TRANSCRIPTION:

HOW TO INCREASE THE IMPACT OF HEALTH BENEFITS PLANS?

THE ARMENIAN EXAMPLE

Presented by Nicole Fraser & Adanna Chukwuma

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HOW TO INCREASE THE IMPACT OF HEALTH BENEFITS PLANS?
THE ARMENIAN EXAMPLE

March 2022

Presented by Nicole Fraser & Adanna Chukwuma

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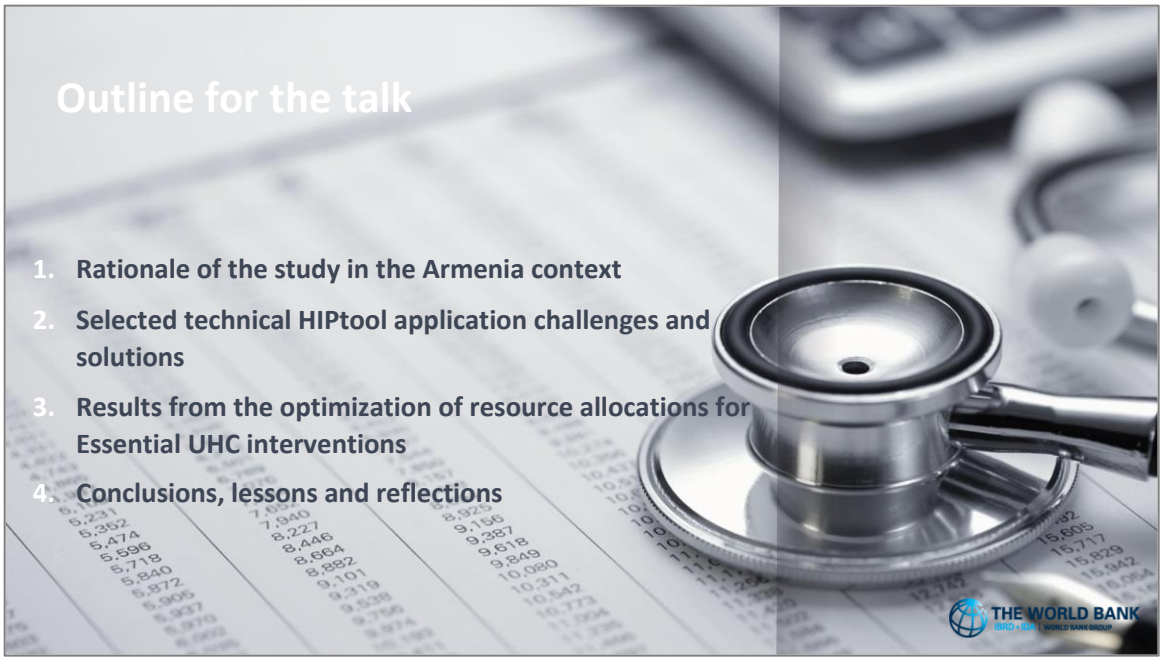
PRESENTATION

Agenda
Minute 00:10:58

Today we will be walking you through a presentation which we have entitled: "How to increase the impact of health benefits plans? The Armenian example."

Acknowledgements
Minute 00:11:10

We have to start by acknowledging the many partners that we have worked with in Armenia and in the Bank, the Ministry of Health, the National Purchasing Agency, the Institute of Health and also development partners like the Global Fund, Gavi, and the World Bank team. We represent a larger team that co-authored the report that was shared with you in the link.



Outline for the talk
Minute 00:11:31

So here is an outline for the talk. I am going to start us off by reflecting on the Armenian context and the rationale of the study. I will hand over to Nicole to walk us through a couple of application challenges as we use the HIPtool (the Health Interventions Prioritization Tool) to walk through the benefits package and opportunities for optimization and some of our results. Then she will hand over back to me to reflect on the bigger picture, lessons and next steps for our work in Armenia.

Armenia is an upper-middle-income country in the South Caucasus Region

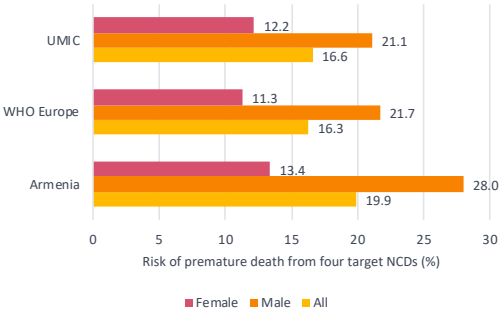
- 2.97M population, rapidly increasing 65+ group
- Upper middle-income with a Gross National Income of ~ USD 4,200 per capita

Armenia, an upper-middle-income country
Minute 00:12:00

To get us started here are some of the points that were already made by Ursula. Armenia is an upper middle-income country in the Southern Caucasus bordered by Georgia, Iran and Azerbaijan with a population of 3 million people. A combination of higher life-expectancy over the years, and emigration of the working-age population has resulted in a population that is largely aging with a growing burden of non-communicable diseases, including multi-morbidity. The income level is about USD 4,200 per capita.

