

# **WEBINAR TRANSCRIPTION:**

## **HOW CAN HIPTOOL SUPPORT PRIORITY SETTING FOR HEALTH BENEFITS PACKAGE DESIGN?**

*Presented by Gerard Abou Jaoude*

**Social Protection and Health  
Division Inter-American  
Development Bank**

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# **HOW CAN HIPTOOL SUPPORT PRIORITY SETTING FOR HEALTH BENEFITS PACKAGE DESIGN?**

**March 2021**

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**ENCUENTRA EL WEBINAR EN <https://criteria.iadb.org/es>**

# INTRODUCTION:

## Minute 00:01:19: Ursula Gideon

Muy buenos días, muy buenas tardes a todos, les doy la más cordial bienvenida a este segundo webinar en nuestra serie de webinars sobre plan de beneficios y priorización explícita que comenzamos el mes pasado, estamos muy agradecidos con ustedes que nos acompañen hoy, máxime dado que en estos días lo único que nos logra cautivar son temas relacionados con la pandemia, así que dobles gracias a ustedes, hoy como saben vamos a tener un webinar sobre una herramienta que de hecho puede ser muy útil para todos aquellos que se ven enfrentados a la necesidad de diseñar un plan explícito de beneficios o tomar decisiones de cobertura, es la herramienta HIPTool no tiene nada que ver con las caderas, sino con Health Intervention Priority Setting Tool.

Nos lo va a presentar alguien que ha trabajado y diseñado esta herramienta que es Gerard Abou Jaoude, Gerard es investigador asociado en el instituto de UCL de Londres para la salud global es miembro del centro de UCL para la economía de la salud global, ha trabajado muchísimo en temas de eficiencia técnica y eficiencia asignativa, eso lo pueden ver también si logran teclear su nombre en Google van a ver muchas publicaciones de él o que él ha autorizado o co-autorizado sobre estos temas, ha trabajado muchísimo el tema de protección financiera, creo que su tesis doctoral tiene que ver con eso. Y no sólo ha trabajado desde la academia, sino también en el terreno en los países de Afganistán, Bielorrusia, Perú, África Occidental y Central, como ven tiene una combinación muy interesante de trabajo en el terreno y en desarrollo de metodologías.

Para este webinar un par de recomendaciones antes de ya pasarle la palabra a Gerard como siempre pongan sus micrófonos en mute, Gerard va a hablar unos 30 minutos y si ustedes tienen preguntas de clarificación específicamente sin las cuales no pueden entender bien lo que está presentando Gerard, mándenlas con preguntas de clarificación y estas las va a contestar ahí mismo Gerard, todas las demás preguntas que ustedes van mandando ojalá, las va a contestar al final. Listo, entonces yo creo que estamos listos, para ya pasarle la palabra a Gerard.

Gerard, the floor is yours. Before maybe making your presentation, I would like to ask you to tell us a little bit about how your professional life has been related with the issue of our interest in this network, Criteria, explicit priority setting and how it benefits package design and the implementation. Thank you.

## How can HIPTool support priority setting for health benefits package design?

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**2 March 2021**

Gerard Abou Jaoude

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### **Minute 00:04:59 - Gerard J. Abou Jaoude**

Thank you, Ursula. Thank you for having me and hello everyone. So, yeah. I started off working mainly in priority settings allocative efficiency analysis for about two years. It was using a disease modelling tool called Optima TB and that was essentially to support national tuberculosis programs so within tuberculosis: which interventions, diagnostics, treatments, and so on, should be prioritized. And that was in a few countries including Belarus, a province in South Africa, Peru, Romania, as well as support on others.

And then, from those analyses we got a piece of work which I am going present today which is really around looking across diseases and platforms of the health system, which is HIPTool. And so, for the last two years after that, there were a number of applications in Afghanistan, Zimbabwe, supported Cote d'Ivoire, Armenia, Honduras, so, as well as kind of being heavily involved in the application of Afghanistan and Zimbabwe, I just supported a number of other analyses. And most of these have been in the lead up to a health benefits package being defined or updated due to changes in the local context or so on, of course within a larger priority setting process. Our analyses only feed into the discussions rather than determining what is done.

So today we are going to go through the health interventions prioritization tool. And the aim of the presentation really is going to be to provide a quick overview of the tool, why we started by developing this tool in the first place, how it works, and then we will finish with some example outputs from the first application with this tool, actually in Afghanistan, so where it kind of set within the wider priority setting process that was going on and specific outputs that came out of it. In the end, if we have enough time, I will hopefully be able to run you through an actual walk-through of the online interface. That is if I don't ramble and I can't promise that.

## PRESENTATION:

# Overview of HIPtool

### **What is HIPtool?**

**Minute 00:08:51**

In 2018 we got some funding from the Bill and Melinda Gates Foundation and a team of us developed HIPtool, which is a health interventions prioritization tool. As I said, it is an allocative efficiency tool, so its aim really is to look at both, the cost and the benefit – so the impact – of individual interventions as well as packages of interventions being considered as part of a priority setting process.

When designing the tool we tried to align it with objectives, with key dimensions within universal health coverage as best as we could. So it includes essentially objectives, health maximization, which is related to cost-effectiveness, equity and financial risk protection.

And when we developed the tool it really was with lower and middle-income countries in mind, so it is intended to be very flexible. It has quite a few pre-uploaded secondary data that are already in the tool to try and minimize the amount of time and resources it takes to run certain analysis that can, at times, take years. So we are trying to reduce the time it takes as well as data requirements. It is really there to try and complement existing administrative and analytical capacities within countries.

## How HIPtool works

1. Automatically uploads a country's disease burden
2. Imports best evidence for health program cost and effectiveness
3. Calculates the cost and impact of different interventions/ packages
4. Identifies interventions with greatest estimated impact on burden of disease
5. Estimates an optimal allocation of spending across interventions within an available budget, guided by user-defined weights on maximising cost-effectiveness, equity and financial risk protection

**Note that local stakeholders are key to providing certain inputs and are significantly involved throughout the analysis**

### How HIPtool works?

#### Minute 00:10:39

The way it works is – in a few steps – depending on how much local data there is and how much time and resources are available, the time of analysis will either take longer or less time. But all will generally go through these five steps: The first step is always the fastest, which is the global burden of disease data that is preloaded in the tool essentially gets uploaded. So as a user you go through and you select a given country's disease burden and the data just essentially appears on the screen.

