considered the focus on VL too radical.[51] For instance, in 2015 the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) published a position paper indicating that it did not view VL as a viable way to improve access in LMICs.[52]

Against this backdrop, the first grant period of MPP was essentially a proof-of-concept phase. Consequently, the focus during this grant was strongly on obtaining relevant licences ('in-licencing'). Anti-retroviral medicines against HIV were in many ways the logical entry point for MPP. There were multiple ARVs on the market for which patent barriers stood in the way of wide-scale access to treatment for people in LMICs. HIV is also one of the main points of attention for most global health actors and there has long been strong HIV treatment advocacy by civil society organisations. All of this helped to create an enabling environment for MPP.

During the first grant period, MPP secured licences for the ARVs Lopinavir, Ritonavir, Atazanavir, Cobicistat, Elvitegravir, Tenofovir Disoproxil Fumarate, Efavirenz, Raltegravir, Dolutegravir and Bictegravir[53] and issued 38 sub-licences.[54] Thus, MPP was able to demonstrate the viability of the patent pool / VL model and its potential for improving access to medicine. Under its second grant, MPP sought to build on this success and expand the model to other disease areas. This evaluation has looked at to what extent the model developed by the MPP during its first phase remained valid during its second grant and whether MPP has been able to build on its initial successes to further increase its relevance. It has hereto looked at several aspects: MPP's objectives and design, its scope and its adaptability to changes in its context.

[50] For examples see: the Patent Opposition Database (https://www.patentoppositions.org/); statements by MSF (https://msfaccess.org/msf-calls-no-patents-or-profiteering-covid-19-drugs-tests-and-vaccines-pandemic)

[51] Amin, T. (2007). Voluntary licensing practices in the pharmaceutical sector: an acceptable solution to improving access to affordable medicines.

[52] IFPMA (2015) Policy Position: Voluntary Licenses and Non-Assert Declarations

[53] Medicines Patent Pool (2020) Self-Assessment report, p. 7-8

[54] Medicines Patent Pool (2020) Self-Assessment report, p. 23

3.1.1 Relevance of objectives and design of MPP

3.1.1.1 Objectives

In the MoU agreed between MPP and Unitaid at the start of the second grant, the main challenges that were identified were similar to those that had underpinned the first grant: a lack of availability and affordability of new treatments, a need to switch to newer regimens due to growing drug resistance and a need for improved medicines/formulations, including medicines with better adherence and tolerability profiles.[19] Notwithstanding the successes achieved by MPP during its first grant, such challenges all persisted in the focus countries of the MPP.

As patents have continued to be a significant barrier for access to medicines in LMICs, **the MPP model maintained its relevance at the start of and throughout the second grant.** Moreover, many interviewed stakeholders felt that the model's relevance was not limited to HIV medicines and that the **MPP's extension under the new grant into other disease areas and new types of products was a logical and needed next step in its evolution**. If MPP succeeds in securing licences in these areas and is able to support the development of a competitive market, this may help bring down prices for such products just as it has been able to do for HIV medicines. Lower prices could also help attract greater interest for these products from donors who work on procurement and distribution of medicines in LMICs.

3.1.1.2 Operational design

Pooling and licensing

The principal reason for the existence of MPP is its work on **in- and out-licensing** through patent pooling. However, as discussed in Section 1.1 patent pools are not the only way for generic manufactures to obtain licenses from originator companies. An alternative is an exclusive bilateral agreement between an originator company and a generic manufacturer. The relevance of MPP thus depends in part on whether its model encourages greater use of voluntary licensing, in particular non-exclusive licensing, and on whether from a public health perspective the 'quality' of the licences is better than that achieved through bilateral licensing. Quality herein can be understood to mean that the terms and conditions themselves favour increased access but also that the licences are more transparent.

Generic companies indicate that obtaining a licence through MPP has multiple benefits. First, it enables them to conclude licences that they would otherwise likely not have been able to. This seems to be the case especially for smaller and less-experienced generic manufacturers. Several generics companies have indicated that they probably would not have been able to obtain the licenses they currently have without MPP because they didn't have the relationships with the originator companies needed to obtain these licenses. These generic manufacturers remark that a good relationship is often a prerequisite for obtaining bilateral licenses and that it is difficult for them to create and maintain these relationships with all the originator companies the same way MPP does. Another large generics manufacturer, however, indicated that it probably also would have been able to negotiate the licence bilaterally as it had success with that in the past. Licensees indicated that the MPP licences also often have better terms for generic manufacturers. Respondents from both MPP and originator companies have indicated that this is because generic manufacturers have more limited bargaining power when they enter into bilateral negotiations. Another benefit of the MPP model is the transparency of its licences: generic companies know that they are getting the exact same deal as other generic companies and that they are operating on a level playing field. A further benefit sub-licensees

derive from working via MPP rather than bilaterally is the support and information MPP provides as part of its licence management work (see next Section '*Alliance management*').

For originator companies, MPP serves as a knowledgeable, trusted and easy-to-collaborate-with partner. Two originator companies independently explained that the relevance of MPP as an intermediate is most apparent when there is (the expectation of) interest from a substantial number of generic manufacturers. MPP has established processes for tendering and assessing the offers from different parties and selecting those that it is confident can deliver, so is able to handle these processes more efficiently than these companies could do themselves. By contrast, for products for which there is low product demand and, consequently, little interest from generic manufacturers, the value of the MPP model was deemed to "disappear". The model rests on the notion that generic competition will drive down prices and make products more affordable. If, however, there is low demand for a product (for instance, because it has a narrow therapeutic scope), there will be few generic companies that are interested in obtaining a sub-licence. The ensuing lack of competition means that the licence may not contribute to better product affordability and increased access. This situation was illustrated by one of MPP's paediatric licences, for which MPP has only one sub-licensing agreement and, according to the licensor, no generic version has been developed due to lack of demand. To ensure access in LMICs, the licensor has opted to use differential pricing of its own product instead and has committed to making it available at cost (without profit) as long as needed in some markets. It has not sought to terminate its licence to MPP but does not expect there to be any further interest from generic companies and considers the licence to be effectively inactive.

It has also been suggested by one originator that the MPP model is of limited relevance for complex products, such as biological medicines. Not only is the number of generic companies capable of producing such complex products smaller, there is also a greater need for licensors to engage in technology transfer to ensure the quality of the product produced under licence. The technology transfer process can be labour intensive and originator companies prefer to limit the number of generic companies with whom they need to work on this. Consequently, it is expected that licensors will be less enclined to work with MPP and that, even if they do, there may not be sufficient interest from potential sub-licencees to encourage competition and drive down prices.

A further part of the value originator companies derive from working with MPP lies in the fact that, as part of the licence agreement between MPP and the originator, MPP actively monitors sub-licensees' compliance with the sub-licensing terms to ensure that intellectual property rights are respected and products produced under MPP licence are not diverted to other markets (see next Section '*Alliance management*'). Several originator companies confirm that MPP takes over of a "lot of the heavy lifting" of managing the licences for these companies and that MPP can do this more efficiently because it often has multiple licences with generic companies. Where applicable, MPP also takes care of the calculation of royalties payable by sub-licensees. By taking on these responsibilities, MPP offers originators an easier route for voluntary licensing compared to bilateral agreements.

One originator company suggested that working with MPP had allowed the company to be better informed about developments in the global health field. It felt that typically the pharmaceutical industry is excluded from important global health meetings but that MPP has, indirectly, brought them into these conversations by relaying information between parties. This role as a broker of information (rather than of licences) was apparent also in the company's dealings with governments in U-MICs. The intervention of MPP was said to have facilitated the dialogue between the company and these governments that led to the countries being included in a new licence agreement.

Among some stakeholders, mainly advocacy groups, there is a sense that originator companies opt to engage with MPP also for promotional reasons. When a company agrees to licence to MPP, this generates good publicity as well as recognition in rating frameworks like the Access to Medicine Index.[55] Indeed, one originator confirmed that public pressure contributed to the company signing a licensing agreement with MPP even though it was unconvinced of the value of doing so. It suggested that, at the time MPP was founded, the public perception was that, if a company did not sign a license agreement with MPP, it did not take access seriously. Furthermore, issuing a voluntary licence may be done to stave off patent challenges or attempts by government to issue compulsory licenses. Some advocacy groups have suggested that companies may thus be misusing voluntary licences, and by extension MPP, to not work on access more holistically and caution MPP against allowing themselves to be used this way. They offered the example of the dolutegravir licence whereby governments of two countries halted their preparatory work for issuing a compulsory license when it was "leaked" at an early stage that the company was in discussions with MPP about a voluntary licence, even though those negotiations still took over a year to be successfully concluded.

Given the nature of the pharmaceutical industry, it is entirely likely that originator companies do use their interactions with MPP in part as a promotional tool and that they carefully choose when to engage with MPP or even communicate about this. This, however, is also part of MPP's operational model as it relies on originator companies deriving some form of benefit from their work with MPP. Provided MPP does not compromise on its principles in its negotiations with the originator companies, this inherent tension need not distract from MPP's relevance or reduce the importance of its work.

Most stakeholders view the work of MPP on patent pooling and licensing as unique and very relevant. Even among more critical organisations, who strongly emphasise the limitations of the VL model and highlight MPP's relative lack of success in areas beyond HIV and HCV, there is recognition that MPP fulfils a useful role in the wider landscape of actors that are working on improving access to medicine. This is not to say MPP has replaced the use of bilateral licensing. The generics companies that work with MPP, in particular more established ones, often have bilateral licences as well. Ultimately, it is the originator company that decides whether they want to go through MPP or conclude bilateral licences with specific generic manufacturers. One originator company indicated that it will continue to use also bilateral licences to maintain a degree of flexibility over with whom it works. There are no publicly accessible data on bilateral licensing agreements that would allow to determine to what extent MPP has replaced the use of bilateral, exclusive licensing in favour of non-exclusive licensing or whether the use of voluntary licensing has increased overall. The sense among stakeholders, however, is that the use of VL has increased because of the existence of MPP. In a public endorsement of MPP, Jayasree Iyer, the Executive Director of the Access to Medicine Foundation is even quoted as saying that the Medicines Patent Pool has become the driving force behind voluntary licencing in the pharmaceutical industry.[56]

[55] The Access to Medicine Index is a yearly ranking of pharmaceutical companies based on their efforts to make medicines, vaccines and diagnostics more accessible for people in low- and middle- income countries. This ranking is done by the Access to Medicine Foundation.

[56] Iyer, J.K. (2020) Transparency is essential to access to medicines. Available via: https://medicinespatentpool.org/story-post/transparency-is-essential-to-access-to-medicines/?platform=hootsuite

Alliance management

By contrast to its work on pooling and licensing, the work of MPP on alliance management – and in particular its **licence management** – is less well understood among some stakeholders. As described in more detail in Section 1.4, licence management includes activities that MPP needs to conduct to ensure that sub-licensees comply with the legal obligations laid down in the licencing agreement. Licence management starts during the product development phase, where MPP offers advice and technical support to sub-licensees, and continues after products are on the market.

Licence management forms an important part of the value that MPP can bring to both originator companies and sub-licensees. Many of the tasks covered by licence management are also contractually mandated by the licence agreement between the originator companies and MPP. A main concern for originator companies when engaging in licensing, whether through a patent pool or bilaterally, is the risk of products produced under licence being diverted to markets other than those covered by the licence agreement and thus potentially undercutting the market for the originator company's own product. As part of its obligations, MPP monitors and enforces sublicensee's compliance with the terms and conditions of the agreement, including preventing the diversion of products. It does this by, among other things, matching export data against reported sales and by ensuring that sub-licensees are cautioned against working with resellers that are known to divert products. One company indicated that it had not experienced major issues with product diversions of generic HIV medicines from the markets in the licence territory to high-income countries and credited this to the strict procurement rules observed by organisations like the Global Fund and PEPFAR. Nonetheless, it emphasised that risk of diversion is an important concern, especially in areas where the procurement is not handled by such organisations, and confirmed that it considers the work of MPP in this area to be an important added value. In 2018, MPP created a policy on the conduct of routine and for-cause audits of its sub-licencees. To date, it has conducted two routine audits.[57] In both cases, the audits identified online distributors/wholesalers purporting to sell licensee products outside of the licence territory. In response, MPP placed the licencees on notice not to sell directly or indirectly to any of the identified online distributors/wholesalers.

While during the first grant, MPP's main focus was on establishing relationships with originator companies and in-licensing, during the second grant the focus shifted towards managing the existing relationships. Whilst the evaluators were unable to speak with most of the originator companies with whom MPP currently engages, it is unquestionably of significant added value that MPP is able to take over the monitoring and enforcement work that, under bilateral agreements, these companies would have had to undertake themselves and that MPP can offer assurances that the licences granted do not pose a commercial risk. This is evidenced, for instance, by the fact that one originator company has asked MPP to take over management of one of its bilateral licences. Another company also indicated that it is significantly simpler to work with MPP than with bilateral licences. Similar considerations apply to MPP's intermediary role in ensuring that sub-licensees respect the originators' trademarks and trade dress, as well as to MPP's calculation of royalties from sub-licensees on behalf of the licensor. Although these activities could be viewed as outside the core of MPP's role as an independent 'broker' of

[57] Summary – MPP Audit Policy and Audits Conducted To-Date. Available at: https://docs.medicinespatentpool.org/dl/2rZTbE4Xu4/

licences, it is precisely such activities that allow MPP to position itself with originators as a more attractive route for licensing than bilateral agreements.

From the perspective of sub-licensees, MPP's work under its licence management workstream covers not only its monitoring role but also substantial technical support at different stages of the development and registration process, as well as post-approval. MPP works with generic companies in the early phases of development to discuss, where applicable, the selection of formulations and to offer support with technology transfer. When a product is at the end of the development stage, MPP offers support to sub-licensees to ensure that all products are approved by WHO PQ standards or by a Stringent Regulatory Authority. The extent to which generic companies require and benefit from this support varies. For instance, some generic companies value the technical assistance MPP provides with regulatory processes, whereas for others this is unnecessary as they already have the required expertise for this in-house. Likewise, for some generic companies the (anonymized) information MPP provides about development progress of competitors, the intentions of other sub-licensees to file for registration or about upcoming tenders, is generally valued business intelligence, whereas others deem this useful but not critical. The Quarterly Review Meetings (QRMs) are generally seen as useful platforms for information exchange between MPP and the licensees. There are also generic companies who have much more frequent interaction with MPP outside of the QRMs and they indicate that this is very useful to them and that this form of support is very valued. These companies also indicate that the quality of the support and the expertise of MPP is high.

In addition to the tasks directly connected to the management of the licences, MPP works with various public health stakeholders, including procurement agencies and governments in the target countries of the licences, to support product uptake through information and data sharing. It does so to ensure that these parties are aware of opportunities to procure products developed under licence from MPP. More generally, MPP lends its expertise on pharmaceutical patents and intellectual property to interested parties. One government representative indicated that because MPP works with many manufacturers, it has information about potential product availability and pricing issues. This information is used to assist the national procurement authorities with determining what constitutes a fair price.

Some have questioned the relevance of the more 'downstream' aspects of MPP's work under alliance management, including the technical support it offers to sub-licensees. Representatives of one organisation fear it distracts MPP from its unique focus on in- and out-licensing and that investing further in this workstream, at the possible expense of its upstream work on in-licensing, may eventually lessen the relevance of MPP. Instead, it is suggested that MPP is to leave the uptake of the licenses to market forces (i.e companies would naturally find it interesting to engage in these markets in order to make a profit) and other organisations that can provide companies with technical support, and instead focus its efforts on the in-licensing work in further areas of public health needs. However, this opinion does not appear to be strongly supported by either originators or sub-licensees, whilst insufficient data is available from in-country organisations to determine the value of MPP's work in supporting product uptake. Among interviewees there is generally high awareness of MPP's work and the portfolio of products that are produced under licence from MPP. Perspectives from civil society organisations nonetheless suggest that MPP's direct engagement with governments is important to make sure countries are aware of their options. Some countries have asked MPP directly to negotiate with originators on their behalf to be included in licence expansions.

Another component of MPP's work under alliance management involves its efforts to measure and communicate on its impact. In recent years, MPP has increased its communication efforts, in line with recommendations made in an internal Management Review Report conducted in

2017.[58] The results of these efforts, such as MPP being included in conferences, webinars etc., have been extensively reported in MPP's annual reports. Although these activities do not directly translate into an increase in licences signed, investment in communication is vital for future collaborations with MPP. Communicating about new licences and the impact of these licences on access offers the favourable publicity for originators and generics companies that can persuade them to work with MPP.

For the most part, the activities MPP conducts as part of its alliance management can be considered as relevant and directly contributing to the success of the MPP licences. This applies in particular to the monitoring of compliance with licence obligations, the information shared by MPP with sub-licensees and, to a more mixed degree, the technical support provided to sub-licensees. These activities offer the added value to involved parties that is essential for MPP's ability to incentivise both originators and sub-licensees to work through MPP. This in turn is what allows MPP to contribute to the acceleration of affordable access to essential medicines. The relevance of MPP's broader activities to support product uptake is somewhat less tangible, although indications are that this more holistic approach enables it to exercise more direct influence over how its outputs (i.e. licence agreements and products developed) contribute to its ultimate access objectives.

MedsPal

Whilst MPP is likely best-known among global health actors and beneficiaries for its work on licensing, another important aspect of the MPP's work is the maintenance of the **MedsPal database**. This resource enables parties working on access to medicine (e.g. goverments, generic companies, medicines procurement agencies, civil society and advocacy groups) to assess the current patent status of medicines in MPP's core disease areas. Although patent information is public, it is notoriously difficult to identify information on pharmaceutical patents as the name of the medicine is usually not included in the patent information. Several interviewed stakeholders, in particular from advocacy groups, have indicated making use of this resource and even view it as one of MPP's greatest successes. These groups indicate using the database in for their own work. They greatly value MedsPal for having increased the transparency of the IP system. Nonetheless, some stakeholders have indicated that the database is not easy to navigate and that data is not always up-to-date.

3.1.2 Relevance of scope of MPP

Disease and product scope

Under the second grant, the first extensions of MPP's scope were into TB medicines and into medicines for treatment of Hepatitis C Virus. The burden of TB, and in particular the rise of MDR-TB, is of concern to many main global health actors. TB is also one of the core investment areas for Unitaid, MPP's main donor. As such, the inclusion of TB fits squarely within internationally set global health priorities. Although many current TB treatments are older medicines that are already off-patent and for which patent barriers are thus not the main obstacle for access, MPP motivated the inclusion of TB into its scope in the TB stewardship report[59] by the then recent development of two new TB medicines Bedaquiline and Delamanid and a further pipeline of

[58] Moore Stephens. (2017). Management review of Medicines Patent Pool.

[59] TB Stewardship Report (2016) The Medicines Patent Pool Foundation.

promising drug candidates. The hope has been that MPP would be able to secure licences for these products and thereby help increase access. A further role for MPP in the TB space lies in its ability to act as an intermediate between pharmaceutical innovators. Most TB treatment regimens require a combination of anti-TB medicines that, according to WHO treatment guidelines, are preferably given as a fixed-dose combination (FDC) product. When one or more of the individual medicines is still under patent, this can hinder the development of FDCs as this requires the cooperation of different licence holders. By securing licences to all patented components, MPP can facilitate the development of new FDCs. It is thus clear that, although the landscape of TB medicines is different than that for HIV treatments and the role of patent barriers is less pronounced here, MPP can nonetheless be a relevant actor in this space as well.

Alongside TB, one of the main co-infections for people living with HIV is Hepatitis C. A 2016 study supported by the WHO showed that HIV-infected people are six times more likely to also be infected by HCV than others[60,61]. HCV is therefore also one of Unitaid's investment areas. The extension of MPP's scope into HCV follows this same logic. Crucially, unlike with TB, some of the most important treatments for HCV are relatively new medicines. The direct-acting antiviral (DAA) medicine Sofosbuvir (Sovaldi®) was approved by the US Food and Drug Administration (FDA) in 2013. At the time, it was the most expensive prescription medicine in the US[62]. Other HCV medicines, some being combinations containing Sofosbuvir, were also very highly priced. As a result, access to these breakthrough medicines was effectively out of reach for people in LMICs, despite the clear need for these products there. The relevance for MPP's venture into HCV medicines, aimed at the introduction of affordably priced generic versions for use in LMICs, was thus evident. Many interviewed stakeholders have also underlined this and view this as one of the areas where MPP has had the greatest impact.

A next step in the growing scope of MPP's activities was the inclusion of medicines on the EML. This move, and in particular the inclusion of treatments for non-communicable diseases (NCDs), was also widely valued among stakeholders. They noted that the development of affordable generic NCD medicines and combination products is often delayed by patents, whilst the burden of NCDs in LMICs has been increasing.[63,64] As the EML represents internationally agreed priorities, it was an obvious extension for MPP. Multiple stakeholders would like to see the scope of MPP expand even further or see more activity in the areas that are covered by the expansion under the EML, as will be discussed further in the strategic recommendations.

---

[60] Unitaid (2021) Hepatitis C co-infection. https://unitaid.org/investment-area/hepatitis-c-co-infection/#en

[61] Platt L, Easterbrook P, Gower E, McDonald B, Sabin K, McGowan C, Yanny I, Razavi H, Vickerman P. Prevalence and burden of HCV co-infection in people living with HIV: a global systematic review and meta-analysis. Lancet Infect Dis. 2016 Jul;16(7):797-808. doi: 10.1016/S1473-3099(15)00485-5. Epub 2016 Feb 25. PMID: 26922272.