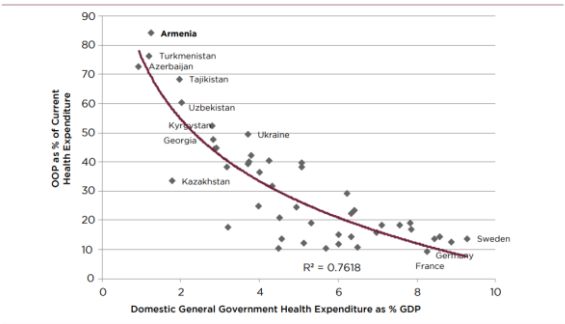
Armenia suffers from low public health spending and below-average health outcomes

Higher than average risk of premature NCD death



Source: World Health Organization, 2019

Health care is predominantly financed out-of-pocket



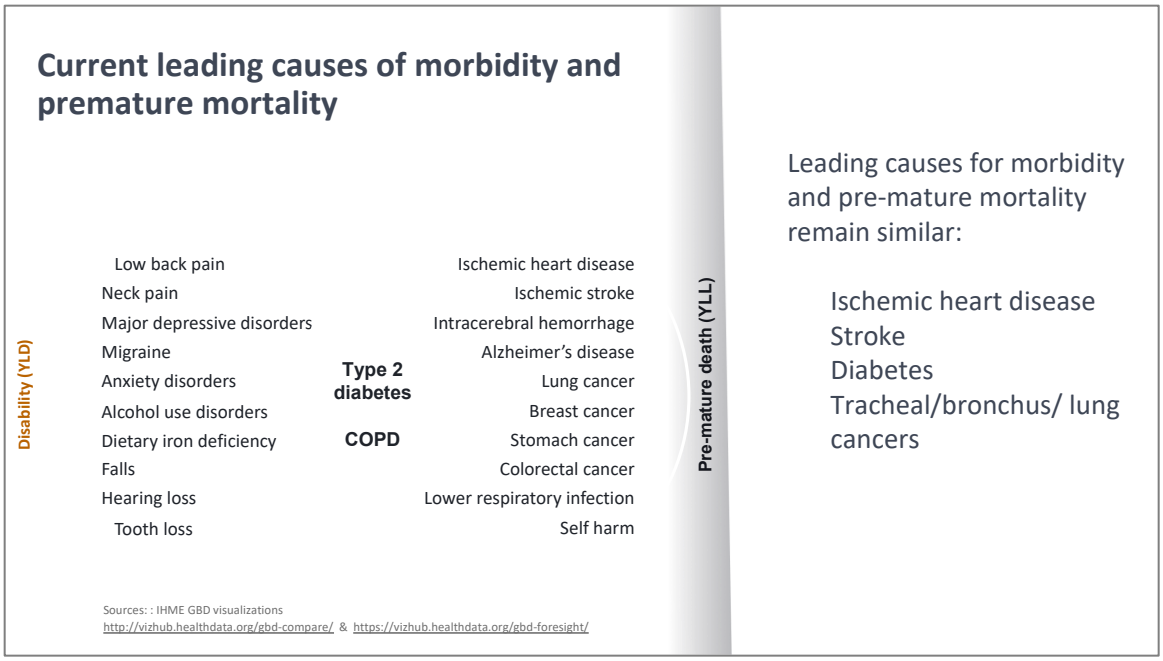
Source: World Health Organization, 2019

- Since 1997, Armenia has had **an explicit health benefits package (HBP)** specifying services, groups and tariffs
- However, essential services are excluded, with low reimbursement rates due to underfinancing of health in the budget
- The country proposes to undertake **UHC reforms**, including the expansion of benefits coverage

Armenia, low public health spending
Minute 00:12:30

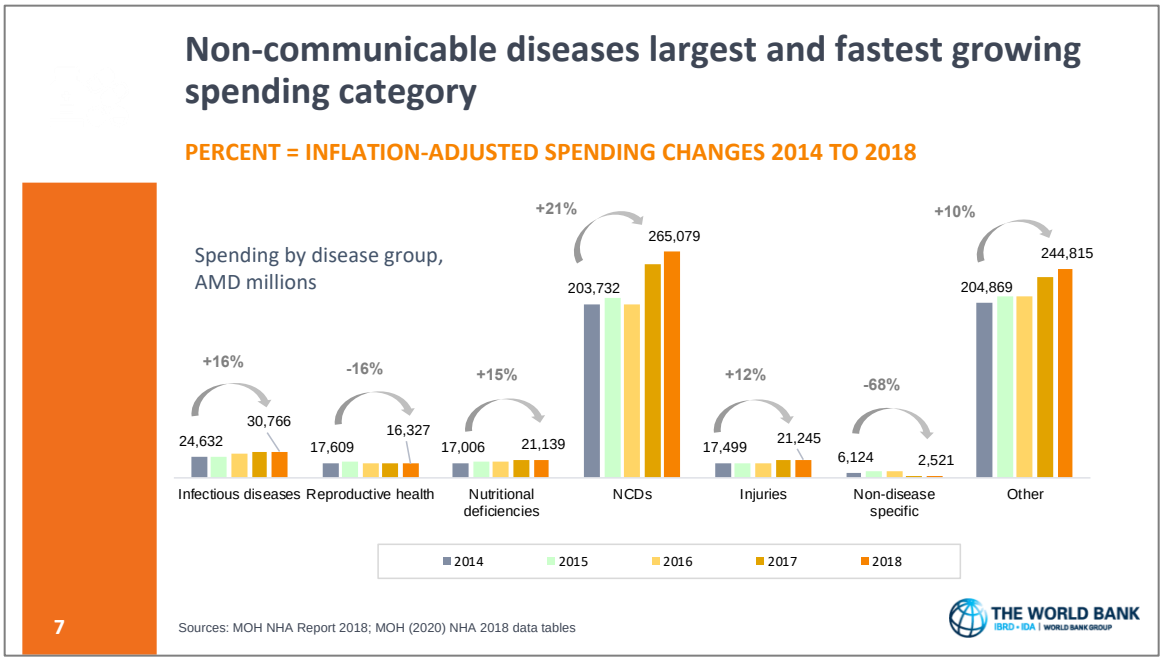
We haven't seen a growth in public health spending and there has been a growth in income per capita. Armenia has one of the highest levels of out of pocket payments as a proportion of total health expenditure in the world, 85%, this is higher than the levels in Afghanistan or Yemen, just to put it into context. And at the same time, owing to some of the factors that I discussed previously, like aging, we see a higher than average risk of non-communicable diseases, mortality, morbidity, including premature mortality. The combination of high need and underfunding have resulted in a benefits package that is narrow in scope and that is underfunded.