The second step is where depending on how much depth of analysis and data is available might take a long time or be fairly quick. But the second step is essentially choosing a package of health services as well as their associated data on cost-coverage and effectiveness to upload into the tool. As I said, there will be a pre-loaded secondary data option available but often, if possible, it is recommended to update them with local data, where possible.

The third step is really something that the tool does. So once the interventions as well as their associated data are uploaded into the tool, it will go ahead and give a cost and estimated impact of the different interventions and packages that are being considered.

Four again is something that tends to be done and is actually something that feeds into discussions within the priority setting process. So HIPtool outputs can be downloaded as Excel sheets and you generate any number of different graphs that you want, whether it is by disease package or by health system platforms of the primary health care, first level hospitals and so on. But as a default the tool generates small, kind of very easy to read pie charts of the highest impact interventions, as well as those

interventions accounting for the majority of the cost. And that can be a talking point.

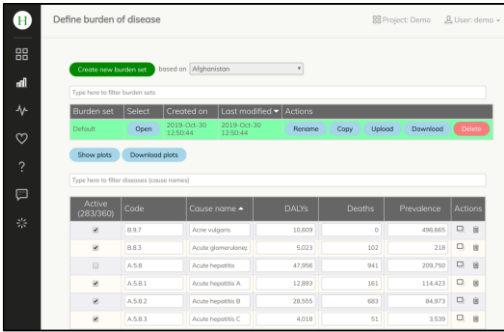
And in the end, once different scenarios are run, once existing cost and impact are determined, there might be a desired run, an optimization analysis, which will involve the tool estimating an optimized allocation of existing spending or additional spending being considered, based on the types of objectives that are selected or the weightings that are selected by users.

And throughout this entire process, when applied at the country level, it is not just a few people running the analysis. It tends to be embedded within a larger group of stakeholders that are there to validate assumptions and discuss constraints that might need to be imposed on the analysis, as well as help with result interpretation and so on. So it is very much an iterative process with a local stakeholder group.



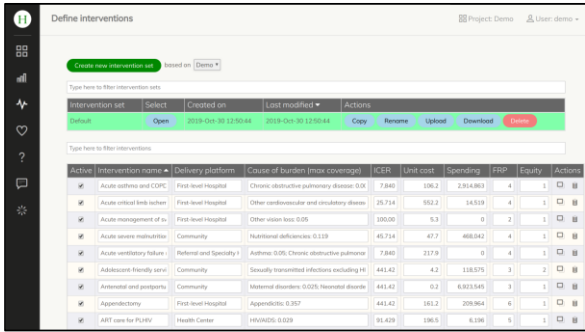
# What does HIPTool look like?

**1. Automatically load up a country's disease burden from IHME:**



Active (2019-2020)	Code	Cause name	DALYs	Deaths	Prevalence	Actions
<input checked="" type="checkbox"/>	B.9.7	Acute vulgus	10,669	0	498,640	
<input checked="" type="checkbox"/>	B.8.3	Acute glomerulonephritis	5,023	102	218	
<input type="checkbox"/>	A.5.8	Acute hepatitis	47,998	941	208,790	
<input checked="" type="checkbox"/>	A.5.8.1	Acute hepatitis A	12,893	181	114,423	
<input checked="" type="checkbox"/>	A.5.8.2	Acute hepatitis B	28,595	683	84,973	
<input checked="" type="checkbox"/>	A.5.8.3	Acute hepatitis C	4,028	51	3,339	

**2. Load a list of recommended cost-effective interventions:**



Active	Intervention name	Delivery platform	Cause of burden (most coverage)	CER	Unit cost	Spending	FRP	Equity	Actions
<input checked="" type="checkbox"/>	Acute asthma and COPD	First level Hospital	Chronic obstructive pulmonary disease 0.8	7,840	106.2	2,914,863	4	1	
<input checked="" type="checkbox"/>	Acute critical limb ischaemia	First level Hospital	Other cardiovascular and circulatory disease	25,714	952.3	14,519	4	1	
<input checked="" type="checkbox"/>	Acute management of toothache	First level Hospital	Other vision loss 0.05	100,000	5.3	0	2	1	
<input checked="" type="checkbox"/>	Acute severe malnutrition	Community	Nutritional deficiencies 0.119	45,714	47.7	468,042	4	1	
<input checked="" type="checkbox"/>	Acute ventilatory failure	Referral and Specialty 1	Asthma 0.05; Chronic obstructive pulmonary disease 0.05	7,840	217.9	0	4	1	
<input checked="" type="checkbox"/>	Adolescent family care	Community	Sexually transmitted infections excluding HIV	441.42	4.2	118,575	3	2	
<input checked="" type="checkbox"/>	Antenatal and postnatal iron and folic acid supplementation	Community	Maternal disorders 0.025; Neonatal disease 0.025	441.42	0.3	6,923,545	3	1	
<input checked="" type="checkbox"/>	Appendicectomy	First level Hospital	Appendicitis 0.357	441.42	161.2	209,964	6	1	
<input checked="" type="checkbox"/>	ART care for PLHIV	Health Center	HIV/AIDS 0.629	91,429	196.5	6,199	5	1	