[62] Court, E. ((2016, April 14th) This is the most expensive drug in America. Marketwatch.com: https://www.marketwatch.com/story/this-is-the-most-expensive-drug-in-america-2016-04-09

[63] Kishore SP, Kolappa K, Jarvis JD, Park PH, Belt R, Balasubramaniam T, Kiddell-Monroe R. Overcoming Obstacles To Enable Access To Medicines For Noncommunicable Diseases In Poor Countries. Health Aff (Millwood). 2015 Sep;34(9):1569-77. doi: 10.1377/hlthaff.2015.0375. PMID: 26355060.

[64] Beck EJ, Mandalia S, DongmoNguimfack B, Pinheiro E, 't Hoen E, Boulet P, Stover J, Gupta A, Juneja S, Habiyambere V, Ghys P, Nunez C. Does the political will exist to bring quality-assured and affordable drugs to low- and middle-income countries? Glob Health Action. 2019;12(1):1586317. doi: 10.1080/16549716.2019.1586317. PMID: 30983547; PMCID: PMC6484498.

MPP started an exploratory phase of Long-acting technologies in 2019 to explore how the model can be applied to this area. This phase has been linked to three Unitaid grants for long-acting projects that are aiming to accelerate the development of existing medicines into long acting versions for preventing malaria and TB and treating HIV and Hepatitis C.[65] This expansion is therefore not an expansion into another disease area, but into different treatment methods.

Geographic scope

In principle, any country that has been designated as an LMIC can be within the scope of MPP's activities. However, the licences that MPP negotiates with originator companies are territorial, meaning that generic medicines produced under licence can only be sold in the countries covered under the terms of the licence. Consequently, products that are produced under licence from the MPP are not automatically placed on all LMIC markets.

The inclusion of low-income countries (LICs) and lower-middle-income countries (L-MICs) into the licence territory is mostly unproblematic. The licences MPP currently holds cover many LICs and many L-MICs. For instance, the licence for ATV has been expanded to cover L-MICs like Indonesia, Morocco, The Philippines, Tunisia, Ukraine, Vietnam, Egypt, Algeria and the Cook Islands.[66] As will be discussed in more detail in section 3.4, these licences are helping to bring substantial value to the populations in these countries.

Where MPP has thus far struggled to make greater in-roads, is with inclusion of upper-middle-income countries (U-MICs), such as Brazil or Malaysia, into the territory of the licence. For DTG for example, a first-of-its-kind agreement through MPP was made enabling access to four U-MICs: Azerbaijan, Belarus, Kazakhstan an Malaysia. In itself, it is not unexpected that innovator companies are less willing to include U-MICs. These countries represent pharmaceutical growth markets where companies have a clear commercial interest of their own.[67] To successfully negotiate access for U-MICs, MPP has to take a pragmatic approach. In the case of dolutegravir, this has meant a willingness to make certain compromises. At the request of Belarus and Kazakhstan, MPP negotiated with the patent holder to conclude a separate licence for these countries but agreed to keep the royalties on this new licence confidential. This was a first for MPP, which up to that point had been fully transparent about all details of their licence agreements. Among some advocacy organisations this move has raised concerns that it sets a precedent for less transparent licences by MPP. However, others have lauded MPP for not putting full transparency over the objective of access itself. They reason that licence agreements are not an end point in itself and that the agreement can be renegotiated over time to achieve better terms and conditions, including around transparency.

The MPP model does not include any activities that are focused on more 'downstream' parts of the pharmaceutical supply chain or on access barriers that exist within national health systems. Consequently, MPP is not in a position to exercise control over which specific

[65] Medicines Patent Pool (2021) Long-acting Therapeutics. Available via: https://medicinespatentpool.org/what-we-do/long-acting-hub/

[66] Written answers to additional questions from Technopolis provided by MPP

[67] Inclusion in the licence territory may depend on other factors than a country's purchasing power alone, such as market size and geographic location. For instance, whilst South Africa is an U-MIC, it is still included in all of MPP's licences. South Africa, however, has the largest number of people living with HIV in the world. The country has also been a strong proponent of HIV treatment access: the South African government was one of the first countries to threaten compulsory licensing for HIV medicines.

population groups within a country benefit from greater access to medicine. MPP's contribution to Unitaid's mission of reaching the most disadvantaged populations in developing countries thus primarily connects to its focus on obtaining licenses for products of greatest relevance to populations in LMICs and ensuring that these countries are included in the territory of the licences.

3.1.3 Adaptations to the design

One of the main changes to the context of MPP's operations during the period of the second grant, was the outbreak of the COVID-19 pandemic. Following this, the MPP Board agreed to temporarily expand MPP's mandate to include any health technology that could contribute to the global response to COVID-19 and where licensing could facilitate innovation and access.[68,69] This work was not officially covered by the MPPII grant, but was paid for with funds provided by Unitaid under the grant. COVID-19 is not part of the MPPIII grant, the successor to the grant evaluated here. MPP's COVID-19 work in 2021 is funded by the Japanese government. MPP's work in this area has mainly focused on medications that could treat the infection and MPP has, at the request of WHO, started mapping patents on medicines that are being investigated for COVID-19.[7069]

MPP is not currently one of the most significant actors in the field of access to vaccines for COVID-19. In a presentation to the Unitaid board, MPP has stated that so far COVAX[71] does not see a role for MPP and that patents were at that point not considered to be a major barrier. MPP also noted that there doesn't seem an appetite from donors to tie funding to licences.[72] Respondents within MPP indicated that MPP is still searching for what its role should be in the COVID-19 space. Nonetheless they have worked to support the response wherever possible. As such they have joined the C-TAP initiative at the request of WHO and have become part of the ACT-Accelerator Therapeutics Pillar led by WHO. They are also in discussions with originator companies and research organisations for potential licences for COVID-19 health technologies.[73] In June 2021, after the second grant period of MPP, it was announced that MPP is a partner for the newly instated WHO mRNA vaccine technology tranfer hub in South Africa.[74] MPP has also launched VaxPal, a new patents database devoted to COVID-19 vaccines to create greater transparency on patents.[75]

---

[68] MPP's efforts on Covid-19 were included in the evaluation at the request of Unitaid, even though they are not part of the MPPII grant.

[69] Medicines Patent Pool (2020) COVID-19 presentation to Unitaid Board

[70] Medicines Patent Pool (2020) COVID-19 presentation to Unitaid Board

[71] COVID-19 Vaccines Global Access initiative

[72] Medicines Patent Pool (2020) COVID-19 presentation to Unitaid Board

[73] Medicines Patent Pool (2021) Disease areas: COVID-19. Available via: https://medicinespatentpool.org/what-we-do/disease-areas#pills-COVID-19

[74] WHO (2021) WHO supporting South African consortium to establish first COVID mRNA vaccine technology transfer hub. Available via: https://www.who.int/news/item/21-06-2021-who-supporting-south-african-consortium-to-establish-first-covid-mrna-vaccine-technology-transfer-hub

[75] Medines Patent Pool (2021) VaxPaL – COVID-19 vaccines patent landscape. Available via: https://medicinespatentpool.org/what-we-do/disease-areas/vaxpal/

MPP has also engaged with generic pharmaceutical manufacturers on COVID-19, which resulted in the *Open Pledge from Global Manufacturers of Generic Medicines against COVID-19*. In this, 21 generic companies have pledged to work together via MPP to accelerate access to hundreds of millions of doses of new COVID-19 interventions for low- and middle-income countries.[76] However, at the time of writing, originators had not yet made any licences available to generic manufacturers via MPP. A majority of respondents in the evaluation were aware that MPP had expanded its scope to include COVID-19 and welcomed this. Most respondents also indicated, though, that they have seen limited or no effect of MPP's activities in this field. The pledge is mostly viewed positively, though respondents indicate that a pledge on its own has limited impact.

The pandemic not only has caused MPP to expand its activities but has also made it more difficult for MPP to work on its core activities. Multiple respondents within MPP have indicated that COVID-19 has made it very difficult to get the attention of companies on topics unrelated to COVID-19. Where before they had easily been able to have conversations with actors in the field, this is no longer the case. This is partly since companies are constrained by COVID-19 and that they need to prioritise where to put their limited resources; and respondents from within MPP indicated that they felt that MPP is not high on the list of priorities, especially for originator companies. It is also because, in response to the pandemic, organisations have been moving people around internally. For MPP this means that they have to start all over again in building relationships and explaining what MPP does.

3.1.4 Assessment of findings

Overall, it is concluded that the objectives, design and scope of MPP during its second grant were all highly relevant and were aligned with the needs of MPP's main beneficiaries: people in need of access to key medicines in LMICs. As patents form an important barrier to access to essential medicines, MPP's work has relevance not only in HIV but also in the new areas that MPP has brought within its scope (TB, HCV, products on the WHO essential medicines list and long-acting technologies). It is widely viewed that MPP provides a unique and important service in the field of global health. Whilst MPP has not replaced bilateral licensing, there is a wide sense that MPP has facilitated voluntary licensing for both originators and generic manufacturers and that as a result the use of voluntary licensing has increased.

MPP has been able to secure additional licences and renegotiate terms on its existing licences because of the value it can offer originator companies. This value is derived partly from the work that MPP undertakes as part of its licence management to monitor compliance with licence obligations and reduce the administrative burden on originators. In addition, originator companies gain reputational capital from working with MPP.

To generics companies, the value in working with MPP is manifold: through the patent pool, companies can gain access to licences they may otherwise not be able to obtain against conditions that may also be more favourable. In addition, sub-licensees can benefit from MPP's technical support and market intelligence during product development and registration, as well as post-approval. The relevance of these services to sub-licensees differs with less experienced companies benefitting from it to a greater extent.

[76] Medicines Patent Pool (2021) COVID-19 Open Pledge from Global Manufacturers of Generic Medicines against COVID-19. Available via: https://medicinespatentpool.org/partners/mpp_global_manufacturers_open_pledge/

To maximise its potential for impact, MPP also works with other key public health stakeholders, such as procurement agencies and national governments. The relevance of this work is in drawing greater attention among these parties to the possibility to procure medicines developed under licence from MPP. Additionally, MPP engages with in-country and civil society organisations to ensure complementary between their work and that of MPP.

Table 1 Summary of Relevance

Evaluation questions	Answer	Strength of Evidence
To what extent did the objectives and design of MPP II respond to the needs of targeted beneficiaries?	The MPP-II grant has focused on overcoming patent-related barriers to access to medicines for diseases that are of high importance to populations in LMICs.	Strong (Peer-reviewed data on disease burden in LMICs for MPP's priority areas, as well as existence of patent barriers)
Have design and implementation approaches been appropriately adapted/course-corrected to respond to any changes in context?	MPP has been flexible in its scope of activities conducted under the MPP-II grant, having progressively extended its disease scope based on expressed needs for MPP's involvement.	Strong (Adaptations to MPP's design and approaches appropriately documented)
To what extent have grant design and implementation identified and addressed issues related to gender, social inclusion and equity in line with Unitaid's overall mission to reach the most disadvantaged populations in developing countries using innovative global market-based approaches?	The priority areas for MPP are all in line with those of Unitaid. The MPP model does not allow for specific targeting of population groups within countries but strongly focuses on improving access to innovative products to people in LMICs through creation of a competitive pharmaceutical market. MPP also focuses on stimulating development of new formulations and combination products to support use in LMICs and serve specific population groups such as children.	Strong (MPP's focus areas and strategy are clearly documented)

Source: Technopolis, 2021

3.2 Coherence

MPP does not exist in a vacuum but operates within a diverse field of actors and organisations with the common goal of improving access to medicine for people in LMICs. To understand how and where MPP brings value into this system, it is important to understand the coherence between the activities of MPP and that of others. This includes some of Unitaid's other IP grantees as well as multilateral health organisations, bilateral development organisations, non-governmental and civil society groups. Furthermore, whilst originator and generic companies are direct stakeholders of MPP, they can also conduct activities aimed at improving access that do not involve MPP. Such actions have therefore also been considered in the assessment of MPP's coherence.

3.2.1 Multilateral organisations

The Voluntary Licencing model of MPP is not the only way to create access to medicines for LMICs. Organisations such as The Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund) work 'downstream' to support access by providing grants to procure medicines

to low-income countries, mainly in Sub-Saharan Africa.[77] MPP, by contrast, works more 'upstream' to remove patent barriers and create a competitive market with multiple generic suppliers. As such, these mechanisms are very complementary: MPP works to increase the number of affordable products available that procurement agencies then can distribute.

The priorities and objectives of the MPPII grant were closely aligned with those of the World Health Organization (WHO) and other international organisations working in the area of global health and access to medicines. HIV, TB and related co-infections, such as HCV, are priorities for all major global health donors. MPP's expansion to include all medicines on the WHO Essential Medicines List (EML) also underlines its efforts to be coherent with internationally recognised priorities. It was noted by some stakeholders, however, that neither WHO nor other global health organisations – including Unitaid – have been very vocal in drawing attention for the need of access to medicine for non-communicable diseases (NCD), even though the EML includes a considerable number of products for treatment of NCDs. Consequently, MPP has fewer visible allies for the work that it is doing in this space.

Another area where WHO and MPP are clearly aligned is in supporting the registration and marketing of products, via the WHO Prequalification of Medicines Programme (PMP) which was established in 2001. Under the PMP, WHO assesses the clinical evidence in regulatory dossiers submitted by invited manufacturers and checks whether products are made in compliance with WHO standards for Good Manufacturing Practice (GMP). If a product is approved and added to the list of prequalified medicinal products, procurement agencies can be assured that the products meet acceptable standards of quality, safety and efficacy. It is the only global medicines quality assurance programme. MPP supports the use of the WHO prequalification programme (WHO PMP) by including conditions regarding submitting licensed products to stringent regulatory authorities and/or WHO PMP for assessment and, where necessary, can assist generic manufacturers with preparing the dossier for filing. MPP's partnership with WHO is also reflected in its participation in the Global Accelerator for Paediatric Formulations Network (GAP-F), coordinated by WHO. In this context, MPP acts as a facilitator for the implementation of respective drug development programmes. Most recently, a further partnership between WHO and MPP was instituted when WHO announced its selection of the first mRNA Covid vaccine technology transfer hub, for which MPP will assist WHO in negotiating with technical partners and devising legal frameworks for governance agreements that prioritise public health.[78]

One particular area where overlap of activities under the MPPII grant was noted is that of market analysis and forecasting. Here, some stakeholders suggested that the work of MPP was partially duplicative or even conflicting with that of the Clinton Health Access Initiative (CHAI). It was suggested that CHAI may be better resourced than MPP for this task. At the same time, some generic manufacturers felt it is normal that forecasts by different organisations will diverge but that, as they are usually aligned on the major variables, they simply create a wider range of estimates, which has value in itself. The overlap of activities has previously been noted and was brought up with the organistaions by Unitaid, as both organisations are Unitaid grantees. In response, a new approach has been established which clarifies forecasting and projections,

[77] The Global Fund (2021) Global Fund overview. Available via: https://www.theglobalfund.org/en/overview/

[78] Medicines Patent Pool (22 June 2021) MPP welcomes WHO announcement of the first COVID-19 mRNA vaccine technology tranfer hub to be established in South Africa. Available via: https://medicinespatentpool.org/news-publications-post/who-covid-19-mrna-vaccine-tech-transfer-hub-sa/

which now is done jointly. As this evaluation did not conduct an in-depth review of the forecasting process, it is difficult to objectively establish whether the new joint approach has sufficiently addressed the concerns over duplication or whether a different approach, potentially without MPP's direct involvement, would be preferable. Nonetheless, MPP's ability to share market data with sub-licensees was generally seen as an added value and it thus stands to reason that there remains a role for MPP in the development of demand forecasts.

3.2.2 *Unitaid IP grantees*

Whilst MPP is the largest beneficiary of an IP grant from Unitaid, during the MPP-II grant Unitaid has supported several other organisations that are similarly focused on overcoming IP barriers to encourage competition and price reduction with the aim to increase access to treatment in the areas of HIV, TB and HCV. These included the International Treatment Preparedness Coalition (ITPC), South Centre (SC) and Third World Network (TWN). In 2020, a further grant was awarded to a coalition led by Wemos for work specifically on COVID-19.

The work of the first three IP grantees differs from that of MPP. Whereas MPP's focus is on licensing, that of the other grantees is mostly on strengthening capacity in countries to make optimal use of legal frameworks to support access as well as on directly challenging weak patents. Specifically:

- ITPC works to remove patent barriers by filing patent oppositions and challenging weak patents or by advocating for use of compulsory licences (CL) if patents have already been granted. Additionally, it works on creating an IP environment that favours access to medicine by, for instance, pushing for law reform and strengthening national patent examination processes. Its work under the Unitaid grant includes 17 countries.
- SC provides capacity building support to patent offices to examine pharmaceutical patent applications and works with policy makers and governments to promote use of available TRIPS flexibilities. SC primarily works with LMICs in Asia, Africa and Latin America.
- TWN works in LMICs in Asia and Africa to support capacity building, file patent oppositions and work with national policy makers on making use of TRIPS flexibilities. They work with the mechanisms of WIPO (World Intellectual Property Organisation) and with policy formulation at national level. The range of countries includes LMICs in Asia.

All three organisations are strongly advocacy-based. Given their focus on (capacity building to make use of) TRIPS flexibilities, it is unsurprising that these organisations are somewhat critical of the MPP model and clearly view its limitations. Whilst they welcome the work that MPP has been doing, and acknowledge the impact MPP has made in particular for access to HIV treatments, there is a fear that the visibility of MPP may give the false impression that the problem of access to medicine in LMICs is "solved". They thus see their role as working in parallel to MPP to keep drawing attention to the issues and create the enabling environment that pushes originator companies to do more on access. This includes advocacy to push for better terms and conditions on the MPP licences, including the extension of their territory. These organisations mostly view MPP as a short-term solution, whilst the long-term solution to the problem of access should come from the kind of systemic reforms these organisations are pushing for.

The other IP grant recipient is Wemos, an agency that aims to increase global health by addressing governments and allied organisations on their responsibility to realise the right to

health worldwide.[79] WEMOS has indicated that, while MPP is not an advocacy organisation and has to maintain an arms-length relationship with advocacy organisations, it still views MPP as an important facilitator of increased access. It considers MPP more as an implementing organisation that can negotiate with companies where many other organisations in the global health field cannot.

Whilst there is only anecdotal evidence of the synergies between the work of MPP and Unitaid's other IP grantees, it is clear that the MPP model is a product-based solution rather than a systemic one: for every new product, MPP needs to negotiate a separate licence for which it relies on the readiness of originator companies. Because of this, success in one area does not guarantee success in another. As such, there is a clear rationale for parallel approaches to tackling IP-related access barriers. Among the other IP grantees, there are nonetheless some concerns that the work of MPP has, at times, undermined their own work with governments to encourage them to make use of TRIPS flexibilities and that originator companies are using their work with MPP to distract critics, as discussed previously in Section 1.4. A certain amount of tension is unavoidable but there is nonetheless recognition of MPP's role in promoting access.

3.2.3 *Non-governmental* and civil society organisations

Beyond Unitaid's other IP grantees, there are numerous other **non-governmental organisations** (NGOs) that are focused on promoting access to medicine. Among those that were included in this evaluation, there is a shared understanding of the role of MPP in bringing affordable, safe and effective medicines to markets with limited access. It is recognised that MPP plays the role of a bridge-building entity between originator companies and generic manufacturers.

Where these NGOs complement the work of MPP (and vice versa) is, for instance, in awareness-raising with national policy-makers about the existence of licences and in creation of political support for the introduction of licensed medicines and their subsequent national procurement. Some organisations, for instance, conduct national campaigns and collaborate with local governments to procure licensed medicines. Discussions with Unitaid and MPP staff, as well as some of the identified literature produced by NGOs such as Médecins Sans Frontières (MSF) and the Access to Medicine Foundation (ATMF) indicate that the work carried out under the MPPII grant has supported their efforts in steering the industry towards more inclusive and affordable licensing practices. The ATMF also puts efforts into encouraging originator companies to get involved with MPP, both directly through its ATM Index reports and through their day-to-day interactions with companies.[80]

Among some NGOs there is a feeling that MPP should be a more vocal advocate for access and that currently it is too focused on its interactions with the companies. This is, however, largely a conscious decision by MPP as it needs to maintain a reputation as a neutral broker. Originator companies could be deterred from working with MPP if MPP were to take a stance that was seen as antagonistic. Organisations like ATMF, which are in a similar position, also caution against MPP becoming more of an advocacy-based organisation. It appears that in MPP's current operational model, it can benefit from the advocacy efforts of others, which help to create an environment that enables the work of MPP, without having to directly

[79] Wemos (2021) Visie, Missie en Waarden. Via: https://www.wemos.nl/over-ons/visie-missie-en-waarden-2/

[80] Letter of the ATMF Executive Director Jayasree K. Iyer https://medicinespatentpool.org/story-post/transparency-is-essential-to-access-to-medicines/?platform=hootsuite

engage in this. This way, MPP can represent a practical solution that allows the advocacy work of others to be translated into tangible impact.