In 1997 Armenia introduced an explicit health benefits package (HBP) specifying services, groups that will be covered, and amounts that would be covered for each service. This has evolved over time. But we have found that many essential services have been excluded, when you consider the burden of disease, in particular out-patient diseases medicines for essential chronic diseases. The reimbursement rates for many of these services are below the cost of production, so the incentive is to undersupply them. So as part of a larger discussion on universal health coverage, which include conversations on fiscal expansion for health or purchasing reforms, we are also having a conversation with the government about how we do we think about the content of the benefits package in Armenia and given the burden of disease and needs.



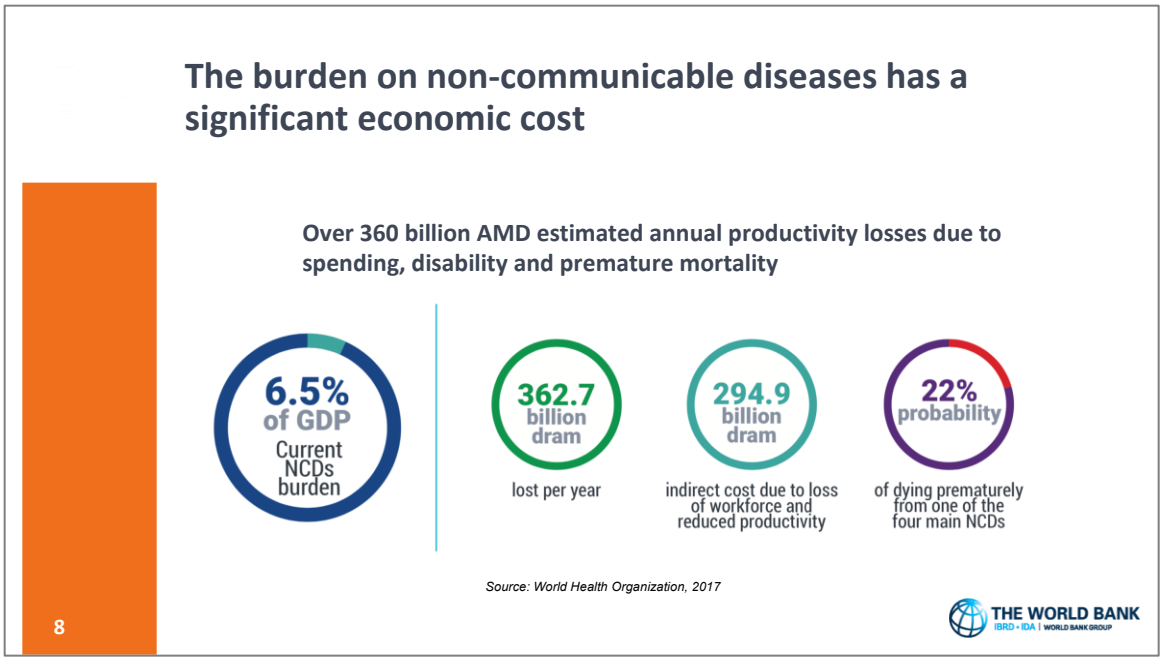
Morbidity and premature mortality
Minute 00:14:02

Here are just some details of the burden of disease. Right now when you look at the picture in Armenia it is a overwhelmingly a picture of non-communicable diseases, in terms of disability, for example, low-back pain, neck pain etc. In terms of death cardio-vascular diseases, as we see in many other countries, as I am sure including in Latin America and the Caribbean. And when we use the data from the evaluation to project into the future, we see more of the same, so the leading causes for mortality and morbidity will continue to be chronic diseases including cardio-vascular diseases and cancers.



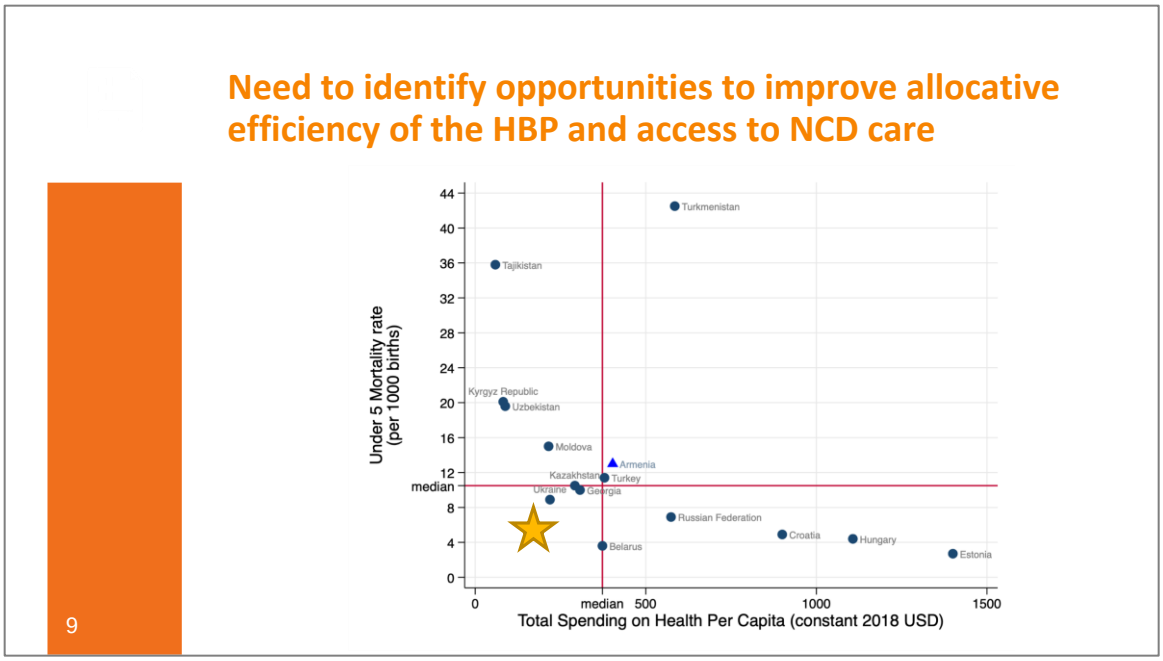
Non-communicable diseases
Minute 00:14:39