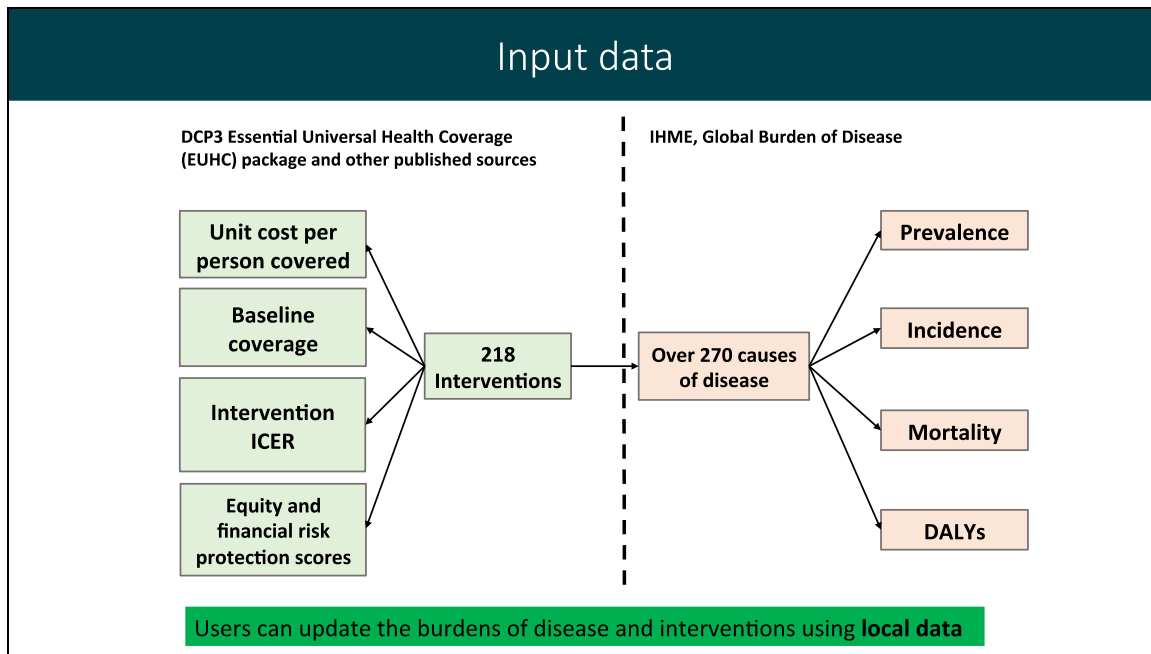
Users can update the burdens of disease and interventions using local data

## What does HIPTool look like?

Minute 00:14:31

And in terms of what the tool looks like, hopefully, as I said, we are going to have time to go through a quick walk-through at the end. But it is an online interface, so there will be different tabs on the left that you can go through, whether it is to upload data about new disease or interventions. And anything you can see essentially can be overwritten. And that is about it.

In terms of trying to accommodate for Internet connections there is the option of always downloading the Excel sheet that is being worked on and work on it remotely. And then, once it is done and with an Internet connection you can upload it back into the tool.



## What does HIPTool look like?

**Minute 00:15:27**

In terms of the pre-loaded data that goes into the tool, it is predominately based on DCP3, the Essential Universal Health Coverage, and IHME for disease burden data. And all of the interventions that are pre-loaded in the tool are linked to causes of disease burden, which are in turn linked to data on prevalence, DALYs and mortality. And each intervention, in turn, has the associated data on cost, coverage and cost-effectiveness. There is also a set of equity and financial risk protection scores, which are, as I said, pre-loaded based on DCP3 data. But those as well can be overwritten. So there is nothing stopping users from, for example, replacing the DCP3 interventions with local services. And that in some cases can be done. The limitation is simply data.

## Health Interventions Prioritization tool (HIPtool): Incremental optimization

### Step 1: Interventions ranked from most to least cost-effective

Intervention	Delivery platform	Cost per DALY averted	1
Childhood vaccination series (DPT, polio, BCG, measles, Hep B, Hib, rubella)	C	13	↑
Detection and management of SAM and referral if complications	C	32	
Hernia repair including emergency surgery	FLH	33	
Surgery for trachomatous trichiasis	RH	43	
Immediate ART initiation with regular monitoring of viral load for PLHIV	HC	64	
Counseling of mothers on providing kangaroo care for newborns	HC	237	
Surgery for ectopic pregnancy	FLH	322	
Retinopathy screening and treatment using laser photocoagulation	RH	631	
HIV testing/counseling (mobile units and venue-based testing) with referral	C	2,400	
Screening and management of albuminuric kidney disease (ACEi or ARBs)	HC	4,813	
Assessment, provision and training in the use of assistive products	FLH	7,163	

C=Community; FLH=First level Hospital; HC=Health Centre; RH=Referral and Specialty Hospital

## Incremental optimization

### Minute 00:16:37

Now that we have kind of seen what the tool is essentially intended to do, the types of data it uses, this next bit is really to try and unpack how the optimization process works within the tool. And it is actually fairly simple. So we are going to take quite a straightforward example, in the sense that only cost-effectiveness is being considered in this example.

The first step is that the tool is going to look at all the interventions that have been uploaded and check which is the most cost-effective and which is the least cost-effective of all of these interventions that have been uploaded.

So here we would see there is about eleven interventions and childhood vaccination series is the most cost-effective. So it costs 13 US\$ per unit of bad health, so a disability adjusted life year averted. So the tool would show that childhood vaccination series is the most cost-effective. It costs only 13 US\$ per unit of bad health averted. And assessment, provision and training in the use of assistive products is the least cost-effective. So that will go at the bottom.

## Health Interventions Prioritization tool (HIPtool): Incremental optimization

### Step 2: Maximum potential impact\* of interventions provides limits for the optimization

	MPI	GBD causes of disease in terms of DALYs
Intervention 1	10%	Diphtheria, pertussis, tetanus, polio, TB, measles, Hep B, Hib, rubella
Intervention 2	25%	Severe acute malnutrition
Intervention 3	40%	Hernias
Intervention 4	30%	Trachoma
Intervention 5	30%	HIV/AIDS
Intervention 6	15%	Neonatal disorders
Intervention 7	25%	Ectopic pregnancies
Intervention 8	30%	Retinopathy (due to diabetes)
Intervention 9	20%	HIV/AIDS
Intervention 10	20%	Kidney disease
Intervention 11	15%	Hearing/vision loss

\*The MPI of interventions is defined as the % of existing DALYs targeted that the intervention can avert