3.2.4 Access strategies by originator companies

Alongside voluntary licencing, originator companies have different ways at their disposal through which they can contribute to improved access to medicine in LMICs. Historically, these have included large scale drug donation programmes, but more recently pharmaceutical companies have begun developing more sustainable access strategies. These include tiered pricing, donations and access programmes and other access initiatives.[81]

The concept of voluntary licensing has developed alongside and as part of such access strategies and, as highlighted by the ATMF, major originator companies are now actively engaging in voluntary licensing.[82] For some companies, this is part of their corporate social responsibility and access policies. The ATMF, however, also makes it clear that engaging in voluntary licensing alone is not sufficient for a pharmaceutical company to be viewed as a responsible actor that promotes access to medicine.

3.2.5 Assessment of findings

Within the landscape of actors that work on promoting and accelerating access to medicines in LMICs, MPP takes a unique place. It is the only organisation that works on voluntary licensing as a mechanism for access. MPP's approach is to create a competitive market with multiple producers of generic medicines to bring down the prices of these products. Whilst MPP works upstream to promote availability and affordability of medicines in LMICs, other organisations working further downstream take responsibility for these products being procured and distributed to target populations. MPP thus forms an important link in the greater access chain. In terms of its thematic priorities, MPP' work is highly aligned with that of all main global health actors.

Although MPP's pooling and voluntary licensing approach is unique, it is not the only organisation focused on overcoming IP-related barriers to access. Various other organisations, including several Unitaid grantees, work in parallel to MPP to draw attention to IP-barriers and offer countries support in addressing these. Their work is primarily focused on building the capacity of governments and other actors to make use of TRIPS flexibilities. The work of these organisations and that of MPP is complementary in that other access mechanisms can be applied alongside voluntary licensing, particularly when companies have not engaged in such licensing or if the terms of the licences do not sufficiently provide access. Although there are at times some tensions between the work of these organisations and that of MPP, there is a recognition of the value of having multiple complementary approaches.

Complementarities exist also between MPP and non-governmental and civil society organisations that are focused on promoting access to medicine. These organisations can

[81] Access to Medicine Foundation (2019) Are pharmaceutical companies making progress when it comes to global health? Available via: https://accesstomedicinefoundation.org/media/uploads/downloads/5d93329e141cb_Access-to-Medicine-Index-10-Year-Analysis.pdf

[82] Access to Medicines Foundation (2021) Are companies engaging in voluntary licensing to expand access? Available via : https://accesstomedicinefoundation.org/access-to-medicine-index/results/are-companies-engaging-in-voluntary-licensing-to-expand-access

promote the impact of MPP's work by raising awareness of the MPP licences in target countries and by creating political support for the introduction of licensed medicines. Importantly, these organisations can act publicly as access advocates and even call out originator companies for failure to license products, whilst this position is difficult for MPP to take without jeopardising its standing with originator companies as a neutral broker. MPP maintains good and mutually beneficial relationships with other non-governmental organisations.

The work of MPP has contributed to originator companies increasingly making use of voluntary licensing as part of their access strategies for LMICs. Companies with comprehensive access strategies, however, typically include voluntary licensing alongside other access mechanisms.

Overall, it is concluded that the work MPP has done as part of its second grant fits well within the landscape of other interventions and organisations that are aimed at increasing access to medicine in LMICs. MPP has sought to align itself with major global health organisations and works closely with WHO. Areas of possible duplication are relatively minor. Stakeholders are not all aligned in their expectations for MPP and the role it should take. Whilst some fear that MPP's prominent position in the global health space could crowd out other voices in the discussion on IP and access to medicine, others would like to see MPP take a more active role itself in this discussion. Divergence of perspectives is unavoidable in this highly contentious field and MPP appears to have taken a cautious and pragmatic position as an independent implementer.

Table 2 Summary of Coherence

Evaluation questions	Answer	Strength of Evidence
To what degree does the MPP II grant fit with other interventions within targeted countries, sectors or institutions? How well does the intervention align with priorities/needs identified by partners/the global disease response?	MPP's priorities and objectives are well aligned with those of the main actors in the global health space. MPP focuses on diseases prioritised by WHO and others.	Strong (Alignment with global health priorities well documented)
To what extend does the grant add value and avoid duplication?	Through its focus on voluntary licensing, MPP is a unique organisation that substantially complements the efforts of other organisations, including Unitaid's other IP grantees, but does not significantly duplicate the work of other organisations working on improving access to medicine.	Moderate to Strong (Based on documented focus of MPP and other organisations; assessment of complementarity and areas of duplication further informed by stakeholder opinions)

Source: Technopolis, 2021

3.3 Efficiency

An important question for this evaluation is how MPP has allocated its resources across its activities, whether this allocation is optimised for the fulfilment of MPP's objectives (allocative efficiency) and whether MPP has made efficient use of resources (technical efficiency). For this analysis, the focus has been on MPP's four key licensing activities: prioritisation, in-licensing, out-licensing, alliance management.

3.3.1 Resource allocation across MPPs activities: annual reporting

In its annual reporting to Unitaid, MPP reports its expenditures in two separate ways:

- By output
- By type of cost

Neither of these methods directly provides insight into the allocation of expenditures across MPP's key licensing activities as they are significantly cross-cutting. To nonetheless conduct an efficiency analysis at the level of MPP's key licensing activities, the evaluators attempted to map these activities to the outputs described by MPP in its annual reporting (Table 3). MPP herein assigns costs according to five separate outputs:

- **Output 1**: Public health-oriented, transparent technology licences are concluded
  - Included indicators relate to the outputs of MPP's work with originators and key stakeholders to create an enabling environment for in-licensing and prepare the ground work for successful negotiations, as well as of the actual negotiation and licensing process. This aligns most closely to MPP's work on **in-licensing**. The activities are furthermore based on the outcomes of MPP's work on **prioritisation**.
  - Other indicators refer to MPP's work on extending the territory of existing licences, and MPP's work with governments and key stakeholders to advance the work of MPP. In MPP's description of key licencing activities, this work is considered part of its **alliance management**.
- **Output 2**: Decreased time from sublicense to dossier submission
  - To achieve this output, MPP selects generic companies and development partners for the development of medicines under licence from MPP. This work is central to MPP's **out-licensing** activity.
  - It also works closely with its sub-licensees to conduct 'development projects' and get the developed products registered with a stringent regulatory authority or WHO PQ. This is part of MPP's **alliance management**.
- **Output 3**: Development of formulations appropriate for use in developing countries, including fixed-dose combinations and paediatric formulations
  - To ensure that appropriate formulations are developed, MPP works with its sub-licensees to select formulations and provide technical support in the development phase. This work is considered part of its **alliance management**.
- **Output 4**: Enhance the transparency of the IP status of HIV, HCV & TB health commodities
  - In its reporting on this output, MPP refers to its work on the MedsPaL database, the information it shares about its licences, technical briefings it conducts with key stakeholders and its communication activities. The work on MedsPaL is considered separate from MPP's key licensing activities, whilst the other elements are connected to its **alliance management**.

- **Output 5**: Direct management costs
  - This output is not discussed in great detail in MPP's annual reporting other than to indicate this output covers costs made in respect to direct management activities for the MPP. Because of this, Output 5 was excluded from the mapping of activities.

As a separate line item in the budget, MPP lists its 'common costs'. These too are assumed to be connected, to varying but unspecified degrees, to each of MPP's activity areas.

Table 3 Mapping of outputs to licensing key activities and KPIs

Output	Activity	KPIs
Output 1: Public health-oriented, transparent technology licences are concluded	Prioritization, In-licensing, Alliance management	KPI 1 Innovation and Availability, KPI2 Demand and Adoption
Output 2: Decreased time from sublicense to dossier submission	Out-licensing, Alliance management	KPI 2 Quality, KPI 2 Supply and Delivery
Output 3: Development of formulations appropriate for use in developing countries, including fixed-dose combinations and paediatric formulations	Alliance Management	KPI 2 Quality
Output 4: Enhance the transparency of the IP status of HIV, HCV & TB health commodities	MedsPal, Alliance Management	KPI 2 Demand and Adoption

Source: Technopolis, 2021.

As the above illustrates, this mapping has several significant limitations:

- Activities that are linked to MPP's work on alliance management contribute to multiple outputs. This may give the impression that this activity represents the largest part of MPP's work, whilst this is not necessarily the case. Rather, it is a reflection of the fact that the work MPP does to manage its licences and work with partners cannot simply be captured by any single output.
- For outputs linked to multiple activities, it is not possible to assign what share of the expenses made in fulfilment of these outputs should be assigned to the distinct activities.
- Outputs 1, 2 and 3 suggest clear end points but alliance management is an ongoing activity throughout the entire patent lifetime of the licenced product. From the available information it is unclear how these continuing costs are captured.

Thus, whilst the mapping of activities and costs may offer some degree of understanding of how MPP allocates its resources, this insight is far from perfect. Nonetheless, the costs made in connection to Outputs 1 through 4 are here discussed through the lens of the activities conducted in pursuit of them.

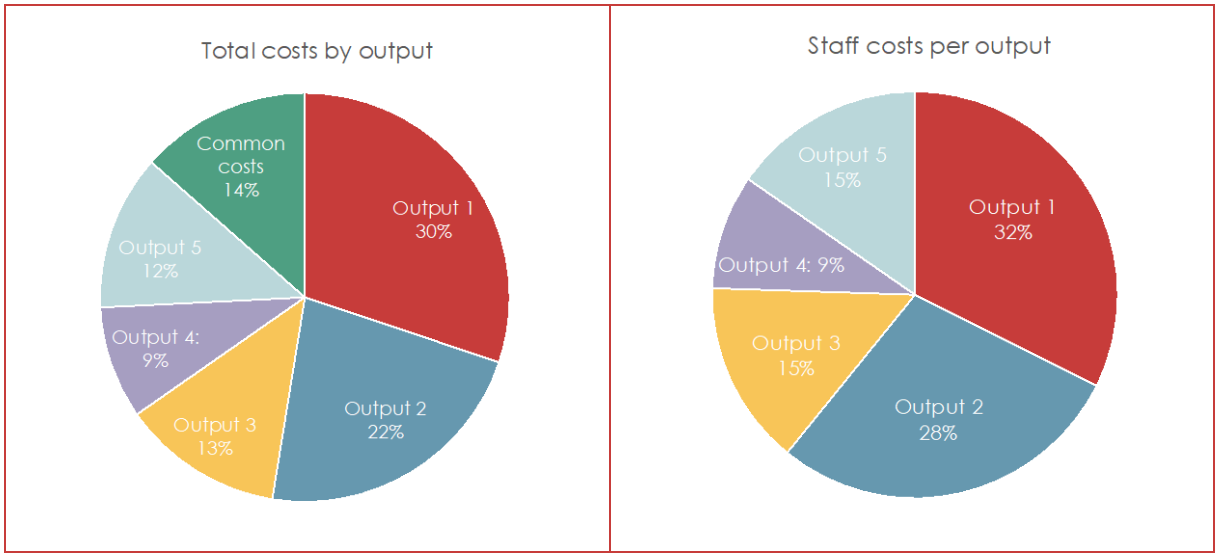
Output 1, resulting from activities related prioritisation and in-licensing, accounts for nearly a third of both its total costs (Figure 4, left) and staff costs (Figure 4, right). MPP has indicated that the negotiation processes with originators are time and labour intensive. In its self-assessment, MPP estimates that the in-licensing process takes "never less than 18 months". It is thus not surprising Output 1 takes up a substantial share of MPP's resources. MPP staff has indicated that in-licensing has become more time consuming now that MPP's license portfolio has expanded beyond HIV.

Output 2 captures a combination of activities related to out-licensing and alliance management. The work done on out-licensing is comparatively short (on average taking 2 to 3 months per licence) but the licence management activities MPP performs to accelerate the development of products can take substantially longer and requires regular interactions between MPP and the sub-licensees. This is reflected in the substantial share of resources (22% of total costs and 28% of staff costs) devoted to Output 2. This expense has stayed relatively stable throughout the MPPII grant.

Whilst a separate output, the activities MPP undertakes to achieve Output 3 are closely linked to its other interactions with sub-licensees as part of its alliance management during the development phase. The need for development of fixed-dose combinations or paediatrict formulations also does not apply to all of MPP's licences . It is therefore to be expected that fewer resources are devoted to Output 3 than to the previously discussed outputs.

The activities conducted in support of Output 4 (MedsPaL and communication), whilst undeniably important, are less integral to MPP's core work as a broker of licensing agreements. As such, the comparatively smaller allocation of resources to Output 4 appears in line with MPP's main objectives.

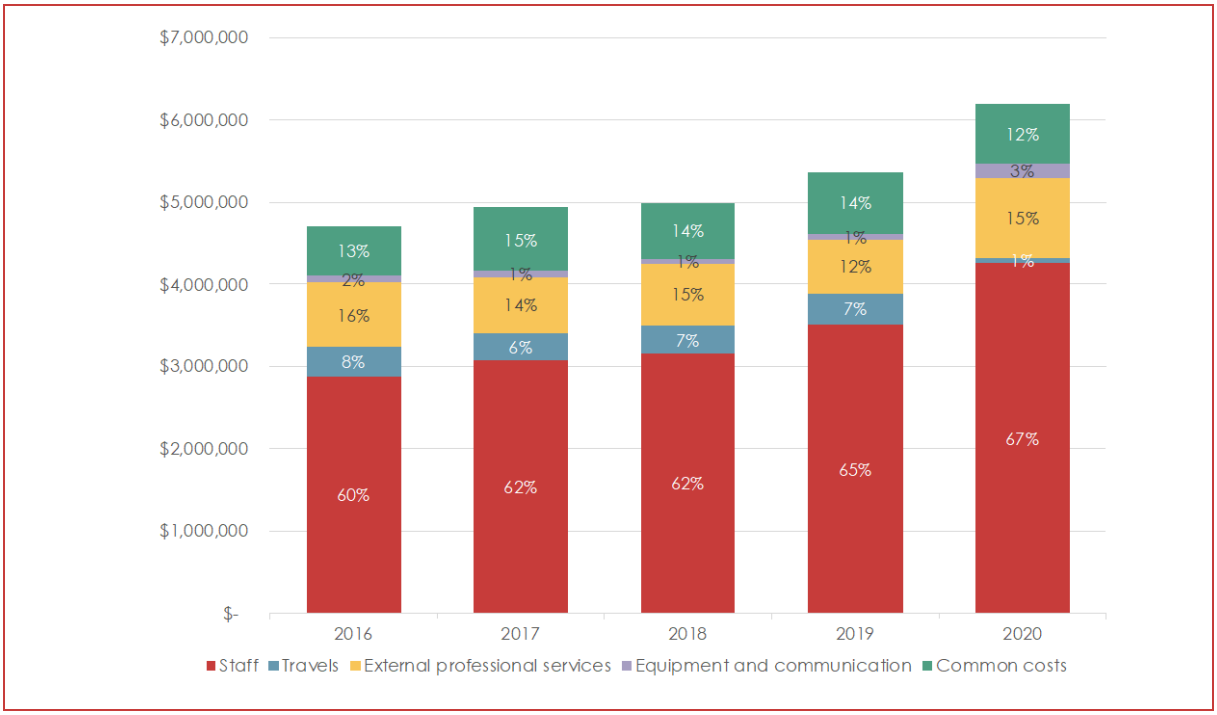
Figure 4 Overview of allocation of costs for MPP (total for 2016-2020): Total costs by output (left), staff costs by output (right).



Source: MPP Budget 2016 – 2020

Overall, the annual expenditure of MPP has somewhat increased over the years (Figure 5). In 2020, staff costs went up, both in absolute terms and relative terms, as a result of the grant reprogramming which led to additional staff being recruited to support in the areas of Long-Acting technologies and the WHO Essential Medicines List. These higher staff costs where partially offset by a decrease in travel costs (probably due to COVID-19). Most expenditures remained within budget, except for common costs, which were slightly higher (+3%) due to higher costs for outsourced HR services.

Figure 5 Cost allocation for MPP (2016-2020) over time by type of cost (USD)

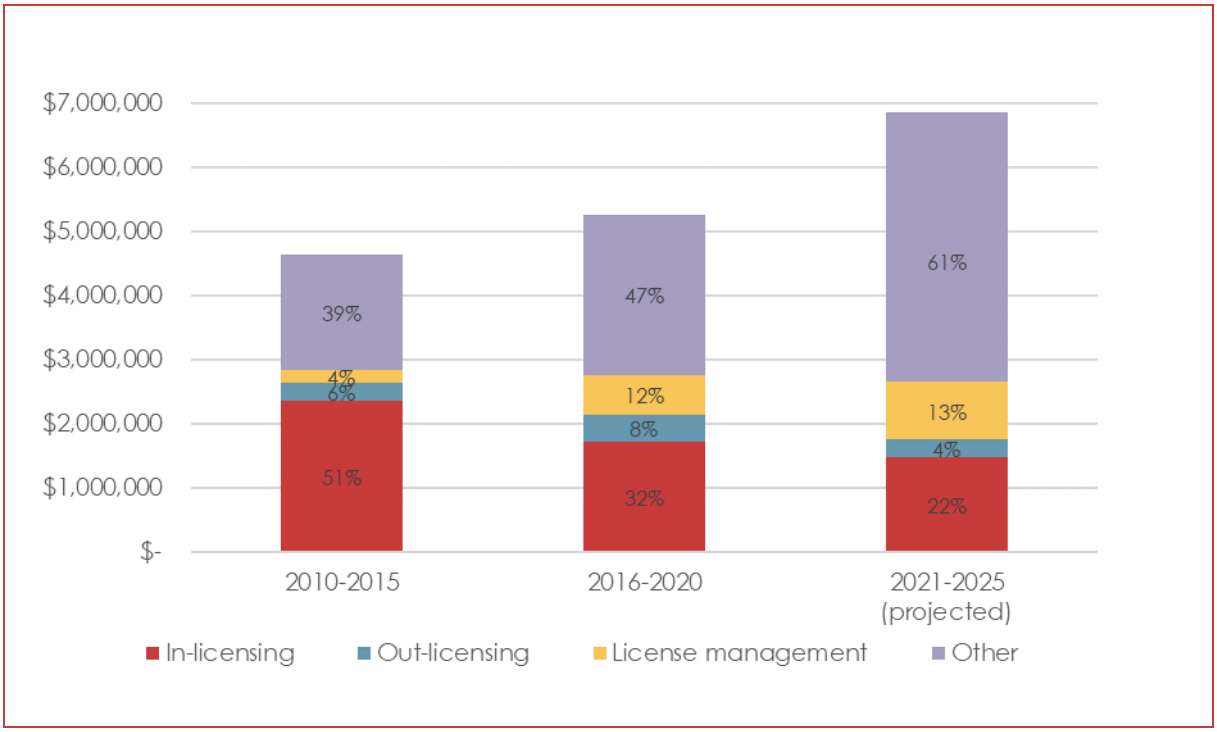


Source: MPP Budget 2016 – 2020

3.3.2 *Resource allocation across MPPs activities: self-assessment*

As Section 3.3.1 illustrated, MPP's financial reporting structure whereby costs are assigned to outputs, offers only limited understanding of how MPP allocates resources to its main activities. However, in 2020, MPP conducted a self-assessment that covers the period between 2010 and 2020 (and includes projections for 2021 until 2025) in which it provides a direct overview of the resources it has allocated throughout the years to in-licensing (including prioritisation), out-licensing and licence management respectively (Figure 6). Key data from this self-assessment form the basis for the analysis further described in this section.

Figure 6 Average annual expenditure over the course of the three grant periods, allocated by activity



Source: MPP annual reports 2011 – 2015, MPP Self-assessment of Licensing work

3.3.2.1 In-licensing

MPP's self-assessment indicates that the total resources allocated annually to in-licensing[83] under MPPII (USD 1.7M) had declined compared to MPPI (USD 2.4M) (Figure 6). At the same time, resource expenditure increased year-on-year (data not shown). As the number of new licences signed remained rather steady throughout this period (1 new licence in 2016, 2018 and 2019 each; 2 new licences in 2017), the annual increase is mostly attributable to expansions of existing licences.

To estimate the resources needed for the conclusion of new licences relative to expansion of existing licences, an approximation was made based on the total average expenditure per year for in-licensing activities, the number of years covered by the grant and the number of new and expanded licences under MPPI and MPPII

[83] In MPP's self-assessment, activities linked to prioritising medicines most needed for public health have been subsumed under in-licensing.

Table 4). The calculation assumes the following average relationship between new licences, licence expansions and total costs:

$$[Cost_{new\ licence} * Number_{new\ licences}] + [Cost_{licence\ expansion} * Number_{licences\ expanded}] = Total\ cost$$

It furthermore assumes that [Cost $_{\text{new licence}}$] and [Cost $_{\text{licence expansion}}$] remained the same under MPPI and MPPII. Total cost is based on the total resources allocated on average per year multiplied by the number of years covered by the grant.

Table 4 Relation between resources allocated to in-licensing under MPPI and MPPII and licenses signed or expanded

Grant (years)	Resources allocated (average per year, USD)		Licences signed	Licences expanded
	In-licensing, total	Negotiate, execute and publicise licences		
MPP-I (2020-2015, 5.5 years)	2,356,089	826,816	18	2
MPP-II (2016-2020, 5 years)[a]	1,707,386	957,346	5	15

Source: MPP Self-assessment of licensing work (draft). The self-assessment was conducted in 2020 whilst the second grant was still ongoing. The included data for MPPII thus do not cover the full grant period but instead use projections for 2020.