And not only are non-communicable diseases high, in terms of burden they are also an economic burden in the country. So you look at the graph on the screen and you see inflation-adjusted spending changes from 2014 to 2018. And we see that in the NCD category is several orders of magnitude higher in terms of spending than infectious diseases, reproductive health and nutritional diseases. And the growth over time at 21% is higher than every other category. So not only is this a health burden, it is also an economic burden.



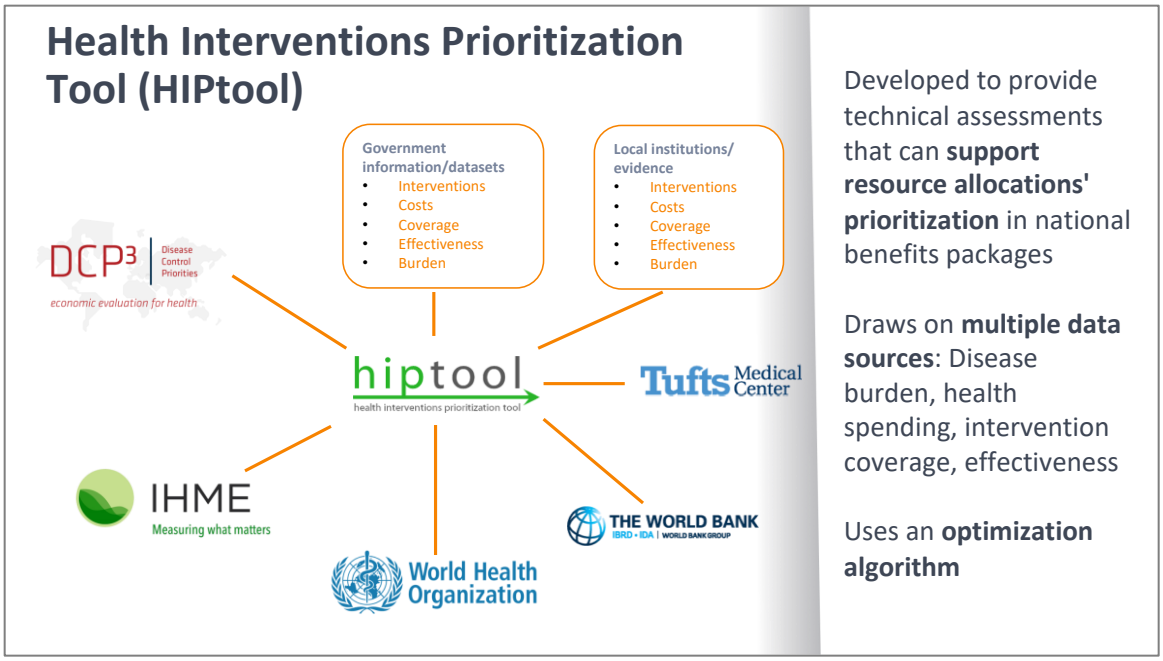
The burden of non-communicable diseases
Minute 00:15:10

This is well captured in the report that was developed by our colleagues in the World Health Organization, sort of looking at when we think about the spending on non-communicable diseases, the losses in productivity due to absenteeism, presenteeism, and premature-mortality, what is the implication what is the implication for the Armenian economy. We see that there are over 360 billion AMD estimated annual productivity losses due to non-communicable diseases equivalent to 6.5% of the GDP. These numbers are helpful in terms of moving this issue from a discussion in the ministry of health to a discussion with the prime minister, and even the ministry of finance was interested in thinking about how we think about these services and how financing changes to address the burden of disease.