## Incremental optimization

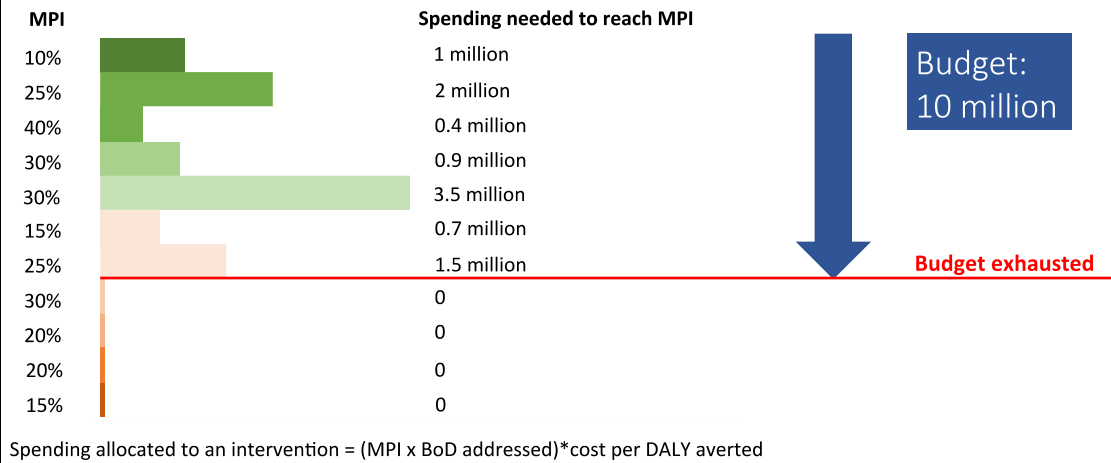
### Minute 00:18:10

And in the next step it will have all of these interventions ranked in the order of cost-effectiveness. The next step is really trying to understand how much a single intervention can reasonably avert of the entirety of the burden of disease that it is targeting.

So in the case of childhood vaccination series it is targeting diphtheria, pertussis, tetanus and so on. But in reality it might only avert 10% of the entire burden of disease that it is targeting. The management of severe acute malnutrition might only avert 25% of all the DALYs associated with the burden of disease that it is targeting and so on. So each one of the interventions will be essentially constrained to a certain extent by the amount that it could possibly avert. It doesn't matter how much we spend after an intervention is averted, that much of the burden of disease it is targeting it won't have an impact because you reached saturation. So the tool goes through and says: "ok, intervention 1 can avert 10% of all the DALYs it is associated to, intervention 2 25% and so on.

## Health Interventions Prioritization tool (HIPtool): Incremental optimization

### Step 3: The tool maximizes spending on interventions until the budget is exhausted



## Incremental optimization

### Minute 00:19:46

Now, how much do I have to allocate? In this example it is 10 million. So it will go through and say how much it will cost for the first intervention to avert 10% of all of the burden of disease that it is targeting. 1 million - this is an example, by the way, and this does not necessarily add up - but I think hopefully you get the logic of what is going on. In the second case it might be 2 million, in the third case 0.4 million, and it will go down through from most cost-effective to least cost-effective, essentially hitting the ceiling of what it can avert in terms of burden of disease. And by intervention 7, as of 11 here, it says that there is 0 dollars left to allocate and nothing beyond this point is prioritized.

## Where/how has HIPtool been applied?

HIPtool is being/has been applied in several countries including:

- Afghanistan
- Armenia,
- Côte d'Ivoire
- Honduras
- Pakistan
- Zimbabwe

The tool has also been used to conduct a multi-country allocative efficiency analysis using available secondary data for 28 Sub-Saharan African region countries

### **Where/how has HIPtool been applied?**

#### **Minute 00:20:50**

So that is, in a nutshell, how the optimization works within the tool. And it has now been applied in a few countries, including the ones listed here. And we have done an experiment to see what can be possible done with only secondary data for the 28 Sub-Saharan African countries that had available data on spending and so on.

## Limitations

Availability of data is limited

- EUHC intervention list not comprehensive
- Links between some EUHC interventions and GBD causes
- ICERs often point estimates rather than ranges and need for disaggregated cost and effect data
- Availability of data to inform MPI

Linear relationship between cost and impact?

Static model with instantaneous impact and no interaction between interventions considered...but doing so would increase complexity and data needs

## Limitations

### Minute 00:21:27

And as a result of both the design and also the application in all of these countries, we have come to tease out a few key limitations that are worth mentioning before we go ahead. So the first set of limitations are really around data rather than the tool itself because, as I said, anything can be overwritten so in that sense it is fairly flexible to accommodate around those needs. But the pre-loaded data within the tool is not comprehensive by any means. So just by the nature of data availability there is a certain bias in terms of the amount of ICERs that are available depending on diseases, communicable diseases, maternal and child health tend to have a larger body of literature behind them than non-communicable diseases which are slightly less well represented in the intervention list.

The second point is (related to) some of the links between the interventions in the tool and global burden of disease because it is fairly tricky to kind of establish where the scope of an intervention ends in terms of its impact in some cases. Management of severe acute malnutrition is to some extent fairly straightforward but a multi-level intervention or multi-component intervention that is targeting a range of disorders can be harder to parameterize.

In terms of cost-effectiveness data most of the data available have been point estimates rather than ranges, which makes it difficult to represent the uncertainty of the analysis. So it has to be explained but there is no formal quantitative analysis to represent uncertainty.

And this is related to the global burden of disease and causes linking that I had mentioned earlier. It can

be difficult to parameterize that ceiling of investment that we mentioned earlier. So what can be reasonably expected as a percentage of burden of disease that is going to be averted by an intervention.

And in terms of the tool itself it makes some fairly simple assumptions so it is a linear relationship between cost and impact. I put a question mark next to that because really I think that is a fairly conservative assumption. There could be arguments either way whether there should be decreasing returns to scale or increasing returns to scale depending on the coverage level and context.

But a more, kind of substantial limitation, which should be recognized in the interpretation of results, is that it is a static model. So it is not a dynamic disease transmission model, which is projecting based on a huge set of data, but very much static, impact is instantaneous and interventions – even though they might in reality be complementary or competing – that is not recognized in the tool. So it is very much only accounted in for in how the background data is set up and how maximum potential impact is defined. But there aren't interactions between interventions.

That said, adding a lot of these features would also bring a substantial increase in complexity which might be a barrier to entry and also the amount of data that is needed, which again requires more extensive time and resources than the tool currently needs. And that is perhaps something that needs to be explored over time to see where the greatest amount of benefit would come from in terms of if or where complexity is added.