Based on these assumptions, the cost per licence was calculated at USD 0.68m for a new licence and USD 0.34m for a licence expansion. However, several limitations apply to these calculated costs.

First, they do not differentiate between more or less fixed and incremental costs. In the self-assessment, MPP breaks down its resources allocated to in-licensing into costs made to "prepare groundwork for successful licence negotiations" and those to "negotiate, execute and publicise licences". It could be argued that the first activity takes place more at the level of a particular product area or innovator company but is not necessarily tied to a specific licence. Furthermore, there likely is some timelag between this preparatory work and the successful negotiation of a licence, such that investments made in one year need not translate into licence agreements signed that same year, or even in the same grant period. Conversely, when the groundwork has been properly prepared, this may have long-term benefits that facilitate multiple licence negotiations. As such, resources devoted to this activity cannot be assumed to scale linearly with the number of licences concluded. If instead only resources allocated directly to negotiation and conclusion of licences are taken as the base, incremental[84] licence expansions are calculated to be similarly resource consuming as the conclusion of new licences (USD 0.24m for new licences versus USD 0.23m for licence expansions). This calculation, however, does not account for how preparatory work may differently benefit work on new versus existing licences.

The approach furthermore ignores the fact that not all licences take the same level of effort to negotiate and conclude. For instance, negotiations that are conducted with a licensor with whom the MPP already has an established relationship may take less preparatory work than those with parties with whom MPP has not worked before. The latter applies in particular to newer areas that MPP has expanded into, which requires MPP to deal with a new set of companies. Renegotiations to expand existing licences can also be done more efficiently when multiple licences with the same licensor can be renegotiated together. Conversely, some licence agreements can be considered to be largely 'precooked'. In the area of long-

[84] The term 'incremental licence extension' is used here to indicate that these costs do not cover any of the preparatory work needed to lay the foundation for successful negotiations and instead assumes each new licence agreement equally benefits from groundwork already prepared.

acting technologies, MPP's work is closely linked to that of three other Unitaid grantees. Here, these grant agreements with Unitaid already stipulate that intellectual property generated under the grants will be licensed to MPP.[85] Consequently, whilst MPP still needs to allocate sufficient resources to formally draw up the licence agreements, relatively little additional effort is needed to negotiate the terms of the licence.

MPP's resources allocated to in-licensing during the MPPII grant have varied from year to year (from around USD 1.35M in 2016 to USD 2.45M in 2020) but this variation does not track closely with the number of new and expanded licences concluded in the corresponding years. This is likely caused by variations in the intensity of the in-licensing process for different licences as well as by time lag between the start of negotiations and the conclusion of licences.

In its self-assessment, MPP also points out that, whilst the type of activities conducted as part of its in-licensing work have remained largely the same, the "scope and quantity have evolved". These developments further call into question the assumptions that the costs per licence can be assumed to be similar in each grant period and across all licences. Important points to consider in this regard include the following:

- MPP's work was initially limited to one disease area (HIV), meaning that the work that needed to be done to acquire the knowledge and build up a network of partners was very focused. With the extension of MPP's scope, the new licenses are increasingly in areas where MPP has less expertise and connections. This means that MPP has needed to build and attract such expertise and will need to continue doing so.
- In the HIV area, where MPP started, it was clear which licenses needed to be obtained and which originator companies needed to be targeted. The fields that MPP has expanded to under MPPII and may be moving towards for MPPIII, are less organised. This likewise necessitates a relatively greater dedication of resources towards preparatory activities.
- The licenses that were targeted first could be considered 'low-hanging fruit' in the sense that MPP was able to capitalise upon some momentum in the global health and treatement advocacy communities that pushed innovators to grant licences. Once these licenses were obtained, MPP has moved to products for which licenses are harder to negotiate.
- In-licensing includes not only the obtainment of new licences but also the expansion or improvement of existing licences. As the number of licences has increased, so has the need to amend existing ones. As these amendments need to be included in each individual sub-licensing agreement, this creates substantial work for MPP.

Overall, time spent on in-licensing depends on a combination of external and internal factors. Important external factors include the willingness of originator companies to engage with MPP and the mutual expectations about the terms of the licence. To what extent MPP can engage in negotiating new licences furthermore depends on the size of the pipeline of possible new licences (which, in turn, relies on research and development done by universities and originators). Internally, allocation of resources to in-licensing is influenced by factors such as MPP's strategic priorities, its success in managing existing relations with licensors to facilitate future negotiations and in forging new relations, and the efficiency of its in-licensing processes.

[85] Medicines Patent Pool (2021) Expanding Access to Long-acting therapeutics. https://medicinespatentpool.org/what-we-do/long-acting-hub/.

The value of MPP's work on in-licensing is self-evident as, without addition of new licences or expansion of existing ones, MPP will not be able to continue contributing to improving access to affordable medicines to people in LMICs. Although MPP's work in expanding existing licences is less publicly recognised than the conclusion of new licences, it forms an essential part of its success in bringing affordable access to essential medicines to as many countries and people as possible. It is integral to MPP's strategic approach to continue pushing with its licensors for territorial expansions and improve the licence terms, particularly if MPP had to accept less favourable terms to be able to secure the original licence. This importance provides ample justification for the allocation of a substantial resources to licence expansions as part of MPP's in-licensing work.

MPP's self-assessment offers some useful insights about the way in which it has allocated resources to its key activities, moving beyond the output-level based reporting that is used in the annual reporting to Unitaid. For the upcoming period 2021-2025, covered by the third Unitaid grant, the self-assessment further disaggregates the resources allocated to in-licensing along five distinct activities:

- Prioritise medicines for in-licensing
- Develop an enabling environment for successful in-licensing
- Prepare the groundwork for successful licensing negotiations
- Negotiate and conclude licences
- Geographical expansion of existing licences

Consistent reporting against these activities may offer a better understanding of not only MPP's allocation of resources to individual activities but also of the incremental costs associated with in-licensing. Nonetheless, it will remain challenging to determine a typical 'cost per licence' because of the underlying differences in the factors that influence each licence negotiation.

3.3.2.2 Out-licensing

According MPP's self-assessment, average annual costs related to out-licensing have somewhat increased under MPPII (USD 0.44M) compared to MPPI (USD 0.28M)(Figure 6). The increase has been attributed to a increase in the number of licences obtained and a series of changes to make the out-licensing process more systematic, rigorous, and objective. Sub-licensees are now selected 'blindly', without revealing the identity of the applicants, to ensure the sub-licensees are selected on objective standards. Compared to its first grant period, under MPPII has conducted a substantially greater number of Expressions of Interest (EoI)s), from 7 under MPPI[86] to 12 under MPPII. Also the number of sub-licences signed by MPP has increased very significantly, from 31 under MPPI (2011-2014) to 55 under MPPII (2015-2019)[87]. This suggests that, although absolute expenditure on out-licensing increased, the costs per out-licence have decreased by approximately 20% under MPPII compared to MPPI, from around USD 50k to USD 40k per sub-licence. MPP expects both total out-licensing costs and costs per EoI to decrease during the MPPIII grant period, because of efficiency gains due to standardisation and automation.

[86] Initially, MPP did not attract sub-licensors through an Expression of Interest. This was introduced only in 2014.

[87] The self-assessment does not include data on sub-licences signed in 2020.

Overall, out-licensing consumes a comparatively small portion of MPP's resources despite it being an essential part of its work. This is because the out-licensing process is far more automated and standardised than MPP's other activities. During MPPII, changes to the process and introduction of an online portal have necessitated additional investments. Whilst maintenance of systems will require continuous investment, the system is currently well established and, at present, there appear to be no plans or needs for significant revisions.

3.3.2.3 Licence management

Compared to MPPI, one of the most significant changes to MPP's work has been its increasing focus on licence management. In its self-assessment, MPP has identified several drivers for this, rooted in the fact that the number of licences and sub-licensees have steadily increased, that many sub-licensees have moved from product development to supply of products and that licensors place greater demands on MPP regarding monitoring compliance with licence terms.

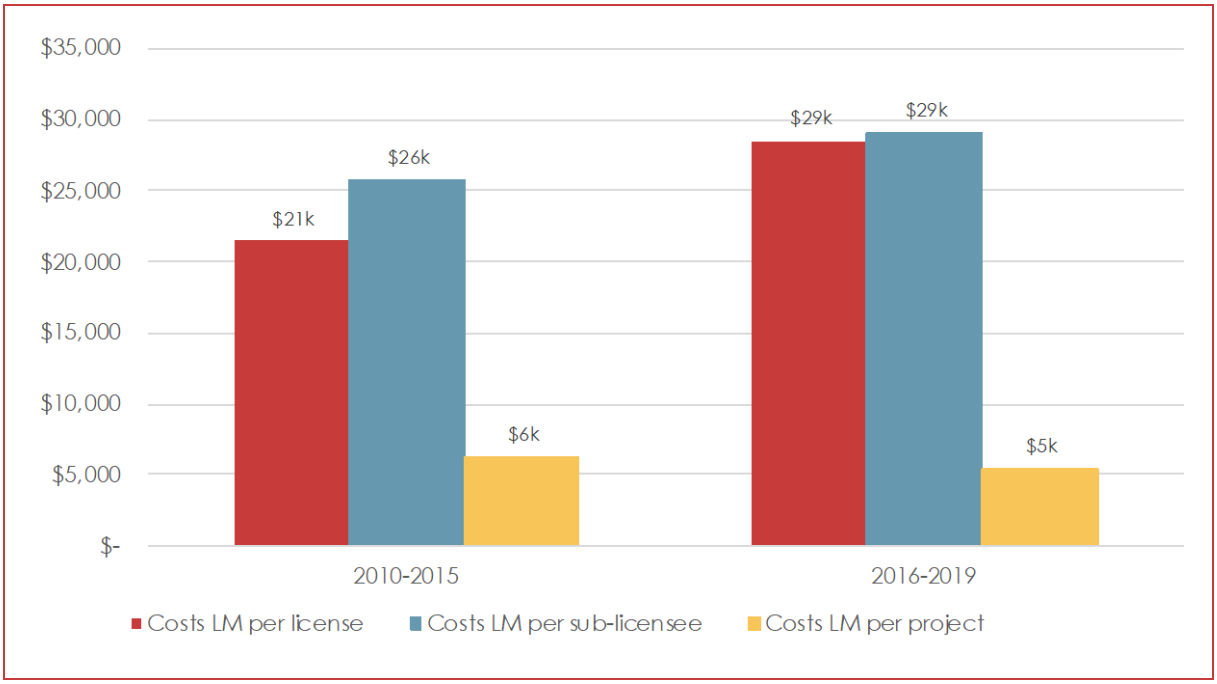
MPP indicates that the resources it allocated to licence management have increased more than three-fold, from USD 0.19M annually during MPPI to USD 0.62M during MPPII (Figure 6). This is expected to continue increasing during its third grant period. The primary reason for the increase is the portfolio extension: there are more sub-licences to manage and consequently there are more sub-licensees to manage. Importantly, every sub-licence gives rise to multiple development projects.[88] Each project requires its own management activities by MPP, with the scope and intensity of these activities depending on the nature of the product, the experience of the licencee and the countries where the licencee intends to market the product. Whilst throughout MPPI, the number of development projects did not exceed 61, under MPPII this had already risen to 151 projects by 2019 and is projected to increase further.

When the resources allocated to licence management are considered at the level of the number of licences signed, there has been a slight increase in the costs per licence (Figure 7, red bars). This increase can be explained when taking into account also the number of sub-licensees and the number of development projects MPP has been managing as a result of its portfolio increase. Here, the costs of licence management per sub-licensee have remained relatively stable, whilst the costs per project have even somewhat decreased (Figure 7, blue and yellow bars respectively).

Most licence management activities with sub-licensees take place in the context of the Quarterly Review Meetings (QRMs). Although the meetings themselves do not necessarily take that much time, the pre-QRM and post-QRM activities are time-consuming. However, MPP and generic manufacturers both value the quarterly recurrence of the meetings. According to MPP, these regular meetings help speed up development and registration because they can identify bottlenecks in the generic manufacturers' supply earlier, and thus support better and timely access to medicines in countries and communities of interest. For generic manufacturers, these meetings (as well as the monthly progress calls) are part of the value added that makes working through MPP more attractive than bilateral licences.

[88] A development project is "a project to develop the Active Pharmaceutical Ingredient or a particular formulation of a licensed product by a single sub- licensee. A single licence will give rise to multiple projects as each sub-licensee may develop several different formulations […]".

Figure 7 Average annual resource allocation to licence management (LM) per licence, sub-licensee, and project



Source: Technopolis Group, based on data provided in Tables 1, 14, 15 and 16 of the MPP Self-assessment on licensing work for 2010-2020 and projection for 2021-2025 (draft).

3.3.3 *Assessment of findings*

MPP's allocation of resources across its main activities appears to be broadly in line with its priorities and informed by evolving needs. Under MPPII, resources allocated to licence management have increased significantly, whilst fewer resources were devoted to in-licensing than under MPPI. These shifts have been necessitated by the growing numbers of licences, sub-licensees, and development projects MPP has had to manage on the one hand, and by fewer new licences being negotiated. MPP has indicated that resource allocation across activities is driven both by strategic choice and by opportunity. As such, MPP does not set fixed budget caps on individual activities but rather allocates its resources according to need.

It is not possible to determine to what extent each of the activities MPP conducts translate directly into results and impacts that could not have been achieved without it. Qualitative findings suggest that some activities, in particular those tied to monitoring and enforcement of licence obligations, are fundamental to MPP's ability to effectively negotiate and conclude licences with originators. Other activities, such as technical support and sharing of business intelligence, can act as useful catalysts to MPP's objective of accelerating affordable access to essential medicines but are not always needed the same way across all licences or sub-licensees. Nonetheless, the importance of such activities should not be underestimated as they contribute to MPP's overall value-add and encourage generic companies to work with MPP rather than seek bilateral agreements.

MPP's allocation of resources across its activities has remained fairly stable over the second grant, in part because of (self-reported) efficiency gains. These efficiency gains include, but are not limited to, automation of several processes such as the sales data collection and tracking US FDA manufacturing alerts, reducing the number and duration of in-person QRM meetings and reducing in-person attendance by MPP's head of business development, and increased online participation to conferences instead of physical participation. MPP has also

shifted more responsibilities from its Geneva-based staff to its staff in India. Because of MPP's unique operating model, there are no obvious benchmarks against which MPP's efficiency could be measured. The assessment of MPP's efficiency thus largely relies on stakeholder perspectives. Since most of these come from people working within MPP, there is an inherent subjectivity to statements about increased efficiency and the desired balance between activities. Nonetheless, there are no obvious indications to dispute claims of increased efficiency in MPP's operations.

Between the first and second grant, MPP has significantly increased its scope of operations but has remained a relatively small and focused organisation. Whether some activities, in particular aspects of its licence management, could be done more efficiently if they were outsourced or left to other organisations remains unclear, but there is a risk that MPP would diminish its relevance and attractiveness to companies if it significantly reduced the value it adds through performing these activities in-house. In the absence of direct benchmark organisations, the assessment of MPP's efficiency remains rather subjective but it appears that MPP has made prudent and efficient use of available resources to achieve its impact.

As indicated at various points, the analysis of MPP's allocative efficiency is challenged by the structure of its financial reporting. The structure used in MPP's self-assessment offers better insight. In its projections for the period 2021-2025, MPP offers an even greater granularity in regards to the activities it will conduct as part of the in-licensing process. Such detailing, especially when applied also to licence management, would be of great use in future analysis.

Table 5 Summary of Efficiency

Evaluation questions	Answer	Strength of Evidence
How timely, cost-efficient and cost-effective was implementation (consider both allocative efficiency and technical efficiency)? What factors have been considered to ensure that value for money has been achieved from an efficiency – resource use - standpoint?	Under MPPII the balance of resource allocation to different activities has somewhat shifted, putting greater emphasis on licence management. The shift has been justified by growth of the portfolio and a greater need to manage existing licences. MPP has aimed for improving its efficiency: they have invested in good relationships especially with originator companies to make future in-licensing processes easier, and in streamlining the out-licensing process.	Moderate/Weak (Financial analysis based on annual reports and MPP self-assessment, but insufficiently detailed to assess efficiency at activity level; due to a lack of independent benchmarks, assessment relies on self-reporting and stakeholder perspectives

Source: Technopolis, 2021

3.4 Effectiveness

To track progress against MPP's objectives under its second grant, a set of Key Performance Indicators (KPI) was agreed between MPP and Unitaid. Performance on these indicators has been reported regularly to Unitaid. For the purposes of this evaluation, effectiveness has been assessed against the access barriers that are covered by KPI 1 and 2.

3.4.1 KPI 1: Innovation and Increased Availability

KPI 1 is used to measure whether during MPP II, the grant has contributed to an increased (commercial) availability of better treatment products. Also, it is used to assess whether the grant has contributed to the development of or access to innovative products.

3.4.1.1 Licence agreements

During the second grant period, MPP was able to reach its target to secure licence agreements for prioritised medicines for HCV and Long-Acting (LA) technologies and devices, but not for HIV and TB.

- MPP has secured licences for all its **HCV** prioritised products as well as for an HCV medicine that was not initially prioritised, which allows for a scale-up of the most effective treatment regimens in LMICs. For one licence (glecaprevir/ pibrentasvir (G/P)), a remaining challenge is that India is not included in the licence, which prevents Indian generic companies from applying for the sub-licence. This makes it harder to promote competition and push down prices.[89]
- For **HIV**, the license of bictégravir (BIC) has a substantial geographic scope, which allows for its use in LMICs alongside DTG. Two other HIV medicines (DOR and FTR) were deprioritised for clinical reasons. One HIV medicine (CAB) remains a priority in 2021, as MPP continues to advance discussions with ViiV, the patent holder.
- For **TB**, two out of three products were deprioritised – one has been licensed exclusively through a bilateral agreement with a generic manufacturer, and the other because of low IP priority. One TB medicine remains on the priority list as no license has yet been concluded despite extensive MPP efforts.
- MPP supports Unitaid's **Long Acting Technologies** technologies portfolio. To date, it has secured a (prospective) license with the University of Liverpool and is facilitating the Long-acting Technology Access Hub.

Table 6 shows an overview of all licenses signed and expanded over the period of the second MPP grant.

Table 6 Overview of licenses signed and expanded

Year	License signed or territory expansion	Disease area	Medicine
2016	Signed	TB	Sutezolid (in combination therapy)
2017	Signed	HIV	Bictegravir (BIC)
		HCV	Ravidasvir (RAV)
	Expanded	HIV	Cobicistat (COBI) Elvitegravir (EVG) Tenofovir Disoproxil Fumarate (TDF) Emtricitabine (FTC) Tenofovir alafenamide fumarate (TAF)

[89] MPP Final report 2016-2020.

2018	Signed	HCV	Glecaprevir/ pibrentasvir (G/P)
	Expanded	HIV	Dolutegravir (DTG) Valganciclovir[90]
2019	Signed	TB	Sutezolid (clinical data)
	Expanded	HIV	Cobicistat (COBI); Elvitegravir (EVG); Tenofovir Disoproxil Fumarate (TDF); Emtricitabine (FTC); Tenofovir alafenamide fumarate (TAF); Bictegravir (BIC)
2020	-	-	-

Source: Technopolis, 2021, based on MPP (2020). Self-assessment of Licensing work

MPP considers one license, first signed under its first grant and extended under the second grant, among its major successes. It concerns dolutegravir (DTG), an HIV medicine approved in the United States in 2013 and the European Union (EU) in 2014. MPP was first able to secure a licence from ViiV Healthcare just a few months after the drug's approval in the EU. In 2016 and 2018, the territory of the adult license was expanded. In 2017, a generics company produced a medicine that, according to MPP, was cheaper and available in more countries than the medicine developed in high-income countries. MPP regards it as a success story because the timeline from when an innovative product first comes to market to when it becomes available in generic form in LMICs, which normally takes 7 to 11 years, was reduced to just four years. The value of accelerated access to DTG was underscored by various stakeholders. The license also has the highest uptake by generic manufacturers – a total of 14 sub-licensees, covering 102 countries, including all sub-Saharan countries.[91] The impact of the DTG licence, which includes paediatric use, is expected to be especially high for children living with HIV[91] since the DTG-based antiviral regimen is considered to be among the best current treatments for HIV in children despite previously existing formulations being sub-optimal for this group.[92] As discussed in the next section, the MPP licence has contributed to the development of new paediatric DTG formulations.

The products for which license negotiations have not progressed have in common that the originator companies and MPP have not been able to agree on a business case as of yet. For Cabotegravir (CAB) and Bedaquiline (BDQ), MPP was able to hold initial discussions on a preliminary feasibility study with the respective originator companies, but these discussions have not yet resulted in the development of a formal business case.

Where MPP has thus far been notably less effective is in its expansion into disease areas outside of its traditional focus, most notably with products on the WHO EML. A combination of factors

[90] Note: this refers to an agreement but not a licence

[91] Access to Medicines Foundation. (2021). Access to Medicines Index 2021. Available online: https://accesstomedicinefoundation.org/media/uploads/downloads/603ce8c4e83e9_Access_to_Medince_Index_2021.pdf.