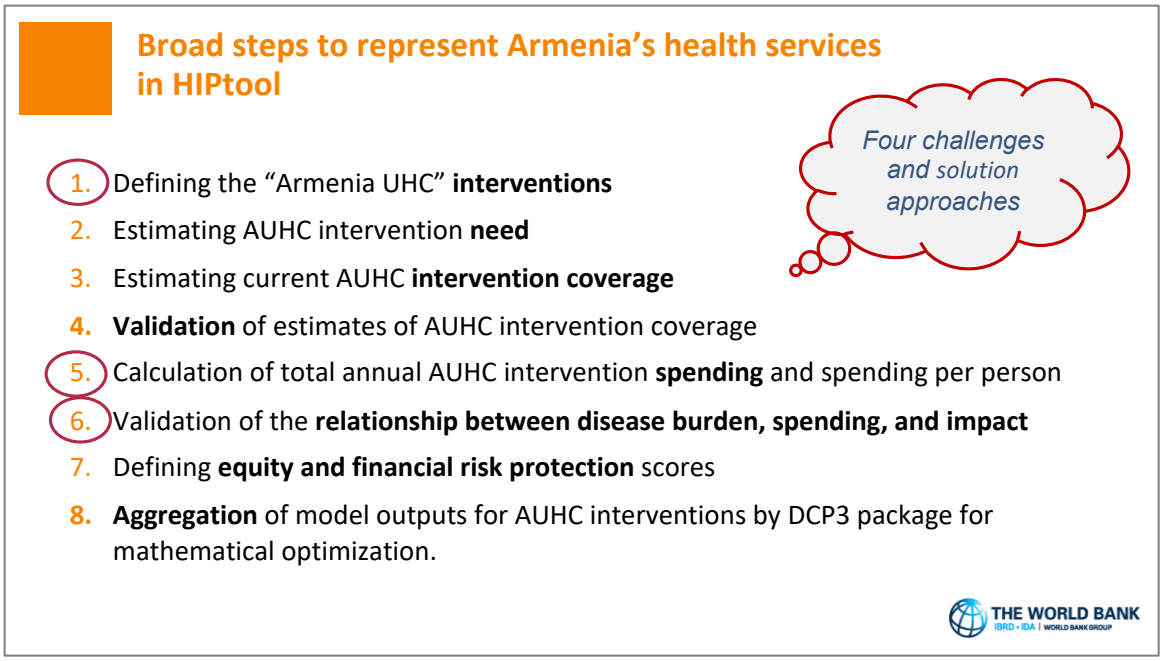
Opportunities to improve allocative efficiency
Minute 00:16:01

This is the entry point for our discussion on the benefits package. Here we have the under 5 mortality rate but we have a broader report, which I can share that looks at different outcomes including pre-mature mortality, amenable mortality and total health spending per capita, public health spending per capita and we consistently find Armenia in the bottom lower quadrants, where we find that they have worse than lower outcomes and higher than average spending on these programs.



Health interventions prioritization Tool (HIPtool) Minute 00:16:35

At this point I am going to turn over to Nicole. Just before I do that, you know the entry point for us was thinking about the benefit package as an opportunity to optimize public health spending in Armenia. We drew on multiple data sources. We looked at the IHME for data on disease burden, mortality and morbidity. We turned to the DCP3 for a classification of the different diseases and the different packages of essential services and some generic data on cost-effectiveness, on essential coverage and on cost. We turned to the government data basis because this is a upper-middle income country with a lot of data for information on the actual services in the benefits package, the actual tariffs, the actual coverage, some data on effectiveness and then we triangulated that with some other data. I want to now turn to Nicole for some of the methods we used and the results.



Steps to represent Armenia´s health services in HIPtool Minute 00:17:33

As Adanna said we used the HIPtool and the strength of this tool is really to link different data types together and it helps us navigate this very complex evidence base of disease burden, costing data, cost-effectiveness on health interventions etc. And it uses the optimization algorithm to indicate where best impact can be gained through allocations. It is a cloud-based tool, it is open-access and we applied it in Armenia in 2020.

Without going into detail we will go very quickly through the eight broad steps that we took to apply the tool.

One was defining these "Armenia UHC" interventions. So the tool is pre-populated with essential UHC interventions, which come from this DCP3 process. Our task was to group the services, as delivered in Armenia, into these pre-programmed interventions in the tool so using the taxonomy which was given in the tool. From now on I will call our interventions for Armenia the AUHC interventions, which are based on the international ones.

The second step was estimating the intervention need so, what are the needs in the population. And we used clinical guidelines and disease burden data.

And then within the third step we needed to look at coverage, so what is the proportion of the Armenian population which is in need of an intervention that is actually covered.

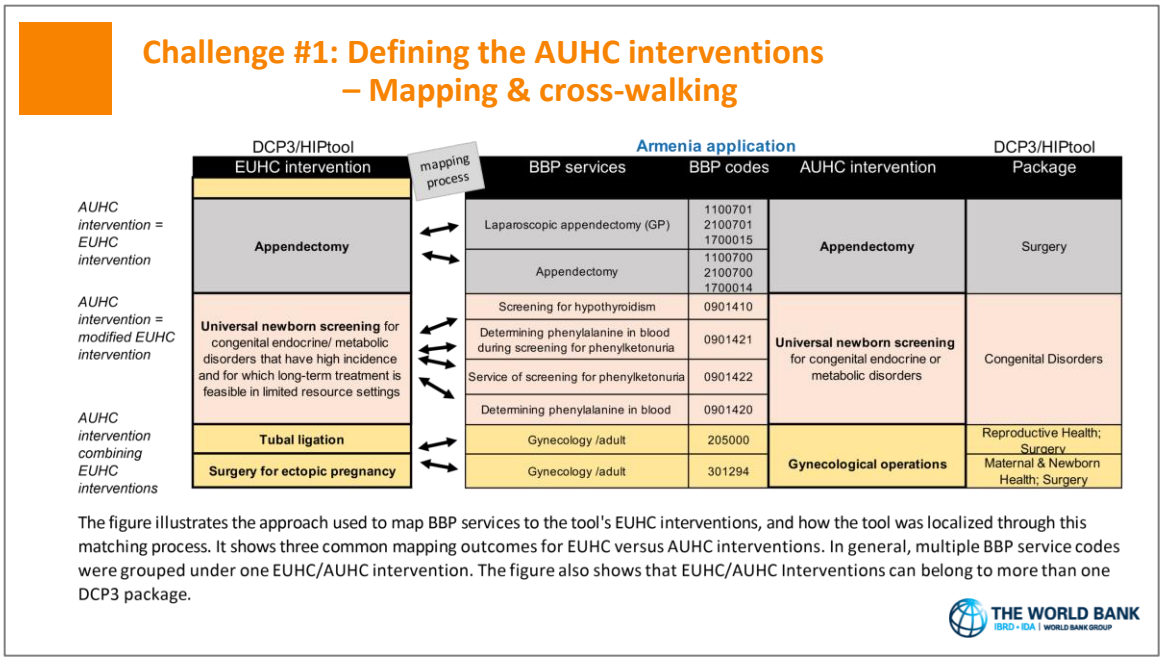
Then the fourth step was an important one, to validate of estimates of AUHC intervention coverage levels against claims for services and these are well documented in Armenia. Actually, in the health benefit package they have coding including about 3.000 different codes, so it is quite something to go through and map things against this taxonomy. And we also had a lot of consultation to check with local experts whether we do this right.