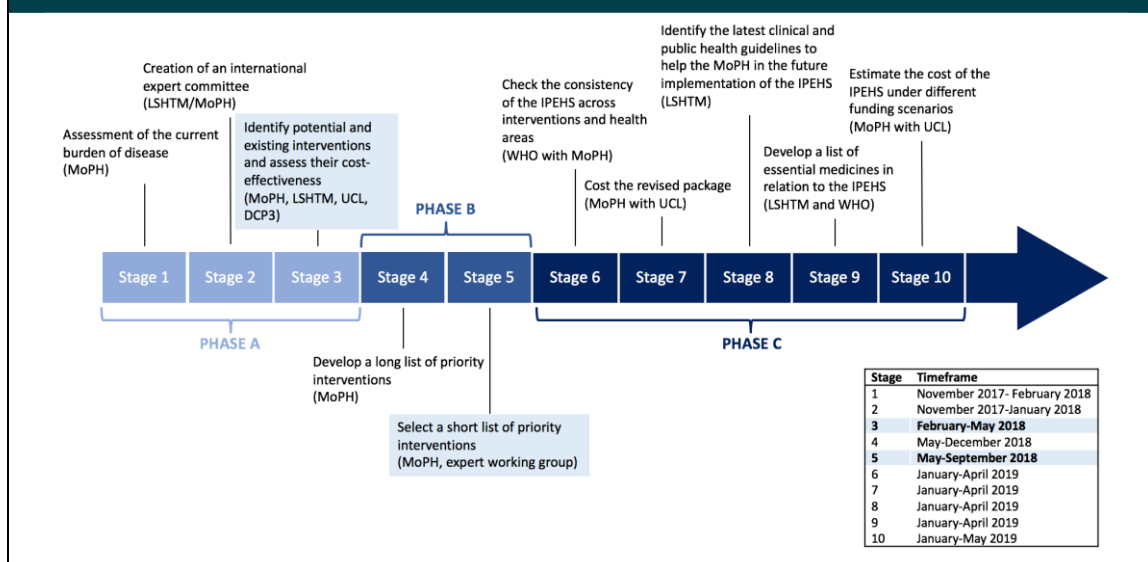
## Country application: Afghanistan

### **Country application: Afghanistan**

**Minute 00:26:59**

So now that we have looked at the tool, how it works and some of its limitations I am going to run you through very quickly some of the example outputs from the first analysis that we conducted in Afghanistan.

## How was HIPTool applied in Afghanistan?



## How was HIPTool applied in Afghanistan?

Minute 00:27:17

Here you can see a time line of the entire priority setting process with boxes in light blue to highlight where HIPTool fed in.

So there was one stage of the priority setting process that was around identifying both existing interventions that are being implemented in the country. There were two health benefits packages. One for primary health care called the basic package of health services and one for tertiary care, the central package of health services.

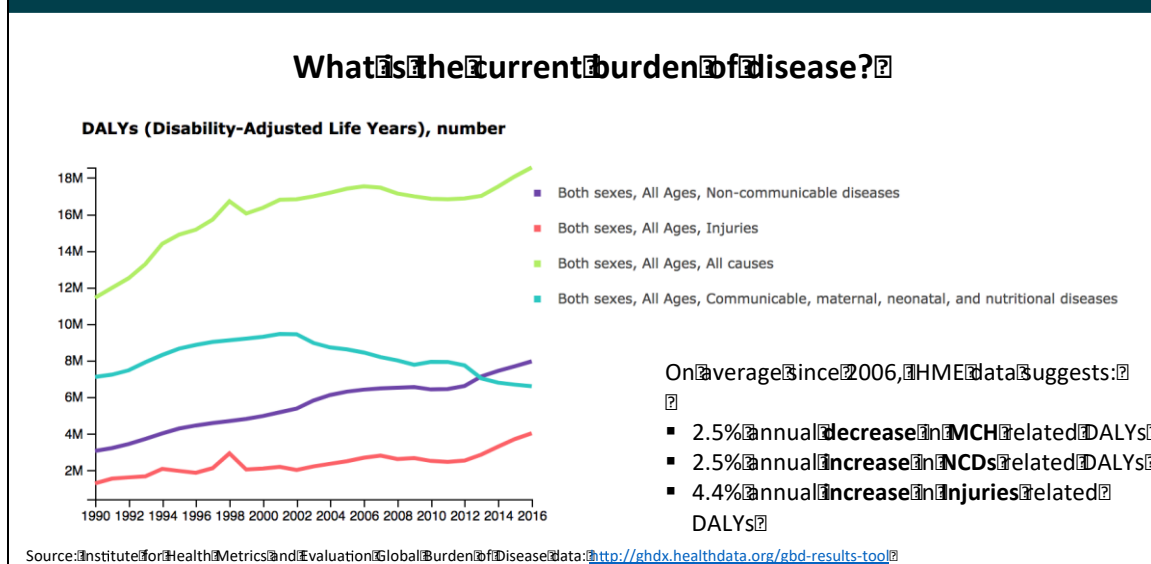
And the first step was try to identify everything that has been done within, as well as look which potential interventions might be added on. And the first kind of step was to try and cost and assess the impact of the existing packages. And after that a long list of interventions was selected by different representatives within the Ministry of Health, a long list of interventions on cancer, mental health, injuries and so on. And that intervention list was consolidated, discussed within the working group that was working on the definition of the new health benefits package in Afghanistan and it was shortened to an extent where there was just under 200 interventions being considered for the new health benefits package.

And at that point there was a second HIPTool analysis so we took the about 170 interventions and run an analysis to look at a whole range of scenarios. So if only maternal and child health were to be scaled up what would be the cost and impact? If an unconstrained optimization was run, how would resources

be allocated? Which interventions would be prioritized? And so on. So there were a few according to the fiscal space analysis with additional funding and different potential priorities like maternal and child health.

And all of this was done between February and September 2018. By all of this I mean the HIPTool analysis. So it is all within a fairly short space of time to try and dynamically feed into the priority setting discussions.

## An applied case study using HIPTool: Afghanistan (i)



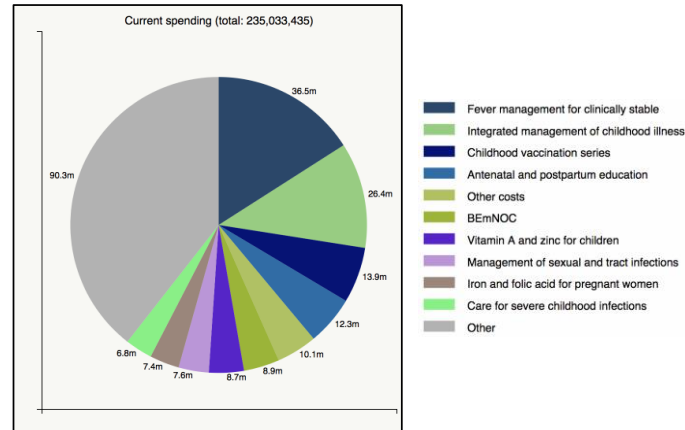
### HIPTool Afghanistan

Minute 00:30:25

Now that you have a context around the priority setting process itself, I will just give you a very quick background on essentially the disease burden and the rationale for why the health benefits package is being updated. Between the year 2000 and 2016 there was a very substantial decrease in maternal and child health related DALYs in Afghanistan. And that was largely due to the basic package of health services and the central package of health services, which were released in 2005 and 2010, I think. And they were primarily maternal and child health focused. But since again, about the year 2000, there was a very rapid rise in non-communicable diseases and injuries. And non-communicable diseases actually accounted for more of the total burden of diseases in Afghanistan by 2016 than maternal and child health and communicable diseases. So it was felt that there needed to be an update of the health benefit packages to try and reflect the changing need for health services and types of health services in the country.