[92] World Health Organization. (2018). Updated Recommendations on First-Line and Second-Line Antiretroviral Regimens and Post-Exposure Prophylaxis and Recommendations on Early Infant Diagnosis of HIV. WHO Guidel.:1-82

may explain this. Although the expansion itself is widely welcomed, it appears to lack a certain focus. To many, it is unclear what specific products MPP is targeting with this. This, in turn limits the ability of others to lend their weight to MPP's efforts. For instance, many stakeholders have credited HIV treatment advocacy organisations for creating the enabling environment in which MPP was able to secure licences for HIV medicines. There was a lot of pressure from civil society, as well as from large donors and global health organisations, on pharmaceutical companies to make these products available and affordable to people in LMICs. In this climate, MPP became the mechanism that enabled the companies to step up their commitments, and avoid the threat of compulsory licencing. A similar enabling environment does not exist for most products on the EML. Without a clear backing from more vocal access advocates, it is proving difficult for MPP to get a foot in the door with companies to negotiate licences for these products.

Although the addition of COVID-19 into the scope of MPP is relatively recent, and its work here is not covered by the second grant by Unitaid, there has thus far been a notable lack of success in this area as well. Whilst MPP is the obvious actor to mediate in licencing of COVID-related technologies, thus far no COVID-19 vaccine developer has been willing to offer any licences despite intense global pressure to do so. Instead, companies have focused on large-scale vaccine donations to increase access to COVID-19 vaccines in LMICs and have pledged to deliver the vaccines without profit for the duration of the pandemic.[93] This evaluation did not include interviews with representatives of any of the COVID-19 vaccine manufacturers, so it is not possible to state with any certainty why these companies have not been willing to engage with MPP about licencing the technology for production of COVID-19 vaccines. It is, however, very likely that this is largely motivated by the very significant commercial potential of these products. In June 2021, the WHO announced it had selected a consortium of public and private organisations in South Africa to host the first mRNA vaccine technology transfer hub for the production of COVID-19 mRNA vaccines.[94] MPP will be assisting in the patent landscaping and licensing.

A representative for MPP suggested that there are three key barriers to in-licensing:

- Originator companies do not have policies or practices in support of access to medicine in LMICs
- Originator companies fear the possible influence of a license agreement on their commercial model, for instance due to diversion of product to other markets
- Originator companies are uncertain about the risks regarding the use of the technology for things not in the license

As a result, MPP feels like a big part of its efforts during the in-licensing process is focused on educating these companies about the voluntary licensing model. As indicated previously, originator companies also noted other reasons not to engage in multilateral licensing via the MPP, such as expected low interest from generic manufacturers in the product or the nature

[93] Businesswire (10 June 2021). Pfizer and BioNTech to provide 500 million doses of COVID-19 vaccine to U.S. Government for donation to poorest nations. Available at: https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-provide-500-million-doses-covid-19.

[94] MPP (2021) MPP welcomes WHO announcement of the first COVID-19 mRNA vaccine technology transfer hub to be established in South Africa. Available at: https://medicinespatentpool.org/news-publications-post/who-covid-19-mrna-vaccine-tech-transfer-hub-sa/

of the product itself. These are, however, inherent barriers that will be harder, if not impossible, for MPP to overcome.

All six originator companies with which MPP currently has signed licences are included in 2021 the Access to Medicine Index.[95,96] Strikingly, four of the six companies are here found in the lowest quartile of both the overall composite ranking[97] and the ranking based on performance in the technical area of governance of access. The Access to Medicine Foundation indicates that companies with low performance in this area "merely have general commitments to improve access to their products, but have no concrete strategy embedded in their business model".[98] This suggests that companies that agree to sign voluntary licensing agreements with MPP do not necessarily do this because they have more supportive access policies and practices than other companies. Their willingness to engage with MPP instead may be influenced by whether they have products in their portfolio that fall within the scope and priorities of MPP and on whether they experience external pressure to agree to voluntary licences. Given the limited participation of originator companies in this evaluation, it is uncertain what considerations led these companies to work with MPP and how this tied in with corporate access strategies. Publicly, the companies have stated that their work with MPP is based on their commitment to improve access for people in LMICs.[99]

The barriers noted by MPP regarding commercial risks associated with the licensing are evidenced by the insistence of originator companies on MPP strictly monitoring and enforcing the terms of the licencing agreement with sub-licensees. Whilst in principle MPP is able to mitigate these risks, it needs to convince originator companies of its ability to effectively protect them. This trust needs to be won as part of every negotiation process and carefully maintained throughout the lifetime of the agreement.

3.4.1.2 Coverage

The current MPP licences cover 143 countries[100], across different continents (Figure 8). Effective coverage, i.e. the number of people living with a disease in LMICs covered by the relevant licenses, varies between 47.5% (G/P) and 100% (LPV/r and Sutezolid). The average effective coverage of MPP's licenses is 95%. Countries that are not currently covered by the licences are

[95] ViiV Healthcare is included in the Index as part of GlaxoSmithKline rather than as an independent company.

[96] Access to Medicine Foundation (2021). https://accesstomedicinefoundation.org/access-to-medicine-index/2021-ranking

[97] In the 2021 Access to Medicine Index, the 19 largest pharmaceutical companies have been ranked based on a scoring against 33 metrics that have been identified by the Access to Medicine Foundation as important to access.

[98] https://accesstomedicinefoundation.org/access-to-medicine-index/2021-ranking/subranking/governance-of-access#breakdown.

[99] See, for instance, statements by Abbvie (https://news.abbvie.com/news/media-statements/abbvie-and-medicines-patent-pool-complete-new-licensing-agreement-to-ensure-sustainable-access-to-pan-genotypic-hepatitis-c-medicine-glecaprevirpibrentasvir.htm), BMS (https://medicinespatentpool.org/news-publications-post/mpp-and-bristol-myers-squibb-sign-agreement-to-further-expand-access-to-a-key-hiv-medicine/), Gilead (https://www.gilead.com/news-and-press/press-room/press-releases/2017/10/gilead-announces-new-license-agreement-with-the-medicines-patent-pool-for-access-to-bictegravir), and ViiV Healthcare (https://viivhealthcare.com/en-gb/media/press-releases/2014/april/viiv-healthcare-announces-new-initiatives-to-improve-access-to-dolutegravir-licence-to-the-medicines-patent-pool/).

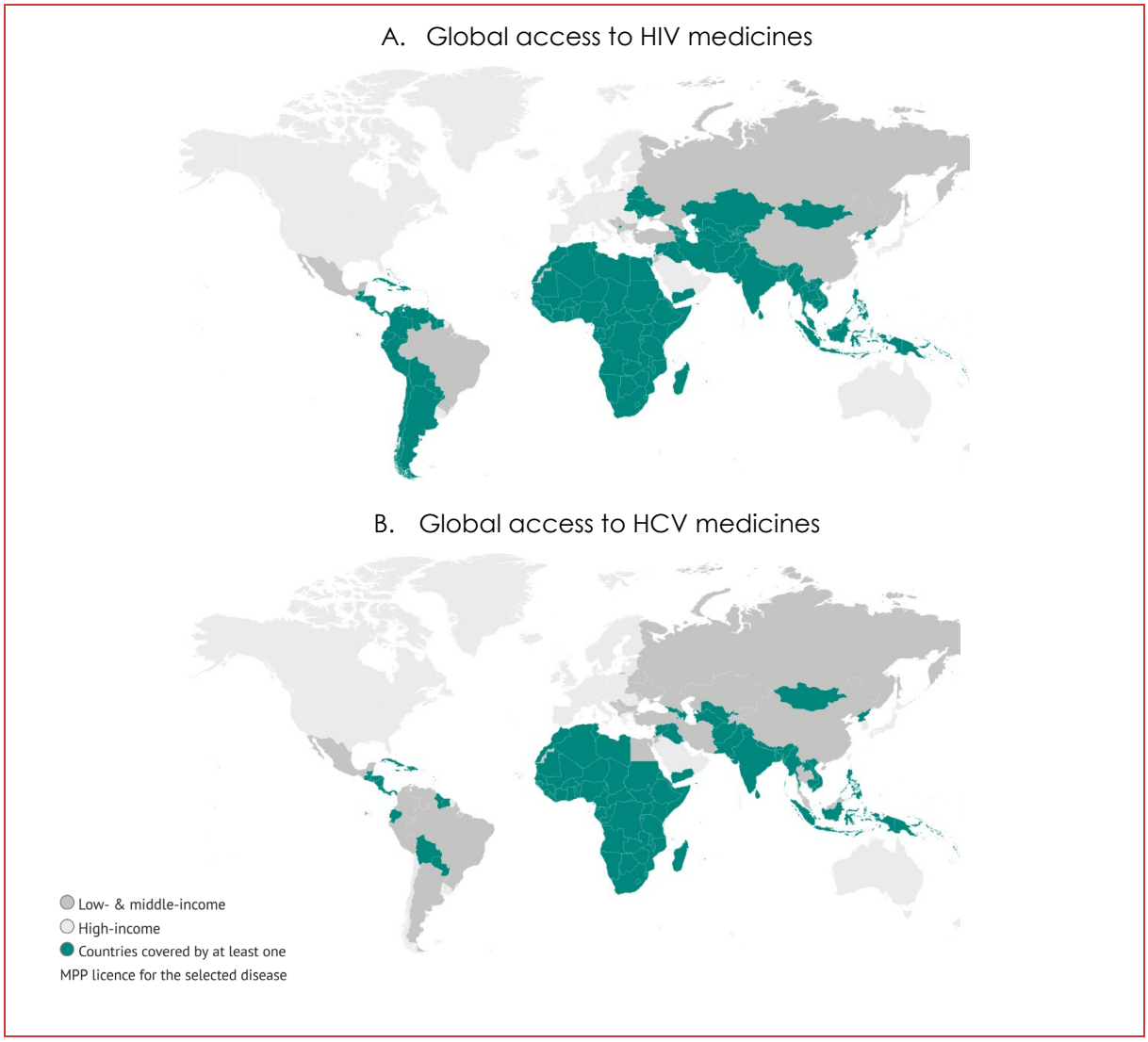
[100] This covers both MPPI and MPPII

mainly located in Latin America and Asia. This is especially true for HCV medicines. Many of the countries excluded from the licence territory are U-MICs. The difficulty of including such markets into the licence was previously discussed under Section 3.1.2.

After the conclusion of licenses, MPP works on expanding the territory of these licenses. During the second grant, they have successfully fulfilled 15 renegotiation processes, with some of the licenses being renegotiated multiple times. MPP has expanded the geographic territory of eight of its licences during MPPII. The targets pertaining to the percentage of middle-income countries included per licence was reached for HIV and exceeded for HCV.[101] The territorial expansion of DTG in 2018 included the conclusion of a separate licence for four U-MICS, which was a first-of-its-kind agreement. In November 2020, ViiV agreed to an expansion of that licence with another four U-MICs. Discussions with companies are ongoing to further expand the geographic scope of licences to include more middle-income countries. Interviewees emphasize the importance of territorial expansion as a means of increasing MPP's effectiveness. Some generic manufacturers would like to see MPP push for even faster territorial expansion. The difficulty of licence expansions should, however, not be underestimated. The original licence agreements typically represent the best possible deal MPP was able to negotiate with the patent holders at the time. For a patent holder to be willing to then renegotiate on the already agreed terms implies that something must have changed either in the business case itself (e.g. changes to treatment regimens) or in the contextual factors that influence the willingness of the patent holder to licence the product for distribution in other countries (e.g. a change in a company's access policies or external pressure).

[101] See Appendix E on precise numbers

Figure 8 Map showing LMICs, and geographical coverage of MPP licences for HIV and HCV medicines.



Source: MPP website, access to medicines tracker[102]

3.4.1.3 Formulations developed

MPP also pushes for the development of new paediatric formulations and fixed-dose combination products. During the grant period, 18 new fixed-dose formulations were developed by MPP sub-licensees and approved via WHO prequalification or by the US Food and Drug Administration (FDA)[103], for three unique fixed-dose combinations: TLD (TDF/3TC/DTG), TAF-ED (TAF/FTC/DTG) and DAC/SOF. The development of the combinations of TLD and TAF-ED were made possible only because MPP brought together IP held by different companies. Whilst the MPP licences allowed for the development of the 3-in-1 TLD product for

[102] https://medicinespatentpool.org/progress-achievements/access-to-medicines-tracker#Interactive-Map/

[103] MPP Final report 2016-2020, p. 25

distribution in the countries within the territory of the licences, the same combination product cannot yet be made available in the US or other countries outside of the licence territory where the underlying patents have not yet expired. One further combination treatment is under review, and two are in the late stages of development.

MPP has been instrumental also in the development of paediatric formulations of the HIV antiretroviral dolutegravir. In May 2021, it was announced that the first paediatric DTG formulation, suitable for use in children from four weeks of age, was ready and had already been procured by over ten countries.[104] Additionally, it will be distributed to other Sub-Saharan African countries through pooled procurement. A second paediatric formulation is also ready. The formulations are strawberry flavoured and can be dissolved in water so that they can be swallowed more easily by young children.[105] Both products have been tentatively approved by the US FDA. The development by two generic manufacturing partners was made possible with the financial and technical support of the patent holder (ViiV Healthcare), MPP, Unitaid and the Clinton Health Access Initiative. Whilst this is a clear example of the role MPP can play in supporting the development of paediatric formulations, MPP has indicated that engaging sub-licensees in the development of such products remains challenging given their limited commercial potential.

3.4.1.4 Increased availability for the most marginalized

The mission of MPP is to increase the supply of medicines to LMICs, including marginalized communities in MICs, since they are at risk of falling between the cracks of donor support that is available to LICs, and having the purchasing power for medicines at originator company prices.

It should be noted that the production of generic medicines under sub-licence from MPP is not sufficient to guarantee access in a country. The medicine will first need to be approved for marketing by the relevant regulatory authority and governments need to commit to procurement. Here, MPP supports generic companies in identifying priority markets for product registration and, where necessary, by discussing the relevance of products with national health authorities in countries included in the licence territories. Even when these barriers are overcome, problems in the downstream distribution chain could still significantly hinder access. This, however, is currently out of the scope of activities for MPP, although some stakeholders have suggested MPP could play a role here too.

3.4.2 KPI 2: Access – Affordability

KPI 2 is used to measure whether through the MPP II grant, MPP has contributed to increased access to medicines. The first dimension of access is assessed in the KPI 2.1: Affordability of medicines. Making medicines affordable is one of MPP's central goals. MPP has fully achieved its goal regarding affordable prices for HIV medicines. For HCV it has reached only 73% of the

[104] MPP generic manufacturing partners to supply low- and middle-income countries with WHO -recommended paediatric ARV formulation. Available at: https://medicinespatentpool.org/news-publications-post/dtg-10-mg-lmics-supply-news/.

[105] McNeil DG (30 November 2020). Berry-flavored HIV medication is ready for babies. The New ork Times. Available at: https://www.nytimes.com/2020/11/30/health/hiv-aids-medication-babies.html.

price reduction target. This has been attributed mainly to lack of demand for HCV products and unavailability of HCV donor-funded programmes.[106]

MPP does not actively get involved in price-setting itself. Rather, it aims to introduce an appropriate number of (generic) suppliers to a market in hopes of increasing competition to the point where prices are driven down naturally by market forces. The number of suppliers is based on demand forecasts done by MPP. MPP argues it looks for a balance between overloading the market, which could result in the sub-licensees not using their license because production is no longer commercially viable, and undersupplying the market which would not drive prices down sufficiently.

During the licensing process, MPP selects the sub-licensees based on their alignment with the selection criteria as per the EoI, with a pre-determined maximum number of sub-licensees that is based on the expected market size. This maximum number is deliberately higher than the necessary number of sub-licensees that is expected to be needed to push down prices. This also allows to create a 'buffer' of extra licensees as some licensees might decide not to pursue the license. The number of sub-licensees that get through the selection process has so far not exceeded the predetermined maximum.[107] CSOs have generally perceived the number of selected sub-licensees to be enough to ensure affordability. Generic manufactures have mentioned that for them, this 'buffer' means more uncertainty, since it means they do not fully know how big the competition could be. For MPP having 'too many' sub-licensees in the market is a relatively small risk, unless multiple sub-licensees would decide to cease development or production as a result and still leave the market undersupplied. In case too few sub-licensees were selected to bring down prices to an affordable level, MPP has the option of re-opening an Expression of Interest to add more sub-licensees. One originator company felt that the number of companies to which MPP had granted a sub-licence for one of its products exceeded what it would have deemed optimal for a sustainable market. The licensor indicated that it requires MPP to discuss the addition of sublicencees with the company upfront and that it reserves the right to refuse this if MPP cannot make a clear case for this.

Some stakeholders have indicated that the amount of licenses MPP grants does not translate to a similar number of companies entering the market and have called for more accountability from companies to follow up on the license agreement. This would enhance competitiveness and ultimately lead to more affordable and wider access. MPP has confirmed that four generic companies have not yet sold any products despite having a licence and that one of these has not yet developed a product. In its self-assessment, MPP also indicated that it had terminated "several sub-licences for lack of performance" or that sub-licensees themselves had given up their licences "for lack of commercial interest" after an unsuccessful tender.[107] The evaluators did not have access to data about the number of licences terminated or the reasons for the termination.

The price of products produced under licences from MPP can be decreased further by pooled procurement. The Global Fund, for instance, has introduced a Pooled Procurement Mechanism to aggregate order volumes on behalf of its grantees to negotiate better prices

[106] MPP Annual report 2020

[107] MPP (2020) Self-Assessment of Licensing Work for 2010-2020 and Projection for 2021-2025

and delivery conditions than grantees could have achieved individually.[108] Simultaneously, one representative for a country emphasised that for countries that procure medicines directly it is important to ensure that, whilst products should be affordable, prices should also not be so low that markets become unattractive to suppliers as this can lead to problems with product availability and continuity of supply. It was indicated that because of its dealings with generic manufacturers, MPP has a good understanding of what prices still offer some commercial incentive for manufacturers. By sharing this insight with procurement agencies, MPP is helping to ensure both the affordability of products and the long-term sustainability of the market.

Whilst MPP's model thus far has been based entirely on stimulating generic competition as a mechanism for making products affordable to people in LMIC, a relatively new development is the inclusion of price obligations into sub-licence agreements. This will be introduced, at the request of Unitaid, into the sub-licence agreements connected to the Long-Acting Therapeutics that are being developed with Unitaid grant funding. As currently, these products are still under development and no sub-licence agreements have been signed, it is not possible yet to assess whether such obligations help ensure the affordability of the resulting products.

Some civil society groups have indicated that they are starting to see concrete impacts from the competition MPP has helped to introduce in the market to lower prices. For DTG, a comparative study of prices across countries shows that in countries that are included in MPP licences, the prices are significantly lower than in other countries: a median of $60 compared to a median of $8,718 for countries excluded from VL agreements (mainly Upper- and Middle-Income countries), which is 140 times higher.[109]

3.4.3 KPI 2: Access – Supply & Delivery

The second dimension of access is assessed in the KPI Supply and Delivery, which assesses how successful the grant was in improving supply and delivery systems to ensure that products reach those in need in a reliable and timely way.

According to respondents from generic manufacturers, MPP's efforts with regard to supply and delivery are mainly aimed at helping generic manufacturers to file for registration of products in priority markets and at resolving regulatory issues. One generic manufacturer indicated that there is an incentive for companies to adhere to the timeline and even to deliver ahead of schedule if this allows them to be the first in a market. As part of the QRMs, MPP provides its sub-licensees with anonymised information about the development progress of all other sub-licensees. This information enables sub-licensees to see where they stand compared to their competitors and can trigger a 'race to market' that speeds up access.

MPP aims to ensure that medicines are available for procurement in countries. Issues with supply chains within countries, the distribution systems, IT and facilities needed to make sure medicines are distributed and received by patients are beyond the scope of MPP. One organisation operating in one of MPP's target countries explained that it works with other

[108] The Global Fund (2019) How we can secure the broadest access to quality-assured and affordable medicines to defeat HIV. Available at: https://www.theglobalfund.org/en/blog/2019-10-16-how-we-can-secure-the-broadest-access-to-quality-assured-and-affordable-medicines-to-defeat-hiv/.

[109] Sim, J. & Hill, A. (2018). Is pricing of dultegravir equitable? A compartative analysis of price and country income level in 52 countries. *Journal of Virus Eradication, 4*(4), 230-237.

partners such as USAID, the United Nations Development Program and their own government to resolve such issues.

Based on its own KPI reporting, MPP has exceeded its target for speeding up the process from sublicense agreement to filing for registration for HIV medicines.[110] Meanwhile, MPP has expanded the number of generic manufacturers to which it sub-licences from 3 to 22, resulting in the signing of 42 sub-licences. The new sub-licensees are located in India, China, Bangladesh, South Africa and South Korea. All distributed MPP licensed products have received approval from stringent regulatory authorities (SRAs) such as FDA, or via the WHO PMP. During the grant period, a total of 54 MPP-enabled products were approved (HIV: 42 and HCV: 12).