The fifth step for us was calculating intervention spending and also spending per capita. And here we pulled together different spending types, so there is capitation spending, there are health benefits package codes, there is public health spending and global fund spending too.

Then a sixth step was validating this really important relationship, this triangle between disease burden, spending, and impact. And this is the step where the all-important ICER values come in, so each intervention has an ICER value from the literature pre-programmed in the tool and it is this relationship between the three which needs to work. I will have an example about that later.

The step seven was bringing in other considerations. It was already mentioned it is not all about cost-effectiveness and the tool has a fairly crude way to bring in equity and financial risk protection considerations as well. We designed this course locally and what it meant basically a high equity score was an intervention targeted at a priority group and a high financial-risk protection score meant that if the intervention was not funded by the state then the likelihood of impoverishment or catastrophic health expenditure was high, so protecting people from that high expenditure.

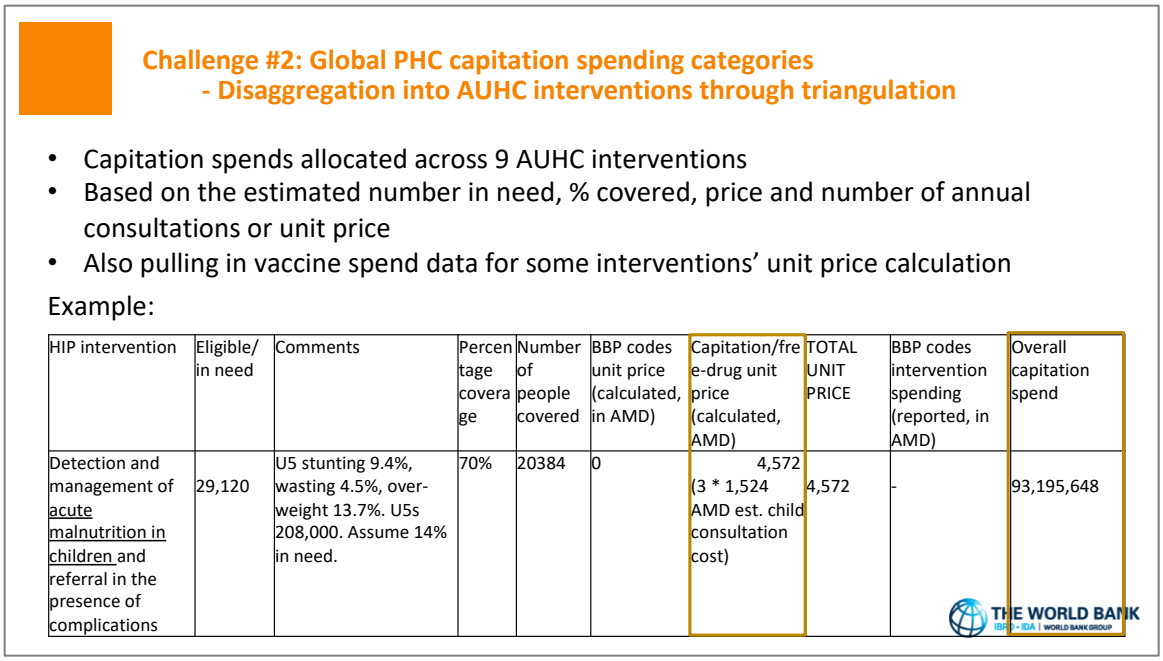
Then the eighth step was the aggregation of all the different interventions in packages. And again, that is pre-programmed in the tool. It is based on the DCP3 program packages and that was then flowing into the mathematical optimization.



Challenge 1: defining AUHC interventions
Minute 00:22:07

I am now briefly sharing four distinct challenges. I don't want to go into detail, but I think it brings it home that the tool application has a lot of different challenges. So, this diagram illustrates the approach taken to select and define those interventions. I already mentioned we have a given taxonomy in the tool, then we have all these services and interventions happening in Armenia, mapping them, cross-walking them into the tool was our job. And there are 218 pre-programmed interventions and only a 135 were actually used. Others like tropical disease interventions were not considered, for obvious reasons and then, in turn, not all of Armenia's health interventions could be fitted into the tool so there was a shortfall there as well. They had to be excluded from the optimization step. However, they were included in the overall spending, they just didn't go into the resource optimization algorithm.