## An applied case study using HIPTool: Afghanistan (ii)

### How is spending allocated across interventions included in HBP?



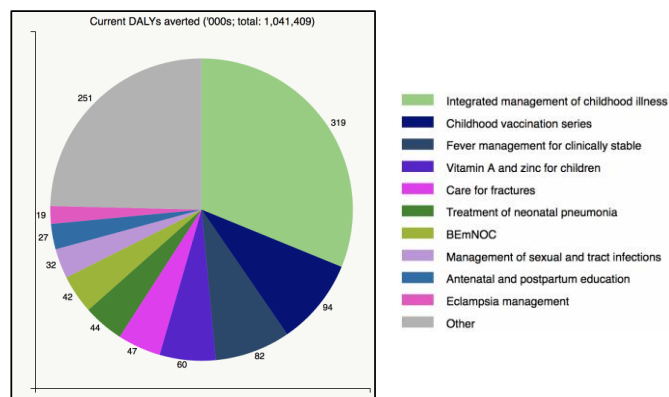
## HIPTool Afghanistan

### Minute 00:32:00

And the first step was to essentially cost up and assess how much is being spent in total on both health benefits packages. Here it says a single one but there were two, which made up a single set of entitlements. We found that around 235 million was being spent with a majority on, for example, integrated management of childhood illness, childhood vaccination series, basic emergency maternal and neo-natal obstetric care. I think about 70% was on maternal, neo-natal and child health conditions.

## An applied case study using HIPTool: Afghanistan (iii)

How much health\* does the current allocation of spending across interventions in the existing HBP generate?†



\*Health represented as averting of composite measure of disability and mortality called Disability Adjusted Life-Years (DALYs).†

### HIPTool Afghanistan

Minute 00:32:42

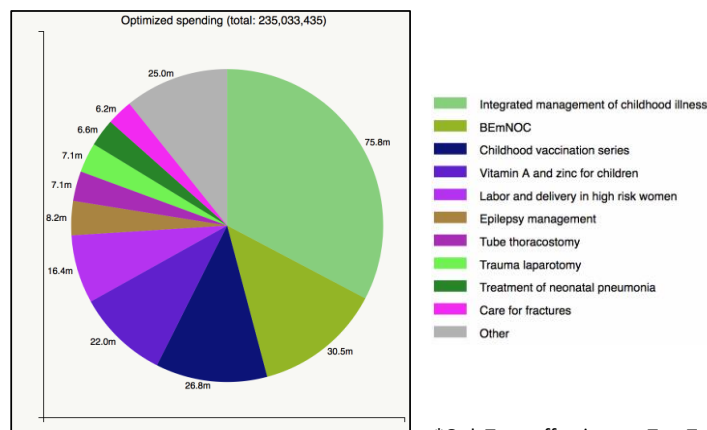
And in terms of health it was generating actually quite a bit, around 10% of the entire burden of disease is being averted thanks to existing spending.

And I should say that the 235 million is about 5.5 US\$ per capita and that excludes everything that is out-of-pocket payment. So it includes government and external sources of financing.

But that 235 million of government and external sources of financing was averting about 10% of the existing burden of disease. So it had a fairly good impact. And again the vast majority of the impact was coming from interventions like integrated management of childhood illnesses, childhood vaccination series and so on. So it maps very well to focus on spending.

## An applied case study using HIPTool: Afghanistan (iv)

What might an optimal allocation\* of spending and mix of interventions look like for this context?



\*Only cost-effectiveness was considered in this analysis

### HIPTool Afghanistan

Minute 00:33:48

A number of scenarios were run around only scaling up maternal and child health services, keeping existing spending as it is with the same interventions only with more funding based on the fiscal space analysis, and then dis-optimization as well as optimization with a larger budget envelope based on the fiscal space analysis.

So what we are looking at here is the scenario that only looks at what if existing spending were allocated differently. What happened was actually that the majority of maternal and neo-natal child health interventions were retained but there was a shift in spending from isolated interventions to more integrated care like IMCI and basic emergency maternal and neo-natal and obstetric care. What also came into the top, or highest priority interventions were tumor related interventions, which here appear, bizarrely, as tube thoracostomy and trauma laparotomy, but these were surgical kind of life saving interventions which were within the surgical package within DCB3. But they related to emergency care essentially at first level hospitals. And you can see care for fractures. So these were all the same package around emergency care because of the rise in terms of injury related DALYs in the country.

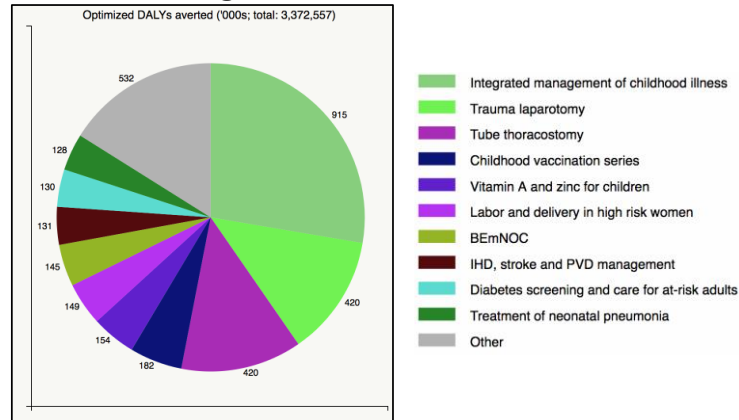
And what also came up here were essentially cost-effective NCD interventions that are typically delivered through primary health centers and first level hospitals, so primary health care, early management or prevention of NCDs. And here we see epilepsy management but further down the list in “other” there was management of depression and schizophrenia, as well as ischaemic heart disease, stroke and PVD management. Sorry I am not a doctor so I forget what all these acronyms are. But low-

level primary health care interventions were prioritized as well as emergency care, in addition to some of those shifts in funding that I mentioned within maternal and neo-natal child health.