The development of these new products enables their supply and delivery to countries that are included into the territory of the licences. MPP licenses have supplied 39.5 million patient years of HIV treatment during the grant period, and 1.1 million patient years of HCV treatment, exceeding the grant targets with 16% and 35%, respectively. As mentioned previously, even for those markets that are being served by the products developed under the MPP licences, supply and delivery are not guaranteed. Many of the targeted countries are characterized by weak health systems, which also affects the stability and quality of pharmaceutical supply chains. One particular challenge for the supply and delivery of products produced under licence from MPP, as for the production of medicines in general, has been the COVID-19 pandemic: this created disruptions for the supply of Active Pharmaceutical Ingredients (APIs), raw and unfinished materials and hindered the transport of products because of export bans and travel restrictions[111]. It is estimated that this delayed MPP sub-licensees by, on average, 2 to 3 months. MPP anticipates there may also be longer-term impacts of COVID-19, because many companies have refocused much of their attention towards producing COVID-vaccines and treatments, and are giving less attention to other disease areas.

3.4.4 KPI 2: Access – Quality

The last dimension of access is assessed in the KPI Quality of medicines, which assesses how successful the grant was in bringing quality-assured medicines and technology for adoption in LMICs.

MPP has surpassed its targets for number of development projects completed and filings made with a SRA both for HIV and HCV: obtaining 96 and 19 respectively. For TB, the grant target was not reached: the target was 5 development projects, but none were reached. MPP reached the target with regard to HIV to develop and file FDCs as well as the target to develop and file paediatric products, with 41 and 5 respectively.

Quality standards for medicines are aimed at ensuring that the medicines are safe and effective, that they contain the correct amount of active ingredient, have a stable shelf-life, and are manufactured following Good Manufacturing Practices (GMP). MPP ensures the quality through the requirement in each of their licenses that sub-licensees manufacture the product in a manner consistent with WHO PQ or SRA standards, or approval through an Expert Review Panel. This corresponds with the standards used by the Global Fund and Unitaid, and most respondents to the Stewardship Report Survey felt this was appropriate.

[110] See Appendix E for the specific numbers on to what extent the goals have been achieved

[111] MPP Final Report 2016 - 2020

Another safeguard for the quality of medicines is the requirement to receive approval from an SRA. MPP has significantly exceeded its targets regarding filings made with regulatory authorities. For fixed-dose combinations, targets related to regulatory approval fillings have also been exceeded. Progress has been slower for paediatric HIV medicines, but the target for the grant has still been achieved.[112] The main challenges for the development of paediatric products include the smaller and more fragmented market for these medicines, the lengthy process for country-level approvals for clinical trials, and a lower level of advocacy among key stakeholders.[113]

Quality is also ensured through MPP's careful selection of licensees through its Expression of Interest (EoI) system, strict quality requirements, and close monitoring of licensees' compliance. In extreme cases, licenses granted to those who fail to perform can be terminated. Interviewees from originator companies have mentioned that the fact that MPP ensures quality control is one of the reasons that they are now preferred by some over bilateral license agreements, where that responsibility remains with the originator.

None of the respondents we have spoken to were aware of any issues related to the quality of the medicines that were created by generic companies through licences of MPP. As far as we have been able to surmise, there have been no recalls or any other significant quality issues related to products licenced through MPP. Some generic manufacturers did indicate that they were aware that MPP could or had retracted a licence from a generic manufacturer, but that was because they hadn't actually produced any mediciations from the licence, not because the quality was substandard. These generic manufacturers did not specifiy which company had revoked this licence or which licence it concerned.

Overall, MPP argues that its sub-licensees have proven their ability to develop quality-assured generic versions of originator products in a fast yet safe manner. An example mentioned by MPP is the case of remdesivir. Here, generic manufacturers went to market within three months from signing the (bilateral) license agreement – while the usual expectation is 2-3 years to develop a quality-assured medicine for introduction in LMICs. It is important to note, however, that this fast process was facilitated by proper technology transfer, so this kind of acceleration of the process is only possible with collaboration from the originator company.[114]

3.4.5 Assessment of findings

Under its second grant, MPP has signed fewer new licences than under the first grant but was nonetheless able to add five more licences to the pool. These successes have come mainly in the areas of HIV (bictégravir) and HCV (glecaprevir/pibrentasvir, ravidasvir), with two licences on a TB candidate medicine (sutezolid). Some of the products that had been prioritised for licensing during the second grant were later deprioritised, either for clinical reasons or because the originator had already signed an exclusive bilateral licence. For products that remain a priority for MPP, but for which it has not yet been able to secure licences, it appears that MPP has thus far not been able to convince the patent holders of the existence of a proper business case. Where MPP has thus far not been successful is in its expansion into products on the WHO EML. It has also not yet been able to play any role in the licensing of COVID-19 vaccines or

[112] See appendix E for numbers on the outputs related to Quality

[113] MPP Annual report 2020

[114] MPP Annual report 2020

technologies for apparent lack of interest from originators. In addition to new licences, MPP was also able to renegotiate for territorial expansion on many of its existing licences, thereby increasing the number of countries that can benefit.

Stakeholders are generally positive about the contribution MPP has made thus far on improving access to medicines in LMICs and expect this to increase further as new products developed under sub-licences from MPP will become available. MPP has significantly helped to speed up the development and registration of generic medicines against HIV and HCV, thereby accelerating access to these important medicines for people in LMICs. It is estimated that during MPPII, MPP licenses have supplied 39.5 million patient years of HIV treatment and 1.1 million patient years of HCV treatment. Additionally, MPP's intervention has enabled the development of new formulations, including paediatric HIV treatments, that are set to bring substantial public health benefits. All distributed MPP licensed products have received approval from stringent regulatory authorities.

MPP's goal to make medicines more affordable has been partially achieved: whilst for HIV medicines the desired cost reduction has been achieved, for HCV medicines prices have remained somewhat above MPP's own target. The cost reductions have been achieved by granting sub-licences to a sufficient number of generic manufacturers to introduce competition in the market. This approach has thus far worked reasonably well because all products developed under sub-licences from MPP are small molecule medicines that are relatively easy to manufacture and do not require extensive technology transfer. Whether this approach will also work for more complex products, such as biological medicines (including vaccines) and long-acting technologies, is as yet unproven. The main question is whether for such products there will be enough generic manufacturers with the right expertise and manufacturing capacity to produce them and introduce competition. Because of this uncertainty, Unitaid has asked MPP to include an affordable pricing obligation into any sub-licences given out on potential future LA products developed with Unitaid funding. What form this obligation will take or how it will be determined what constitutes a fair and affordable price is not yet clear at this point. It is difficult to predict whether such an obligation will have the desired effect. On the one hand, the obligation could help ensure that products that are developed with donor funding (i.e. a Unitaid grant) are available and affordable to the intended beneficiaries of those products. On the other hand, if the maximum allowed price is below the point where it commercially attractive for a manufacturer, the licence agreement with MPP could remain unused.

Despite MPP's successes in stimulating and accelerating the development and registration of new affordable (generic) medicines, it cannot fully control whether these products reach the target populations. By working closely with not only its sub-licensees but also with procurement agencies, governments and organisations in the countries included in its licences, MPP aims to support the wide uptake of developed products. However, MPP is itself not responsible for in-country distribution and systemic weaknesses in pharmaceutical distribution chains and health systems remain important barriers to access in many of MPP's target countries.

One of the key success factors behind MPP's effectiveness likely is its somewhat pragmatic approach. MPP is sometimes willing to accept certain compromises on the terms and conditions of the licences, if the agreement reached can still be considered to be in the best interest of access. This may apply to the countries MPP is able to include in the territory of the licence, the royalties levied by the originator companies or the disclose of specific information. MPP recognises that a less-than-perfect agreement can still be preferable over no agreement at all. After the initial licence agreement, MPP can and often does continue to drive for better terms and conditions. Most stakeholders understand and appreciate this approach, although

there are some concerns that these compromises could mark a change in MPP's practices that some view as undesirable.

Table 7 Summary of Effectiveness

Evaluation questions	Answer	Strength of Evidence
To what extent has the grant contributed to an increased availability of better treatment products that are commercially available for rapid introduction in LMICs? (KPI 1)	Moderate to high Under the second grant, MPP has secured additional licences for treatments against HIV and HCV, as well as for a possible TB treatment. With its existing licences, MPP has facilitated the development of new generic medicines, including paediatric formulations. Additionally, MPP has been able to extend the territory on a substantial number of its licences to include middle-income countries. Jointly, these achievements have helped increased the availability of and access to priority medicines. The grant has not yet been successful in increasing availability of products in its newer priority areas.	Strong (based on objective data about number of licences, products and countries + stakeholder perspectives)
How successful was the grant in bringing quality-assured medicines/technologies for adoption in LMICs? (KPI 2)	High All 54 MPP-enabled products (HIV 42, HCV 12) developed during the grant were approved by WHO PQ, USFDA or another SRA.	Strong (products produced under licences from MPP need to receive approval from a stringent regulatory authority)
To what degree has the grant contributed to making products (medicines, diagnostics) available at prices that are affordable for governments and other donors? (KPI 2)	Moderate By selecting multiple sub-licensees MPP fosters competition which helps drive down prices. This model is effective, but not always sufficient to reach MPP's targets. For HIV, MPP reached its price reduction target, but for HCV the target was not reached. No information was available on to what degree these price reductions are sufficient to guarantee access to people in the countries covered by the licences.	Moderate (Data on relative price reductions available, but not on whether this makes them sufficiently affordable to ensure access)
To what extent did the grant improve supply and delivery systems to ensure that products reach those in need in a reliable and timely way? (KPI 2)	Moderate MPP's main focus is on enabling the development of new formulations and generic medicines to create competition and promote access to quality-assured, affordable medicine. The intervention of MPP has, for some products, helped to significantly speed up the development and introduction of generic medicines. However, MPP does not directly engage in strengthening of supply and delivery systems at national levels. It does not exercise any direct control over the reliability or timeliness of supply, other than through its interactions with and support to its sub-licensees.	Weak to moderate (Limted data identified on supply and delivery of products produced under MPP licences or on if/how MPP supports sub-licensees in the supply and delivery)
What were the main factors influencing the achievement or non/achievement of the increased availability of better treatment products available for rapid introduction in LMIC?	MPP's success is largely determined by the willingness of originator companies to make licences available. This willingness depends on factors within, as well as beyond MPP's control. Where MPP has been able to demonstrate a proper business case to originator companies, it has been more	Moderate (Mostly based on stakeholder perceptions, but similar observations made by different stakeholder groups)

	successful. MPP's effectiveness is affected also by whether there is a suitable enabling environment, which includes sufficient advocacy and attention from the global health community for access to the medicines targeted by MPP.	
To what extent did the grant achieve its objectives and expected outcomes in addressing targeted access barriers within the specified timeframe and budget?	MPP's has achieved or exceeded most of its KPIs. In areas where KPIs have not yet fully been met, this is because negotiations with originator companies are still ongoing.	Moderate to strong (Based on KPI reporting)

Source: Technopolis, 2021

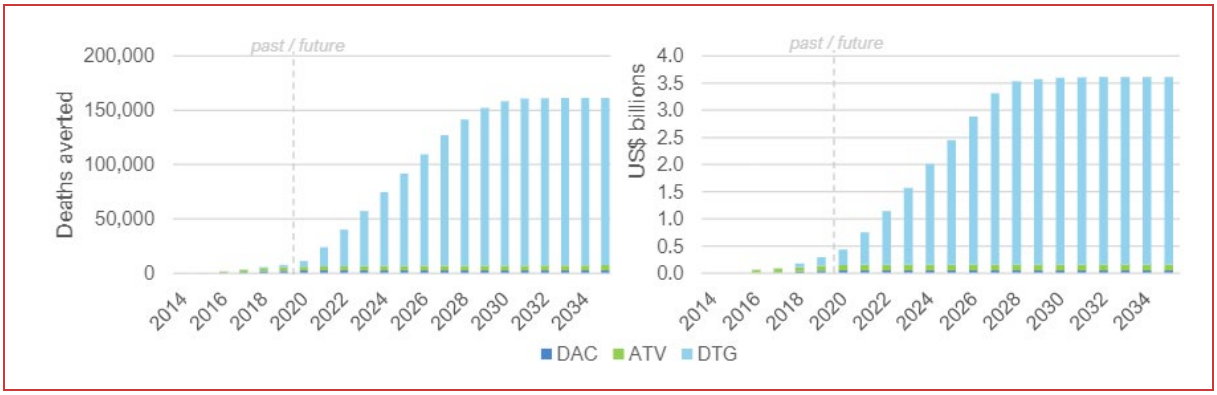
3.5 Impact

In line with the Terms of Reference, for this evaluation no new data were gathered on the impact achieved under the MPPII grant, as MPP had already contracted CEPA in 2020 to conduct a separate impact assessment.[115] To nonetheless offer some insight into how the work by MPP is expected to affect access to treatment, a brief summary of the analysis reported by CEPA is provided here.

The model developed by CEPA builds on a chain of effects linking licensing to outcomes in parallel factual and counterfactual scenarios. This chain of effects is as follows: licencing leads to more generic competition, which leads to price reduction, which leads to increased uptake which leads to health outcomes. The impact model does not only look at impacts achieved so far, but forecasts impact.

The impact model developed by CEPA has so far been applied to three MPP licenses: atazanavir (ATV) as second-line HIV antiretroviral treatment; dolutegravir (DTG) as first-line HIV antiretroviral treatment; and daclatasvir (DAC) as pan-genotypic HCV treatment. The CEPA model estimates that MPP licensing could result in the prevention of 161.000 deaths and lead to savings of USD3.6 billion for health systems in countries covered by MPP licences by 2035.

Figure 9 Cumulative impact from DTG, ATV & DAC licensed predicted by end-2035, central modelling scenarios.



Source: CEPA, 2019

Respondents from all backgrounds indicate that they feel that MPP has had and will have a large impact on increasing access for LMIC's, both in terms of affordability and increased availability. Their sense is that a lot of the medicines that are licenced through MPP would not have been available, or at least not to the same extent, as they are now. Multiple respondents indicated that the impact is especially felt in L-MICs, whereas making impact in U-MICs remains a challenge.

Through its pooling mechanism, MPP has also aided the development of combinations of medicines that generic manufacturers would otherwise not have been able to put together due to IP restrictions. One generic manufacturer indicated that they have reached 20 million patients with combinations that were made possible only because of MPP.

[115] MPP 2016-2020 Final version, non-confidential.

Overall, respondents indicate that MPP has made valuable contributions to price reductions, especially for HIV antiretrovirals.

Table 8 Summary of Impact

Evaluation questions	Answer	Strength of Evidence
To what extent has the grant-generated, or is expected to generate, global/national-level effects across Unitaid's five dimensions of impact (public health impact, economic impact, equity impact strategic benefits and positive and negative externalities at global/national levels)	Based on the CEPA impact assessment, the grant has contributed to, and can reasonably be expected to further contribute to, substantial health and economic impacts. Savings to health systems in LMICs are likely to positively influence global equity.	Moderate to strong (based on CEPA impact assessment and stakeholder observations)

Source: Technopolis, 2021

3.6 Sustainability

When assessing the sustainability of MPPII, three aspects need to be considered: **the sustainability of the grant's achieved impact**, MPP's **financial sustainability** and its **institutional sustainability** in the form it has operated under the grant. The former has been explored already in more depth in the impact assessment study of CEPA. However, certain aspects of impact sustainability, particularly those pertaining to the creation of an enabling environment for the scale-up and adoption of the technologies licensed under MPP, have been included in the analysis performed for this report. In addition, this evaluation has considered aspects related to the financial and institional sustainability of MPP.

3.6.1 Impact sustainability

MPP's impact is in the effects of the licenses it brings to the national markets. To fully achieve the impact potential of MPP licences, several bottlenecks need to be overcome. As part of the MPPII grant, MPP has worked with partners to develop country readiness for the introduction of new licensed products to ensure uptake and enhance access to the products by those who need them. For countries covered by the Global Fund, MPP promotes product adoption through communications with the respective procurement entities of the Global Fund as well as with local actors such as governments, NGOs and CSOs. In other countries, MPP also joins forces with international and national partners, such as WHO, local NGOs and CSOs to raise awareness with governments and procurement agencies about the ability to procure the developed medicines or advocate for their inclusion into treatment guidelines or policies. It is, however, important to note that MPP does not directly encourage or advertise its licences in the countries, but rather uses an awareness-raising approach among country stakeholders, who, in turn, engage with governments and other national procurement bodies. Countries reportedly are not always aware that they are included in the territory of the MPP licences. In some cases these countries may still make use of the products produced under the MPP licence but simply do not realise the production was enabled by a MPP licence. In others, they may be missing out on the option to procure generic medicines. Here, there is a clear role for MPP's outreach work, for instance by working through WHO Regional offices.

As long as MPP's sub-licensees continue to supply the developed products to MPP's target markets and the products remain relevant, the impacts of MPP's licensing work can be expected to last. Because for most of the licences for which there currently is development/commercialization activity the last-to-expire patent is still in force[116], it is difficult to predict how access to the medicines produced by MPP sub-licensees will evolve once these products come off patent. This situation is set to arise during the third grant as patents on several of MPP's licences will expire within the next five year.[117] Once the patents expire, the support of MPP to sub-licensees may become redundant. It could even become counterproductive, as the appearance could be raised that MPP favours certain generic companies over others. In MPP's self-assessment, MPP has indicated that MPP will continue to undertake policy/advocacy work to support uptake of products and facilitate access in additional

[116] According to the MPP self-assessment of licensing work, the last-to-expire patent on Tenofovir disoproxil fumarate expired in July 2018.

[117] Last-to-expire patents that will expire before or in 2025 are: paediatric abacavir (September 2023), atazanavir (May 2025), and daclatasvir (assumed to be abandoned worldwide by 2022)

countries even after patents are expired or abandoned, because "the impact of an MPP licence extends beyond the immediate expiry of the patents".

A certain degree of obsolescence of the products developed through MPP's licences is to be expected over time. Newer, more effective or safer treatments may replace the current generation of products. Less optimistically, existing treatments could become less relevant because of rising drug resistance. In both scenarios, the need for the medicines produced by MPP's sub-licensees could decline to the point where it is no longer viable for these companies to continue manufacturing. However, MPP seeks to continually expand its product portfolio. Provided it is able to keep adding new relevant licences into the pool, MPP will likely continue to generate impact.

3.6.2 *Financial and institutional sustainability*

Unitaid is the sole funder of MPP's main activities. However, during the MPPII grant, MPP received additional funding from other organisations for selected projects. The Swiss Agency for Development and Cooperation (SDC) and Wellcome Trust co-funded a feasibility study exploring the expansion of MPP's mandate to include other patented priority essential medicines. As mentioned previously, for MPP's activities related to COVID-19, MPP has obtained external funding from the government of Japan for the MPP-III grant period. The diversification of funders somewhat reduces MPP's reliance on Unitaid, although Unitaid is expected to remain its largest funder for the coming years. The inclusion of new funders may allow MPP to set its priorities somewhat more independently from Unitaid's core investment areas.

The question has been raised as to whether MPP should levy a fee on some of the services it provides to sub-licensees or collect royalties. Whilst the possibility was not explored in-depth, one stakeholder expected this to be very difficult in practice and emphasised that this could damage the relationship between MPP and its partners.

Most stakeholders expressed confidence that MPP has developed into a mature, knowledgeable, and adaptable organisation. Nonetheless, there is some concern over whether MPP, in its current composition, has sufficient capacity to conduct the extensive analysis and negotiations with originators to fully realise the potential of the expanded product scope. Meanwhile, MPP's management has expressed a wish to preserve the organisation as a small, focused entity. There thus appears to be some tension between the wishful expectations of some stakeholders about the scope and reach of MPP's activities and MPP's own strategic vision for its future.

Table 9 Sustainability

Evaluation questions	Answer	Strength of Evidence
How has the grant contributed to an enabling global environment for scale-up, including affordable pricing, tools to support country adaptation and uptake and advocacy, and stronger partnerships among global actors?	MPP works extensively with a diverse network of partner organisations to raise awareness of its licences and promote uptake of products developed by its sub-licensees to maximise access.	Moderate to high (MPP's efforts are documented in its annual reports, self-assessment and other communications. Confirmed in publications by and interviews with key partner organisations.)
To what extent has the grant helped establish country readiness for scale-	MPP's operational model is predominantly upstream. It does not require financial	Moderate

up, including securing ongoing political and financial commitments by national governments and other partners, supportive policies and enhanced health system capacity for delivery?	commitments by national governments or other partners. Governments in countries covered by MPP's licences have the opportunity to procure medicines developed by MPP's sub-licensees but do not do so directly from MPP.	(Limited information about MPP's more downstream work as no clear targets have been defined and outputs are largely intangible)

Source: Technopolis, 2021

3.7 Lessons learnt

Over the course of its second grant, MPP has made various changes to its design and operational structures to further improve itself and maximise the impact of its activities. Some changes were made following an internal Management and Governance Review[118], conducted in 2017 at the request of Unitaid. Whilst this evaluation has focused primarily on MPP's work under the MPPII grant and has not looked in detail at MPP's internal operations, it is clear that the changes that were triggered by this review have had some positive impact on how MPP is currently viewed by its stakeholders. This applies to areas such as its interactions with licensors and sub-licensees, its communication and transparency, and its overall professionalism.