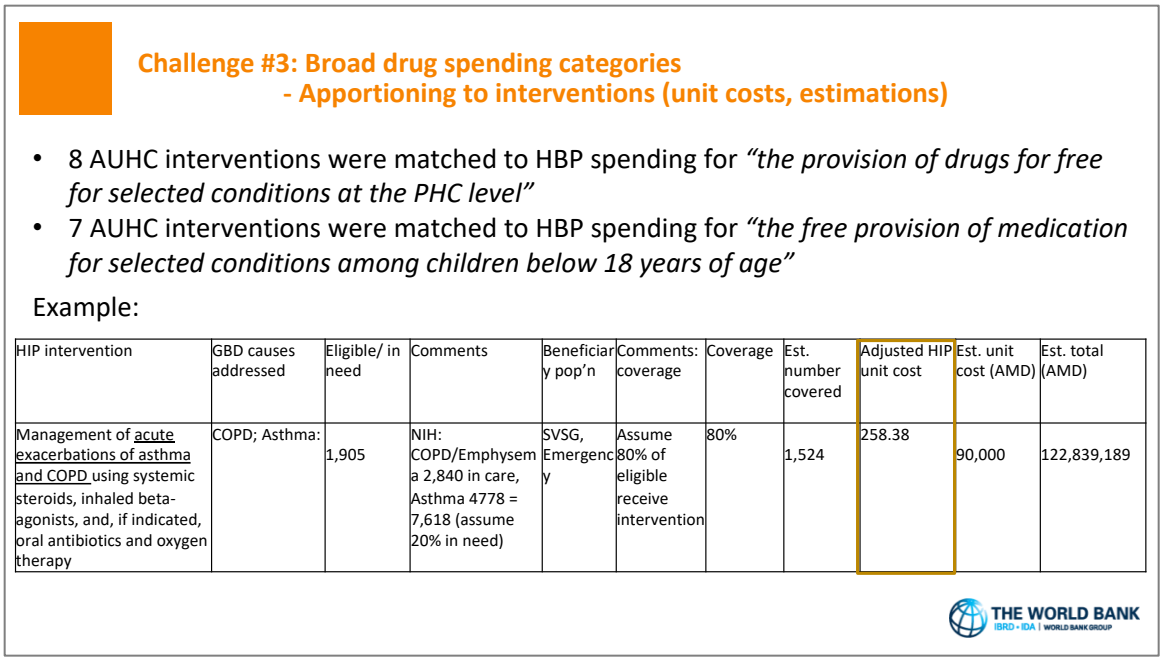
Unfortunately, important interventions like therapeutic dentistry or diagnosis and management of several cancers could not be included in the optimization because the tool, as it was then, did not yet have those in the taxonomy.



Challenge 2: global PHC capitation spending categories Minute 00:23:38

Here I would like to illustrate a challenge with the capitation system. Armenia has a capitation system for the PHC (primary health care) level, capitation funds, the running costs of PHC facilities like salaries, utility, maintenance etc., and you can only imagine how difficult it is to have lump sums for capitation and fitting them into a model which has itemized PHC level interventions. So, some capitation codes worked well because they could be linked directly into a HIPtool intervention like TB or hematology, other capitation categories were really broad like general medical practice or family medicine, OB-GYN. So these broad capitation categories we had to split them up into the UHC interventions in the tool and this was mainly done through triangulation.

Here we have the malnutrition and the example of detection referral in children and the approach taken was that we estimated the numbers eligible for the intervention, the percentage covered currently, then the number of consultations required on average to provide a child with the intervention over a year. We then applied the unit cost from Armenia for child consultations and we came up with an average spend which was sitting in the pediatric general practice capitation code. And this capitation code has eight other interventions. We did the same thing and at the end we matched everything together so that the global spend in this pediatric general practice reflected the itemized spends on all these interventions we had fitted into it. It is really an iterative process.



Challenge #3: Broad drug spending categories
- Apportioning to interventions (unit costs, estimations)

- 8 AUHC interventions were matched to HBP spending for *"the provision of drugs for free for selected conditions at the PHC level"*
- 7 AUHC interventions were matched to HBP spending for *"the free provision of medication for selected conditions among children below 18 years of age"*

Example:

HIP intervention	GBD causes addressed	Eligible/ in need	Comments	Beneficiary pop'n	Comments: coverage	Coverage	Est. number covered	Adjusted HIP unit cost	Est. unit cost (AMD)	Est. total (AMD)
Management of acute exacerbations of asthma and COPD using systemic steroids, inhaled beta-agonists, and, if indicated, oral antibiotics and oxygen therapy	COPD; Asthma:	1,905	NIH: COPD/Emphysema 2,840 in care, Asthma 4778 = 7,618 (assume 20% in need)	SVSG, Emergency	Assume 80% of eligible receive intervention	80%	1,524	258.38	90,000	122,839,189