## An applied case study using HIPTool: Afghanistan (v)

How much health\* could an optimal allocation of spending across interventions in a revised HBP generate??



\*Health represented as averted composite measure of disability and mortality called Disability Adjusted Life-Years (DALYs).

### HIPTool Afghanistan

Minute 00:37:11

So once we looked at how spending was allocated, the tool then estimated that around three times more DALYs could be averted if there was substantial more focus on emergency care. So we see here that out of the 3.3 million DALYs that are estimated to be averted, 840 will come from these basic emergency care procedures that are life saving, seek to address injuries or just trauma and shock in general. And then we also see that maternal and child health interventions remain very impactful but the low-level NCD interventions that I mentioned around primary health care management, heart disease or cardio-vascular disease related interventions and diabetes screening or care at primary health care level needs also come up, simply because of the burden of disease that they represent in the country.

## An applied case study using HIPtool: Afghanistan (vi)

### Key policy recommendations:

- NCDs and injuries represent the majority of the country's burden of disease and are increasing
- While significant improvements have been made in MCH, there is disproportionately little focus on NCDs (especially mental health and CVDs) and injuries
  - There is a mismatch between spending focus/impact and burden of disease
- A revised HBP and spending on highly cost-effective interventions that are more aligned with burden of disease could buy significant gains in health
  - MCH spending is mostly maintained, with marginal shifts of spending to life-saving and high disability-averting interventions that address NCDs and injuries

### **HIPtool Afghanistan – policy recommendations**

#### **Minute 00:38:28**

And based on this scenario, as well as the five or six other scenarios that we had run, the key policy recommendations that emerged from the analyses were that both NCDs and injuries now represent a very substantial part of the country's burden of disease. And they are on an increasing upward trend. So while the existing packages had made significant improvements in maternal and child health, there was arguably little focus on NCDs. And with additional funding or even small reallocations within existing spending the highest impact would probably be from life saving emergency care interventions to address injuries, trauma and shock, as well as some of those primary health care interventions around early management of mental health and cardio-vascular disease.

# Summary/walkthrough

## Summary

HIPtool has been applied in several countries to support priority setting/ health benefits package design

Can feed into different stages of a priority setting process and is intended to provide timely directional results on investments/what to prioritise

Global evidence is preloaded in the tool and accompanying spreadsheet, but can be overwritten with local data depending on availability

Simple charts in addition to excel output sheet to generate figures as needed

## **Summary**

**Minute 00:39:46**

In summary, I think all of this has been said so there is not much point in reiterating. But it has now been applied in a few countries. It has really been more of an ongoing contribution to priority setting discussions rather than being prescriptive. So the output of HIPtool is not saying: “spend 420 million on this intervention”, but is giving directions on what packages of services and what types of interventions are likely to yield the highest impact, trying to direct slightly more focus on where the largest impact could be gained with the types of priorities that are being set.

And the main takeaway should really be that it is this kind of tool that can contribute to discussions and ultimately it can be run with secondary data but depending on time and effort it can be completely replaced with local data.

## Questions and answers

**Moderator:** Katherine del Salto

### Minute 00:42:22

**Katherine Del Salto:** One of the questions I find really intriguing is whether besides general DALY or budget allocation, could this still help to identify if health inequalities in a country are being addressed? And I think it is really key for low- and middle- income countries and especially for Latin America as a very unequal region.

**Gerard Abou Jaoude:** Yes, that is an excellent question. So population groups are not defined in the tool. So the short answer would be: no, there isn't kind of a distributional impact. There isn't a distributional analysis that takes place. The next best thing in the tool is that there is the option of both putting weight on equity and financial risk protection and for each intervention to generate a score in terms of equity and financial risk protection. So you could go through the intervention list and as a group of stakeholders or decision makers try and establish which of those interventions are likely to impact either low-income groups, or to redress gender and equity or rural-urban, or whatever type of equity is being considered or a local priority. So, no, and the next best thing would be to have the weighting with ordinal scores that adjust the cost effectiveness. It essentially becomes equity adjusted DALYs or financial protection adjusted DALYs by putting weights on them and scores.

### Minute 00:44:15

**Katherine Del Salto:** Thank you, I think your answer ties very well with the next general question, which is: "using this type of tools, just as you explained it in this webinar, I think is a very easy way to talk to policy makers who are generally not very technically trained, so do you have any experience in using this tool in having talks with policy making individuals and decision making individuals and has it helped the communication between the technical teams and the decision makers?"

**Gerard Abou Jaoude:** So we presented the results twice during the Afghanistan priority setting process to the Minister of Health and representatives of the Ministry of Health. And in Zimbabwe we again (...) – as I said it is kind of always along with the stakeholder that these analysis are run.

So it is alongside the process but it is always interacting with the Ministry of Health. It is not like we have got the data and six months later here are the results. So it is a continuous kind of dialogue. And in that sense it can help in the first place identify the methods, the types of outputs and expectations in terms of what can and can't be done by the tool but it can also help break down any technical terms like disability adjusted life years when communicating essentially with ultimately the people who are going to be implementing any recommendations that are going to come out of it. I would say one of the most

difficult concepts tends to be disability adjusted life years. Even when saying it is a measure that combines death and disability and it is just a unit of good health that can be fairly tricky to communicate in terms of impact.

I don't know if this answers your question.

### **Minute 00:46:44**

**Katherine Del Salto:** Yes I think it does. Yes and I am going to join two questions. The first one ties more into your answer. How complex is this tool to use in terms of accompanying countries to actually use it? And once you are done with that one, maybe expand a little more on how this tool will cover different scenarios with a different mix or combination of interventions, because obviously the interventions could vary a lot from country to country.