In the conclusions of MPP's self-assessment report for the period 2010-2020, MPP itself writes that the organisation has become more expert and professional over time and that the rigour with which each activity is performed has increased.[119] This **professionalisation** of the organisation is something many respondents have commented on. There is a sense that the current MPP has become more professional, thorough, and knowledgeable than it was a few years ago and that it has become an organisation that others like to collaborate with. A significant change observed by stakeholders is a **notable improvement in communication**: the current frequency with which MPP communicates, especially with generic manufacturers, is much appreciated as is the type and quality of information shared. Two originator companies corroborated this perception, having similarly observed that in recent years the MPP team has become more responsive to inquiries and is working more in the spirit of partnership than it used to. This was said to have also facilitated internal company discussions with the senior management about working with MPP. These changes are noteworthy especially as communication and engagement with stakeholders were among the issues flagged in the Management and Governance Review. Overall, it appears that MPP has worked hard to address the issues that were raised in that review and that those efforts have not gone unnoticed by MPP's stakeholders.

During the MPPII grant the organisation has extended its product and disease scope, recognising the potential of its model beyond its initial focus on HIV. This willingness to stretch itself aligns with the expectations of the stakeholders and shows that the organisation has been **flexible and attentive to the needs of its target beneficiaries**. However, it has also shown the **difficulties of replicating MPP's early successes** and raised the question of whether MPP is approaching the limits of its model. There is still a strong sense among many stakeholders that MPP has the potential to make a difference in other areas as well, but that it has thus far stuggled to fully realise this. A possible explanation for this may rest in the extent to which MPP's external environment has been conducive to its activities in this space. With its early work on HIV medicines, MPP was able to capitalise on strong public pressure on pharmaceutical companies from civil society organisations, governments and global health institutions. This created an environment in which MPP could offer an acceptable compromise. Other disease areas have not been characterised by the same degree of public pressure. This is particularly true for the extremely heterogeneous group of non-communicable diseases. Even though it is widely recognized that NCDs, such as cancer, cardiovascular disease and diabetes, are the next big burden for LMICs, there is no similarly well-organised network of actors to vocally

[118] Moore Stephens (2017) Management Review of Medicines Patent Pool. Final Report 15 May 2017.

[119] MPP (2020) Self-Assessment of Licensing Work for 2010-2020 and Projection for 2021-2025

advocate for treatment access. Consequently, originator companies are less likely to consider the need for LMIC access strategies, including the possible use of voluntary licensing, for these products. MPP has not yet found the solution to these obstacles but, as discussed further in Section 4.2, may have several options for working towards this in its next strategic phase.

A particular consideration is **to what degree lessons learned from MPP's operations to date have and can be applied specifically in the area of COVID-19**. MPP's achievements in the space of HIV showed even sceptics that voluntary licencing and patent pooling can be made to work effectively and improve access when there is sufficient incentive for originator companies to engage. Whilst treatment advocacy for MPP's scope extensions may not be as strong as it has been for HIV, there has been an enormous amount of public pressure on pharmaceutical companies to provide equitable access to COVID-19 vaccines and treatments and allow generic manufacturers to contribute to production. The COVID-19 Technology Access Pool (C-TAP) mechanism, which was launched in June 2020 by WHO and with the support of 37 countries, was created specifically for this purpose. MPP is to serve as the operational conduit for sharing of IP. However, more than a year after C-TAP was launched and despite high-level support, originator companies have thus far not engaged with either C-TAP or MPP to negotiate access to vaccines or medicines in this space. Instead, companies have used the argument of the complexity of (mRNA) vaccine manufacturing and insufficient manufacturing capacity to suggest IP barriers are not the primary obstacle to access. The recent institution of mRNA COVID-19 vaccine technology transfer hubs by WHO may go some way towards undercutting this argument. It is, however, likely that the reluctance to waive or licence IP is fuelled also by the fact that COVID-19 affects not just LMICs but also HICs where there is very significant commercial interest for companies. The challenge for MPP, and for the wider global health community, is thus to **construct** not only a public health argument but also **a viable business case to entice originator companies to grant such licences.** The licence holders of the main patents on COVID-19 vaccines that have been approved within the WHO PQP to date are all companies with which MPP does not yet have any licence agreements.[120]

One particularly noteworthy change for MPP during its second grant has been the **increased emphasis on licence management**. As the number of licences and sub-licensees has grown, MPP has needed to spend considerably more time and resources on its dealings with sub-licensees to ensure that all licences and development projects are properly managed. Throughout the grant period, MPP has worked to improve the efficiency of its licence management activities in various ways. As the number of licences is expected to further increase, it will be essential for MPP to continue looking for efficiencies and tailor its efforts to the needs of individual sub-licensees and development projects, taking into account the possible risks from reducing its involvement.

Most of MPP's learnings have been internally oriented, aimed at improving its own operations. Where it has shared lessons with the outside world, these have focused primarily on improved 'story telling' about how MPP works and what impacts it is contributing to. No data was reviewed to determine if and how this information reaches different target audiences.

[120] WHO (15 July 2021) Status of COVID-19 Vaccines within WHO EUL/PQ evaluation process. Guidance document. Available via: https://extranet.who.int/pqweb/sites/default/files/documents/Status_COVID_VAX_15July2021.pdf

Table 10 Lessons Learned

Evaluation questions	Answer	Strength of Evidence
What have been the lessons learned and how have they been incorporated in the lifetime of the grant or across other interventions? Have lessons learnt been widely disseminated by implementers and Unitaid?	Throughout the MPP-II grant MPP has worked to improve its internal operations, taking into account recommendations made as part of the Management and Governance Review. This has translated into improved perceptions of MPP's professionalism among stakeholders. Changes made to its internal processes have been institutionalized and will continue to be applied in its next grant phase.	Moderate (Based on documented changes to processes and stakeholder perceptions)
How effectively have strategic, implementation and sustainability/scalability risks been identified and managed over the course of implementation	MPP has struggled to scale up its activities beyond its initial focus on HIV and, to a degree, HCV despite its efforts. These difficulties are not unexpected and relate in part to MPP's external environment but nonetheless hint at risks to MPP's scalability and long-term sustainability that MPP has not yet been able to manage.	Moderate to strong (Based on data on new licences obtained and stakeholder perceptions)

Source: Technopolis, 2021

4 Conclusions and recommendations

4.1 Conclusions

Based on the findings of this evaluation, the Theory of Change that was developed for MPP is found to be in essence valid: **the MPP model** that is based on in-licensing patents for priority medicines and non-exclusive out-licensing to generic manufacturers **has increased the availability of these medicines in many LMICs whilst promoting their affordability through creating competition in the market**. The MPP model is based on the correct assumption that access to medicine can, at least in part, be improved by reducing IP-related access barriers. This model, which was first demonstrated as viable during MPP's first grant, has maintained its relevance in the period covered by the MPP-II grant.

The work that MPP has performed under this grant has been **appropriately aligned with that of other key actors working on global health and access to medicine**. The various scope extensions reflect the main global health priorities. MPP is well recognised and has become an obvious and trusted partner, as evidenced by its work with WHO and other NGOs. Its efforts are largely complementary to that of other, often more locally operating organisations that work to promote access. MPP has shown that voluntary licensing and patent pooling can be used effectively to promote access, whilst creating proper (economic) incentives for all parties involved. MPP's understanding of the intellectual property of innovative medicines is the unique selling point of the organisation.

During the grant period, **five new licences were signed**: for the HIV medicine bictégravir (2017, Gilead), the HCV medicines glecaprevir/pibrentasvir (2018, Abbvie) and ravidasvir (2017, Abbvie) and two licences for the TB candidate medicine sutezolid (2016, John Hopkins University, with a separate agreement with Pfizer for use of trial data in 2019). MPP herewith reached its grant target for HCV medicines but fell somewhat short for HIV and TB medicines. It is notable, though not unexpected, that the number of new licences signed has been substantially lower than that during the first grant. Furthermore, although during the MPP-II grant MPP's scope was extended to also include products on the WHO EML and COVID-19 treatments, it has not yet been able to secure any licences for products in these areas. This suggests that, whilst in its first phase MPP was able to pick more 'low hanging fruit', it is now experiencing a diminishing rate of return on its efforts on in-licensing and that its foray into new disease areas is more challenging due to a relative lack of public advocacy and possibly different market dynamics. Whereas the disease burden for HIV and TB is typically highest in markets that are of limited commercial value, attention for non-communicable diseases has traditionally been focused mostly on high-income countries. Innovative products in this area thus tend to have higher profit margins and there is a greater commercial risk to originators in granting licenses on these products to others.

Although the number of new licences signed is relatively low, **MPP has had significant success in improving the coverage of its existing licences**: between 2016 and 2020 MPP successfully negotiated to extend the territory for eight of its licences for HIV medicines. These extensions include low-middle income countries in Northern Africa (Morocco), Central Asia (Azerbaijan, Belarus, Ukraine), Southeast Asia (Malaysia, Philippines) and Europe (Armenia, Moldova). As a result, many of the licences now cover countries that are home to around 90% of people living with HIV in low- and middle-income countries. The licence extensions thus form an important part of the work MPP has performed throughout the second grant.

MPP has been able to secure additional licences, and improve on its existing ones, because **originator companies have increasingly recognised the value of working with MPP**. This value is derived partly from the fact that MPP takes over the management of the licence and the

interactions with sub-licensees, **reducing the administrative burden** of this on the companies. Additional value is derived from the **outside recognition** that originator companies receive for licensing patents to MPP. Such reputational capital is important for an industry that is often heavily criticised and seen as placing profits over people. Nonetheless, the difficulties in securing licences for new product categories show that these benefits may not be enough to incentivise originator companies to grant MPP licences if there is not a sufficiently strong business case for them in doing so. This shows the importance for MPP to continuously invest in working with innovator companies to understand what they need to make the granting of a voluntary licence to MPP worthwhile whilst not compromising on its access objectives.

To generic manufacturers, MPP offers convenient access to a varied portfolio of licences. Importantly, the pool of licences **facilitates the development of new formulations and combination products**. Generic manufacturers benefit substantially from their interactions with MPP through the licence management: through this, they obtain support (where needed) with registration filing and development plans and receive market intelligence to inform their market entry decisions. Under the second grant, MPP has expanded and diversified the group of generic manufacturers to which it has granted sub-licences.

The **MedsPal database** that MPP maintains meanwhile adds value to the work of different groups of stakeholders, from treatment advocacy organisations to generic manufacturers, by providing an overview of important patent-related information that is often difficult to find.

Overall, MPP has been rather effective in achieving its goals set under the second grant. However, it appears to be reaching a point in its existence where its effectiveness is being challenged by greater difficulty in securing new licences or further extension of its current ones.

MPP is a fairly unique organisation and has no obvious immediate comparators. As such, **it is challenging to benchmark MPP and determine whether it makes efficient use of its resources**. Observations made by direct stakeholders indicate that the organisation is professional in its dealings with others and that, despite being relatively small, MPP is able to create substantial added value to both licencors and sub-licensees. Over time, more of its efforts have shifted towards management of its portfolio of licences, as the numbers of licences, sub-licensees and development projects have increased. It has been able to absorb part of the additional work needed for this activity by making some efficiency gains, through greater automation and standardisation and by making better use of its Indian office and staff. Given the value stakeholders place on these interactions with MPP, it is questionable whether the efforts devoted to licence management could be significantly reduced without jeopardising the relations MPP has built.

Overall, it can be concluded that, throughout the second grant, MPP has further developed into a professional organisation that is valued by companies, global health organisations and countries. Through its work on licences, MPP has significantly improved access to priority medicines in the areas of HIV and HCV and has delivered very substantial benefits to affected populations in LMICs.

4.2 Strategic recommendations

As already highlighted at various points throughout this report, this evaluation has found that there are several important areas for further reflection as MPP embarks on its third grant period (2021-2025).

4.2.1.1 Creating the environment for scalability of MPP

The progressive extensions to MPP's scope have been logical and are much welcomed by stakeholders. Many have raised the suggestion that MPP further opens its scope and considers

all technologies (not limited to medicines) for which there is a clear global health need within its mandate. The feasibility of such expectations, especially considering the limited capacity and even preparedness of MPP to grow at such a rapid rate, can be questioned. Moreover, MPP has thus far struggled to effectively replicate its early success in the HIV space to its complete scope expansion. Thus, **a suitable balance needs to be struck between the reach of its scope and the focus of its specific activities within that scope**. In principle, it is possible to find such balance through **clear prioritisation of products and disease areas**, involving a suitably diverse group of expert advisors to help identify the main products where MPP can help make a difference. MPP does already have processes for identification of priority medicines, including among patented medicines on the EML, but external stakeholders often are not well aware of what these priorities are, preventing them from lending their advocacy voice to MPP's efforts. Additionally, it has been suggested that the prioritisation process is too narrow and overly focused on public health needs, without due consideration of the commercial aspects of the targeted products to construct suitable business cases. As the main body to set MPP's policies and strategies, this type of industry expertise needs to also be sufficiently represented in MPP's Governance Board.

Whether under its third grant MPP will be able to make greater in-roads with priority medicines in other areas will likely also depend on whether sufficient momentum can be created to push for access to these medicines. MPP itself has expressed the hope that a high-visibility breakthrough with a licence for a product outside of its traditional focus could create the necessary momentum to further build its portfolio. However, this will likely have to involve **building new relationships with originator companies** beyond the relatively limited set of companies with which MPP has concluded licence agreements so far. For instance, out of the top-10 largest developers of oncology medicines, MPP has licences (for non-oncology medicines) with just three companies.[121] This will thus mean that MPP needs to gain entry with such other companies if it wants to open up discussions about possible licencing in this area. As MPP holds no direct leverage over companies to force such discussions, it may have to **strategically use its network of allies in the access community to broker first contact with executive management of companies**. Importantly, R&D based pharmaceutical companies are not the only potential generators of pharmaceutical IP. Much of the early-stage pharmaceutical development takes place at universities and research institutes, often with the financial support of research funders. **This places these funders in a position whereby they can place conditions on their grantees** with regards to how IP resulting from the funded research will be managed and, for instance, require all IP to be licenced to MPP.

A related question for MPP during its next phase will be what role it should play itself in helping to create greater momentum for treatment advocacy in areas beyond HIV. At present, MPP is mostly recognised as a neutral intermediary between originator companies and generic manufacturers and less so as an outspoken access advocate. MPP has taken this position deliberately as the effectiveness of its work depends on the willingness of originator companies to engage. This willingness likely would reduce if MPP were critical of the industry. The challenge for MPP will thus be to **make proper use of the voice of other organisations to advocate for treatment access in the areas targeted by MPP whilst clearly articulating its own position** on the importance of access to these medicines and communicating the value of the MPP model.

[121] Verified Market Research (2021, March). Top 10 oncology pharma companies leading the path towards a healthier future. Available via: https://www.verifiedmarketresearch.com/blog/top-oncology-pharma-companies/

A recent example of how MPP could better position itself as a treatment access advocate and help prepare the ground for its own activities, without compromising its neutral position, relates to its work in the EML space. In June 2021, MPP submitted a statement to the WHO Essential Medicines List Committee in which it asked members of the Committee to be forward looking in its decision-making as to what products to include on the EML, noting that products are placed on the list based in part on whether they are considered cost-effective.[122] MPP notes that, even when patent-protected products are not cost-effective at their original price, they could be made cost-effective through the introduction of generic competition, as has happened with dolutegravir. Even though with this statement MPP is not taking aim at specific products or companies, it can be seen as a call on the community to help identify for which products affordability is a main access barrier and whether MPP could play a role in overcoming this. Identifying these products early on and with input from the global health community, advocacy organisations are also empowered to put pressure on companies and governments to work on access. This can help to create the right environment where MPP becomes the trusted partner with whom companies can work as part of their access planning.

Based on the above observations, the evaluators offer MPP the following strategic recommendations for consideration, whilst noting that many of these are not calling for introduction of new activities or organisational aspects but rather for building further on what is already there:

- Continue to grow the scope to include all areas where MPP could reasonably be argued to make a difference but clearly prioritise specific products and/or disease areas within this broad scope
- Draw public attention to MPP's specific priorities rather than to its broad mandate to help create treatment advocacy for these products/areas
- Involve a sufficiently diverse group of experts in the prioritisation process, with expertise beyond the current focus areas of MPP
- Increase involvement of experts with knowledge of the commercial aspects of pharmaceutical development and marketing in the prioritisation process
- Make more strategic use of partners and allies to advocate for treatment access and make high-level contact with originator companies

4.2.1.2 Distribution of efforts

As noted at various points throughout this evaluation, MPP has gradually shifted a greater amount of effort into the **management of its licences. The true added value of such activities is hard to establish**. Some of the activities that fall under licence management are required by the licence terms and MPP is therefore legally required to execute them. This part of the work thus is largely unavoidable and key to MPP's ability to secure licences. In addition to this, MPP assists its sub-licensees throughout the development and registration process and continues to offer market intelligence and support post-approval. Generic companies are generally happy with this support, but it is difficult to judge whether this is because it is freely available to them or because they genuinely require this assistance. It is clear, however, that not every company needs the same extent of licence management activities. Such support may be more

[122] Medicines Patent Pool (2021, 21 June). MPP's intervention to WHO Essential Medicines List Committee. https://medicinespatentpool.org/news-publications-post/mpp-statement-to-who-eml-committee/

beneficial for companies that do not have experience with working with licensing or do not have specific regional/country product introduction experience. For efficient use of resources, it will thus be important for MPP to **conduct a careful needs assessment for each new licence and sub-licensee and tailor the work it conducts accordingly**.

A more critical outlook on licence management would be to suggest limiting this activity of MPP altogether and concentrate instead on more focused prioritisation of medicines and in-licensing. There is an argument to be made that a more focused and precise assessment of needs and subsequent licensing of such needed technologies could lead to better uptake of licenses by both generic companies and target countries. At the same time, company experiences with roll-outs of licensed medicines for infectious diseases prove that uptake remains suboptimal even in countries with high disease burden.

Whilst **MPP has secured notably fewer new licences in its second phase** than in its first phase, there are **no indications that this could be attributed to the activity receiving less priority or insufficient resources being dedicated to it**. Rather, this seems to be the somewhat predictable result of MPP having already secured the main licences in the area of HIV and finding it more difficult to do the same in other areas. Thus, whilst it may be tempting to recommend greater priority be given to in-licencing, where necessary by deprioritizing licence management, it is unclear that this would translate into greater effectiveness for MPP. Rather, **the work on licence management should be seen as part of the relationship management that is needed to demonstrate MPP's value to companies and encourage them to work with MPP**.

Strategic recommendations in this area thus are to:

- Conduct proper needs assessment for the level of effort devoted to licence management for every licence and sub-licensee and tailor activities accordingly
- Continuously assess where MPP's efforts are most needed and allocate resources accordingly

4.2.1.3 Maintaining its high standards for access and transparency

MPP has its roots in the public health and treatment advocacy movement. However, likely because of its strong ties to Unitaid and other United Nations agencies, it has since evolved into an organisation that appears to view multilateral health organisations as its peers rather than grassroots advocacy organisations. This has allowed it to become **recognised by companies as a neutral "honest broker" that is not unnecessarily dogmatic and is ready to put the overall access objective first**, even if that sometimes means accepting terms and conditions that are sub-optimal. However, among advocacy organisations, there is **some concern that this readiness to compromise could lead to a 'slippery slope'** whereby MPP abdicates from its core principles. MPP appears to be sufficiently aware of this risk and to carefully manage this internally through its internal governance structures. However, it also needs to **communicate about this clearly to the outside world** to avoid the appearance that MPP is compromising too much on its principles and allowing itself to become a tool for industry rather than a mechanism for access.

Similarly, concerns have been voiced that MPP is not always pushing originator companies hard enough to get the best possible terms. For instance, some interviewees have suggested that MPP could go further in its efforts to **promote affordability by adding price commitments to its licence agreements**. The concept of socially responsible licencing, whereby licensors place conditions on sub-licensees about access and affordability, has received increasing attention from research funders and institutions. For instance, in May 2020 the European Commission issued a call under the Horizon 2020 Framework Programme for Research and Innovation for "innovative and rapid health- related approaches to respond to COVID-19". The

call text included an obligation for grantees "to ensure that results or resulting products/services will be available and accessible, promptly and at fair and reasonable conditions including an obligation to grant non-exclusive licences for this purpose". However, discussions about fair pricing and price caps are often complicated by differing perspectives about how to determine what constitutes a 'fair price'.[123] Most such discussions have focused on the price of innovative medicines and less so on that of generic medicines, where prices are typically much lower because of competition and because prices are not used to recoup significant R&D costs. Nonetheless, some respondents to the Stewardship survey felt that, in cases where the market for a medicine is projected to be small, it could be appropriate for MPP to include provisions to cap prices.[124] MPP has indicated that it could envision needing to set maximum prices at some point and that the management team would not necessarily be against this. Unitaid has requested MPP to include affordable pricing commitments into any sub-licences granted against licences obtained from any of Unitaid's grantees in the area of Long-Acting technologies. It is **difficult to predict what the effect of such conditions would be**. Whilst it could help further bring down prices, it is conceivable that it would simultaneously have a deterring effect on sub-licensees who would see their ability to financially benefit from the licences further reduced and who could thus opt out of a licencing agreement.

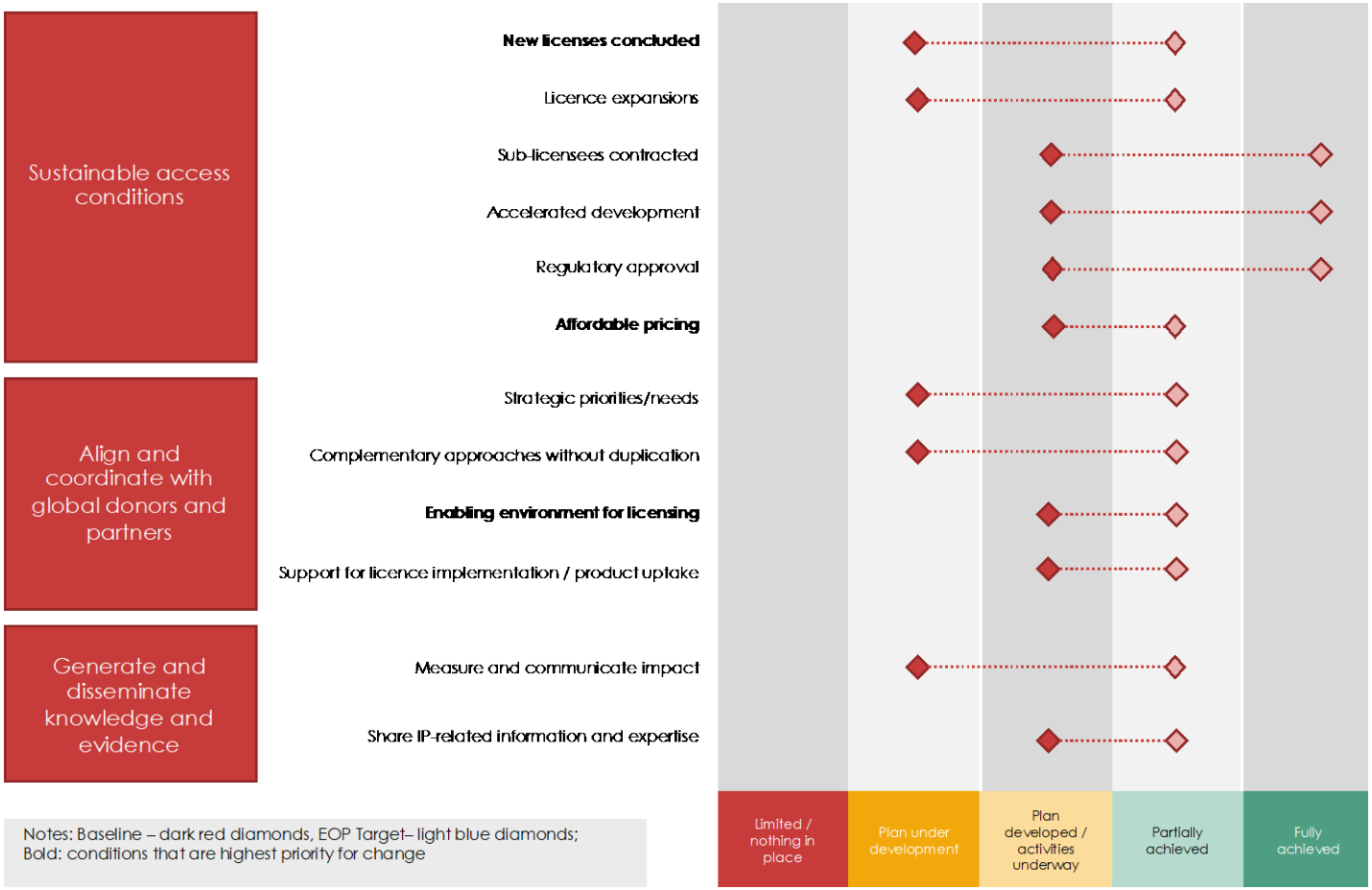
Strategic recommendations in this area are to:

- Maintain regular and transparent discussions internally about the standards and principles to which MPP adheres in its dealings with originator companies to ensure that it does not compromise on these
- Continue striving for transparency as much as possible in all of its transactions; clearly communicating, internally and externally, where and why certain choices have been made
- Consider in what cases additional provisions to ensure access and affordability could add value

[123] Moon S, Mariat S, Kamae I, Pedersen H B. Defining the concept of fair pricing for medicines BMJ 2020; 368 :l4726 doi:10.1136/bmj.l4726. Available via: https://www.bmj.com/content/368/bmj.l4726

[124] Respondents included Manufacturers, Regulatory Oversight, Control and Distribution companies and End Users. More information available in the Stewardship Report (2016).

Table 11 Scalability matrix for MPPII



Notes: Baseline – dark red diamonds, EOP Target– light blue diamonds;
Bold: conditions that are highest priority for change

Because the MPPII grant, subject of this evaluation, builds on a prior grant (MPPI) and the operational model of MPP has not significantly changed between the two grants, the baseline for all conditions is that plans were already under development or that activities were underway at the time the second grant started.

Appendix A Evaluation Matrix

	Evaluation Questions	Operationalised questions	Evaluation methods
RELEVANCE: Is the intervention doing the right things?			
1.1	To what extent did the objectives and design of MPP II respond to the needs of targeted beneficiaries?	What are the needs of the targeted beneficiaries? people living in LMICs community and civil society organisations governments/national health systems in LMICs scale-up partners?	
		How were the objectives of MPPII decided?	
		How do the objectives of MPPII align with the needs of the targeted beneficiaries?	
		How was the design of MPPII decided?	
		How does the design of MPPII align with the needs of the targeted beneficiaries?	
1.2	Have design and implementation approaches been appropriately adapted/course-corrected to respond to any changes in context (for example, at the policy level – globally or within a national context, emerging and competing technologies/products/approaches)?	What important changes in context (external changes that may have had an effect on the grant) have occurred during the course of the grant: On the national level in the countries benefiting from the activities of MPPII Globally or regionally in the areas where the MPPII activities have been focused	
		Was it necessary for the MPP to adapt to these changes? Why (not)?	
		How has the design of the MPPII grant allowed for the grant to be adapted to these changes in context?	
		How has the MPP addressed these changes on the national and global level?	
1.3	To what extent have grant design and implementation identified and addressed issues related to gender, social	In the context of the grant, how are the most disadvantaged populations in LMICs defined?	

	Evaluation Questions	Operationalised questions	Evaluation methods
	inclusion and equity in line with Unitaid's overall mission to reach the most disadvantaged populations in developing countries using innovative global market-based approaches?	How have issues related to gender, social inclusion and equity been addressed in the design of the grant?	
		How have issues related to gender, social inclusion and equity been addressed in the implementation of the grant?	
		To what extent have the results and impacts of the grant reached most disadvantaged populations? What are examples of products/projects where it appeared?	
COHERENCE: How well does the intervention fit?			
2.1	To what degree does the MPP II grant fit with other interventions within targeted countries, sectors or institutions (e.g. creating synergies between relevant interventions and consistent with other initiatives/international norms and standards within the same space)? How well does the intervention align with priorities/needs identified by partners/the global disease response?	What other relevant interventions in the targeted countries, sectors or institutions that were concurrent with the grant?	
		Who are partners in the global disease response and what have they identified as needs / priorities?	
		How did the objectives of MPPII align with priorities/needs identified by other actors on the national and global levels?	
		How has the grant aligned with other interventions of partners in the global disease response?	
		Has the grant allowed for synergies with other interventions?	
2.2	To what extent is the grant adding value (and not duplicating efforts or establishing parallel systems)?	Are there other actors or grants working towards the same needs/priorities as the MPPII? If yes, what/who are these?	
		Are there significant gaps between the activities of other and those under the MPPII grant that the MPP could have addressed?	
		How do activities by others overlap with activities conducted under the MPPII grant?	
Efficiency: How well are resources being used?			
3.1		What were the activities of MPPII and what were the costs associated with them?	

	Evaluation Questions	Operationalised questions	Evaluation methods
	How timely, cost-efficient and cost-effective was implementation (consider both allocative efficiency and technical efficiency)?(1) What factors have been considered to ensure that value for money has been achieved from an efficiency – resource use - standpoint?	How have costs been allocated between operational costs (associated with activities) and administrative costs (overhead)?	
		How have costs been allocated across different types of activities?	
		What determined this allocation?	
		How were resources needed for the implementation of the MPPII grant procured?	
		How efficient is the licensing model of MPP? To what extent are all the services that are provided critical and necessary?	
Effectiveness is the intervention achieving its objectives			
4.1	To what extent has the grant contributed to an increased availability of better treatment products that are commercially available for rapid introduction in LMICs? (KPI 1)	Has the grant contributed to the development of or access to innovative products (better, new, adapted, superior) in resource-limited settings?	
		Has availability of better products increased for the most marginalized groups/regions as a result of the grant?	
		Have the products developed with support through the grant been registered for commercial use in relevant project countries or are plans in place for their registration after project closure?	
		Has the grant contributed to reducing intellectual property barriers, or ensuring that such barriers are not created, which may prevent equitable access to a product?	
4.2	How successful was the grant in bringing quality-assured medicines/technologies for adoption in LMICs? (KPI 2)	To what extent the grant resulted in the approvals (by WHO Prequalification Program or another appropriate regulatory authority) or submissions for approval of the Unitaid supported medicine/technology?	
		To what extent does MPP have influence and procedures in place to ensure manufacturers to deliver products for approval on time and adhere to their planned development schedule? Has there been slippages? if so, why?	
		How effective has MPP's been in regard to expanding access to Covid-19 vaccines? What were the barriers/enablers of success?	

	Evaluation Questions	Operationalised questions	Evaluation methods
4.3	To what degree has the grant contributed to making products (medicines, diagnostics) available at prices that are affordable for governments and other donors? (KPI 2)	Has the grant secured appropriate equitable access commitments from developers/ manufacturers and/or suppliers benefiting from Unitaid support (directly or indirectly)?	
		How has the grant-supported improved access to affordable products for most disadvantaged populations?	
		To what extent has MPP been able to accurately forecast the number of licenses needed to ensure adequate competition and thus affordability of the licensed products ?	
4.4	To what extent did the grant improve supply and delivery systems to ensure that products reach those in need in a reliable and timely way? (KPI 2)	Has the MPPII grant provided an enabling environment for generic manufacturers to produce health products of public health importance in LMICs?	
		Has the grant secured appropriate commitments from developers/ manufacturers and/or suppliers benefiting from Unitaid support to ensure the security of supply of the product?	
		What activities has the grant supported to improve supply and delivery of products?	
		How have these activities contributed to better supply and delivery of products?	
4.5	What were the main factors influencing the achievement or non/achievement of the increased availability of better treatment products available for rapid introduction in LMIC?	What were the factors influencing the achievement of the increased availability of better treatment products available for rapid introduction in LMIC? Internal factors such as the action of MPP's team and its partners External factors such as industry and non-governmental stakeholders' actions	
4.6	To what extent did the grant achieve its objectives and expected outcomes in addressing targeted access barriers within the specified timeframe and budget?	What objectives of the grant were achieved?	
		What objectives of the grant were not achieved?	
		How, if at all, was the achievement of objectives limited by the available budget?	
		Were activities completed within the specified time frames? If not, why was this?	
IMPACT: what difference does the intervention make			

	Evaluation Questions	Operationalised questions	Evaluation methods
5.1	To what extent has the grant-generated, or is expected to generate, global/national-level effects across Unitaid's four dimensions of impact	(Based on the existing research) to what extent has the grant generated, or is expected to generate, public health impact at global/national levels?	
		(Based on the existing research) to what extent has the grant generated, or is expected to generate, an economic impact at global/national levels?	
		(Based on the existing research) to what extent has the grant generated, or is expected to generate, equity impact at global/national levels?	
		(Based on the existing research) to what extent has the grant generated, or is expected to generate, strategic benefits and positive and negative externalities at global/national levels?	
SUSTAINABILITY: Will the benefits last?			
6.1	How has the grant contributed to an enabling global environment for scale-up, including affordable pricing, tools to support country adaptation and uptake and advocacy, and stronger partnerships among global actors?	What are the key enabling factors that allow for the uptake of technologies supported by MPPII in LMICs?	
		What actions have been undertaken as part of the grant to contribute to the development of these enabling factors?	
		To what extent has the grant generated tools that can support scale-up and stronger partners among the global actors?	
		Have long-term partnerships been established between the MPP and other global stakeholders in the area of access to medicines in LMICs? What are the (expected) outcomes of those partnerships? How do these partnerships facilitate MPP's work?	
6.2	To what extent has the grant helped establish country readiness for scale-up, including securing ongoing political and financial commitments by national governments and other partners, supportive policies and enhanced health system capacity for delivery?	What is necessary for country readiness for scale-up?	
		Under the MPPII grant, how has the MPP engaged in partnerships with local stakeholders (national governments, health system stakeholders and civil society groups)? What were the goals of those partnerships?	
		Has the grant helped secure political commitment to increased access to products in LMICs? What is the evidence of such commitments?	
		Has the grant helped to secure ongoing financial commitments by national governments and other parties?	

	Evaluation Questions	Operationalised questions	Evaluation methods
		Has the grant engaged with local partners to enhance health system capacity for delivery of technologies?	
		Has the grant helped establish other factors necessary for country readiness for scale-up activities?	
Lessons learned			
7.1	What have been the lessons learned and how have they been incorporated in the lifetime of the grant or across other interventions? Have lessons learnt been widely disseminated by implementers and Unitaid?	What have been the most important lessons learned from the design and implementation of the MPPII grant?	
		How have the lessons learned been incorporated in the lifetime of the grant?	
		What are the mechanisms that allow for the communication and dissemination of lessons learned with Unitaid?	
		How have the lessons learned during the course of the grant been incorporated across other interventions?	
		How have lessons learnt been disseminated by implementers and Unitaid?	
7.2	How effectively have strategic, implementation and sustainability/scalability risks been identified and managed over the course of implementation	What strategic, implementation and sustainability/scalability risks have been identified during the course of the grant?	
		What actions have been taken to mitigate and manage these risks?	
		To what extent have these actions been effective?	

Source: Elaboration performed by Technopolis Group based on the ToR

Appendix B List of interviews conducted

	Name of interviewee	Title	Organisation
Category: Unitaid staff			
1	Philippe Duneton	Executive Director	Unitaid
2	Robert Matiru	Director, Programme Division	Unitaid
	Janet Ginnard	Director, Strategy	Unitaid
	Vincent Bretin	Director, Results	Unitaid
	Julien Puille	Team leader Finance	Unitaid
	Sonia Hilton-Mathew	Senior legal officer	Unitaid
3	Karin Timmermans	Technical Manager	Unitaid
	Kristen Dorman	Legal Officer	Unitaid
	Akko Eleveld	Programme Manager	Unitaid
	Rachel Evans	Programme Support Officer	Unitaid
	Gauri Khanna	Monitoring and Evaluation Manager	Unitaid
	Irina Avchyan	Finance Manager	Unitaid
Category: MPP staff			
4	Charles Gore	Executive Director	MPP
	Esteban Burrone	Head of Policy and Advocacy	MPP
	Agnese Tonnina	Grants and Operations Manager	MPP
	Karine Belondrade	Head of Strategy, Operations and Resource Mobilisation	MPP

	Sandra Nobre	Head of Business Development	MPP
	Chan Park	General Counsel	MPP
	Gelise McCullough	Head of Communications	MPP
Category: in-country organisations			
5	Adel Zeddam	Country Director	Algeria - UNAIDS Algeria
6	Anban Pillay	Department of Health, Deputy Director General (Health Regulation and Compliance)	South African government
Category: Global health organisations, multilateral organisations and funders			
7	Mariangela Simao	WHO Assistant Director General for Access to Medicines, Vaccines and Pharmaceuticals	WHO
	Erika Duenas	Technical Officer	
8	Hans Georg Bartels	Senior Programmme officer Global Challenges Division	WIPO
9	Alan Staple	VP, Global Markets	CHAI
	Neel Lakhani	Director of Global Markets	
	Craig McClure	Senior Director of the Viral Hepatitis Program	
Category: Civil Society and NGOs			
10	Jayasree Iyer	Executive Director	Access to Medicines Foundation
11	Tapiwanashe Kujinga	Member of Afro-CAB and Director, PATAM	Afro-CAB and Pan-African Treatment Access Movement (PATAM)
12	Grania Brigden	Director of TB	The Union
13	Aditya Wardhana	Executive Director	IAC Indonesia

14	Mykyta Trofymenko	Intellectual Property Council	100% Life Ukraine
15	Cary James	CEO	World Hepatitis Alliance
16	Catherine Connor	Vice President, Public Policy and Advocacy	EGPAF
Category: Unitaid IP grantees			
17	Ethan Guillen	Project Coordinator	WEMOS
	Mariëlle Bemelmans	Director	WEMOS
18	Othoman Mellouk	Intellectual Property and Access to Medicines Lead	International Treatment Preparedness Coalition (ITPC)
	Sergey Kondratyuk	Project manager	International Treatment Preparedness Coalition (ITPC)
	Sangeeta Shashikant	Coordinator	Third World Network (TWN)
	Nirmalya Syam	Senior Programme Officer	South Center (SC)
19	Yohane Soko	M&E officer	South Center
Category: generic companies			
20	Valentina Jieun Lee	Global Business Operations Team Lead	Celltrion
	Michelle Kunryoung Kim	Associate	
21	Ravi Mehta	Associate VP-BD	Desano
	Joe Zhou	Director	
22	Bhavesh Shah	Director	Hetero
	Rahul Lande	VP-International Marketing	

23	Dr. Satyanarayana Chava	CEO	Laurus
	Pavan Elisetty	General Manager – BD	
24	Mukul Jerath	Senior GM-Global Institutional Business	Lupin
25	Arvind Kanda	Head Commercial-ARV	Mylan (Viatris)
	Prashant Sisodia	Vice President	
	Kedar Madhekar	Associate VP	
	Srinivas Sivareddypeta	Manager Strategic Projects	
Category: originators/licensors			
26	Anonymised respondent	Function known to evaluation team	Originator company (Anonymised)
	Anonymised respondent	Function known to evaluation team	
27	Anonymised respondent	Function known to evaluation team	Originator company (Anonymised)
28	Anonymised respondent	Function known to evaluation team	Originator company (Anonymised)
29	Steve Rannard	Professor	University of Liverpool
	Andrew Owen	Professor	

Appendix C Targets and KPIs

Table 12 Goal outcome: Accelerated market entry of affordable, appropriately formulated medicines in low- and middle-income countries

Goal		Grant target	Total to date	%
1: Median time in days from regulatory approval of originator product to filing of MPP licenced medicine with a stringent regulatory authority	HIV	2500	1339	146%
2: Median price difference between originator product and MPP licensees (unit: treatment course for HCV and TB, patient-year of treatment for HIV)	HIV	$367 per patient per year	$352 per patient per year	104%
	HCV	$203 per treatment	$258 per treatment	73%
	TB	N/A	N/A	N/A

Source: MPP Programmatic Annex

Table 13 Outputs related to KPI 1: Innovation and Increased Availability

Output		Grant target	Total to date	Total to date %
O1.1: (HIV, HCV, TB and long-acting technologies (LA)/devices): % of priority medicines & technologies as outlined in the annually updated MPP Priority Report / LA initial list are licensed into the pool.	HIV	1	0	0%
	HCV	2	3	150%
	TB	1	0	0%
	LA	1	2	200%
O1.2: (HCV) Number and percentage of pan-genotypic regimens[125] enabled by MPP licenses	HCV	2	2	100%
O1.3: (HIV, HCV) % of middle-income countries included per license (broken down by adult & paediatric)	HIV	70%	BIC 71%	BIC 101%
	HCV	16%	G/P: 57% RAV: 17%	G/P 356% RAV 106%
O1.7: (HIV and HCV) Number of middle-income countries added to existing licenses (broken down by adult & paediatrics)	HIV	4 countries across existing adult and paediatrics and paediatrics with at least 2 for adult licenses	ATV: 10 across BIC/TAF/COBI: 3 across DTG adult/paed: 11/6 LPV/r adult/paed: 30/20	>100%
	HCV		DAC: 22 across	
O1.8: (EML) Number of public health-oriented licenses concluded	EML	1	0	0%

[125] Pan genotypic regimes are medicines that are active against all genotypes of a disease.

Source: MPP Programmatic Annex. RAV = ravidasvir, G/P = glecaprevir/ pibrentasvir, DAC = daclatasvir, BIC = bictégravir, EML = Essential Medicines List, ATV = Atazanavir, DTG = Dolutegravir, LPV/r = Lopinavir/Ritonavir, TAF = Tenofovir Alafenamide, COBI = Cobicistat, LA = Long-Acting technologies.

Table 14 Outputs related to KPI 2: Supply and Delivery

Output		Grant target	Total to date	Total to date %
O2.2: (HIV) Median time in days from sublicense agreement to filing for registration by generic manufacturer and by-product.	HIV	1664	895	146%
O2.3: (EML) % of public health-oriented license agreements concluded sublicensed to at least two generic manufacturers	EML	100%	N/A	N/A

Source: MPP Programmatic Annex

Table 15 Outputs related to KPI 2: Quality

Output		Grant target	Total to date	Total to date %
O2.1: (HIV, HCV, TB) Number of development projects completed and filings made with a stringent regulatory authority or WHO PQ including list of dates and product	HIV	52	96	185%
	HCV	8	19	237%
	TB	5	0	0%
O3.1: (HIV, HCV should the need arise) Number of FDCs developed and filed with stringent regulatory authority and/or WHO PQ	HIV	30	41	137%
	HCV	N/A	1	N/A
O3.2: (HIV, HCV should the need arise) Number of paediatric products developed and filed with stringent regulatory authority and/or WHO PQ	HIV	4	5	125%

Source: MPP Programmatic Annex