**Gerard Abou Jaoude:** Those are both excellent questions. In terms of the first question, the tool is becoming easier and easier to use as we put more and more resources out there. So we would like to put out very short training videos that anyone can watch to do. But in practice it is very simple to use. I was hoping to do just a walk-through in this meeting but I haven't had time to do it. Everything is kind of labeled and there is always background technical support, even though it is unpaid, when I don't want to open an inbox to millions of requests. But usually we have had fairly straightforward requests come to us. The ultimate aim is for people to be able to use the tool without us being involved. But it has just been over two and a half years now so we are probably getting there with time. You might always run into difficulties and then need some support. But it is not as major a kind of sticking block as it would be with other tools.

You would probably be able to run an analysis start to finish. The questions might be more around: have I understood this 100% correctly or have I done this correctly rather than "I can't do anything, it is not doing anything, nothing is happening" or "I am just stuck on the same page not knowing what is going to come next."

Sorry what was the second question?

**Katherine Del Salto:** How could the tool cover different scenarios with different mixes and combinations of interventions?

**Gerard Abou Jaoude:** That was an excellent question. In terms of different interventions any number of interventions can be uploaded in the tool. It doesn't have to be the pre-loaded set that is based on the Central Universal Health Care package in DCP3. So, for example, the package of WHO recommended interventions could be uploaded in the tool. It is not supposed to be tied to a single country's health benefits package or to a single globally recommended health benefits package.

Anything in the tool can be overwritten. The only consideration is that there needs to be some evidence on cost-effectiveness and some evidence on how much is being spent on the intervention, and so on. If it is a prospective intervention, so something that is not currently implemented, obviously there wouldn't be any spending because it is in the future. Is it going to be optimized enough? And there would simply be a need for cost-effectiveness evidence. So, any intervention can be uploaded as long as it can be linked to a burden of disease and it has some data on that. Then it can be included in the tool.

Different scenarios can be handled because if we break down, let's say a certain junk of money, either it is politically contentious to reallocate or is coming from external sources of funding, so it is to some extent beyond the scope of control of a country to reallocate as it sees it fit, then specific spending amounts and specific interventions can be constraint. So when you run an optimization you can have an optimization that might say: "look if I can reallocate all of my funding, if we can consider this one big broad fund that is within our discretion to reallocate, this is the type of impact I can generate." You can then have scenarios where you have a certain proportion of funding that is just fixed and whatever you truly have discretion entirely control over is then reallocated. And you can compare and contrast what it might look like if you are able to reallocate all your health resources.

Similarly there is kind of a budget envelope that is put into the tool. So for scenarios where you might have a fiscal space analysis that says: "look there might be anywhere between a 1% and 7% increase in health spending over the next three or four years." You can essentially change your budget envelope to try and see how the optimization and how your impact changes.

And then there is a whole range of scenarios where you can just fix certain interventions or scale up certain interventions, so you are not optimizing but you are just looking at if we were to maximize coverage on the existing tuberculosis intervention or the existing mental health interventions what might the impact be compared to optimization. So there are a few different scenarios that can be run based on a few features.

## **Minute 00:53:00**

**Katherine Del Salto:** Great, thanks so much. We could expand on that answer even further but respecting the time I will probably move to one of the last questions. It is something that has repeated itself in the questions and it is: How much of the complexities of pricing and costing is the tool incorporating? So how do you incorporate resources like personnel or equipment and different complexities in pricing that depend on capacity or how far or disperse things are?

**Gerard Abou Jaoude:** So again, very good question; Our position when we were doing this tool was that it is very much for directional results, so try and quickly inform ongoing discussions around priority setting. So it doesn't consider health resources, availability of drugs and so on. All of that would

require quite a lot more data, quite a lot more time to set up the analysis. And I am pretty sure there is a few tools that already do it. So in that sense it is very much restricted to just see where would discussion likely yield the largest impact, which interventions are going to likely yield the largest impact, with an iterative process that is probably going to go ahead with implementation considerations and so on.

What the tool can do, and this is typically what is done is to the best of the ability of users, you can put constraints around interventions. So it can't be scaled up beyond this point so you might not choose 80% coverage but you might just say: "look, this is the first year this intervention is being implemented, the maximum coverage it can attain is maybe 10% or 20%", and slowly have a phased approach with multiple analyses showing what the impact is likely to look like as coverage increases, knowing full-well that either because of infrastructure or availability of drugs or human resources it might take longer to achieve higher coverage levels.

### **Minute 00:55:40**

#### **Katherine Del Salto**

Great, Thank you so much. We have a lot of questions, still not answered but hopefully we can share them with you later and then have them maybe posted on our website.

**Gerard J. Abou Jaoude:** I will answer any of the questions you send through.

**Katherine:** Great, Thank you.

**Gerard J. Abou Jaoude:** I think my email address is on the slide as well, if anyone wants to.

### **Minute 00:56:08**

#### **Katherine Del Salto**

Yes, for everyone, both the recording and the presentation, and also transcriptions in both Spanish and English will be available in the website, in a few days from now, so you can refer to it back. I think I can just give back the floor to Ursula to start closing maybe. I don't know if you would like to add maybe a question that I didn't.

### **Minute 00:56:38**

#### **Ursula Gideon**

Thank you, Katherine. This was great. And thank you Gerard for your clear answers. This was wonderful. I think we have many questions we would like to discuss with you. Maybe we can find another time to dive deeper into the tool. I think it's extremely relevant for Latin America as many countries are either just starting to design health benefits packages as you know from Honduras, for example, and there are many more that are kind of introducing some more evidence into their adjustment processes, so this,



thank you, this was really good.

I would now like to close and before doing so, I would just like to invite you all to visit our website. We have a new website, it's [criteria.iadb.org/es](http://criteria.iadb.org/es), and we will soon have a version in English, so this might be of interest to Gerard. You will find many interesting documents and resources on our website as you all know we have all the webinars on our website so you can go back in time almost a decade and find great stuff from really wonderful experts, such as Gerard, lots of documents, policy briefs and so on, so please visit us, follow us on twitter and let me invite you also to our next webinar, we will now start to a small series of webinars about Covid vaccines manufacturing and deployment of vaccines so, next March 12, we will have webinar at 11 am local time Washington with Professor Prashant Yadav, Matthew Downham from CEPI and Esteban Corley from Argentina. So, I hope I will see you all then and have a lovely day, and thank you again Gerard for this wonderful presentation.

**Gerard J. Abou Jaoude:** Thank you so much for having me and staying until the end

**Ursula Gideon:** Bye



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