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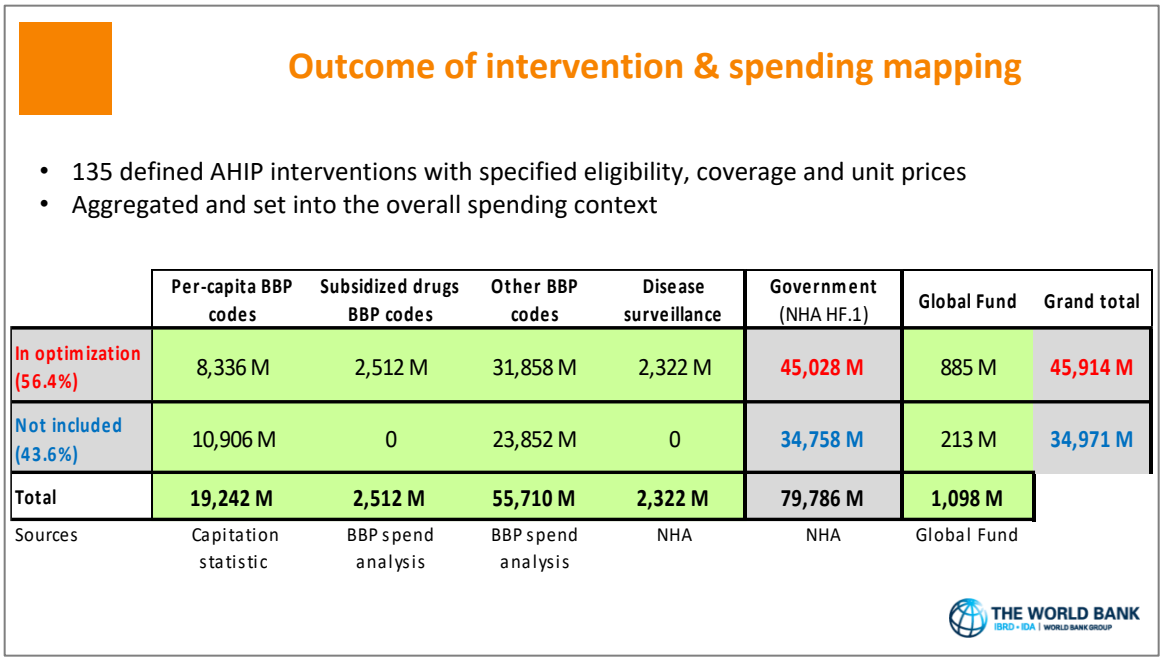
Challenge 3: broad drug spending categories
Minute 00:25:53

Then there were also two very broad spending categories for drugs, one for adults and one for children. And here the approach was very similar but we leaned more on the unit costs which are pre-programmed in the tool and fortunately the tool adjusts these unit costs to the country context and we can also adjust, of course, for inflation for the current year of analysis so a lot of the drug expenditure was again mapped into broader codes of drug spending mainly using unit costs and then estimating, of course, also coverage and total spend.



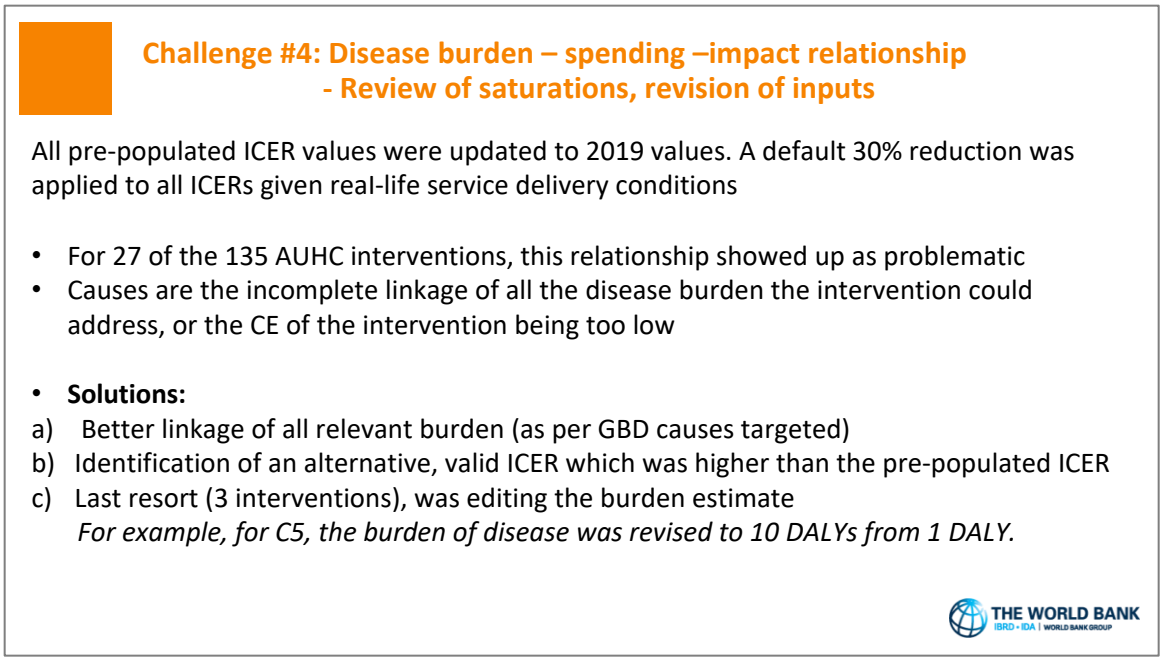
Outcome of intervention & spending mapping

- 135 defined AHIP interventions with specified eligibility, coverage and unit prices
- Aggregated and set into the overall spending context

	Per-capita BBP codes	Subsidized drugs BBP codes	Other BBP codes	Disease surveillance	Government (NHA HF.1)	Global Fund	Grand total
In optimization (56.4%)	8,336 M	2,512 M	31,858 M	2,322 M	45,028 M	885 M	45,914 M
Not included (43.6%)	10,906 M	0	23,852 M	0	34,758 M	213 M	34,971 M
Total	**19,242 M**	**2,512 M**	**55,710 M**	**2,322 M**	**79,786 M**	**1,098 M**	
Sources	Capitation statistic	BBP spend analysis	BBP spend analysis	NHA	NHA	Global Fund	

Outcome
Minute 00:26:37

And the next slide showed us the outcome of this mapping exercise of interventions and spending. Basically, the top line in red is what could be included in the optimization, so it is just above 56% of total health expenditure of the Armenian government and the rest could not be included because of various reasons but particularly because the tool just didn't have a space for these interventions or because of the capitation spend is actually founding salaries etc. In the end we managed to include 46 million US$ in the optimization.

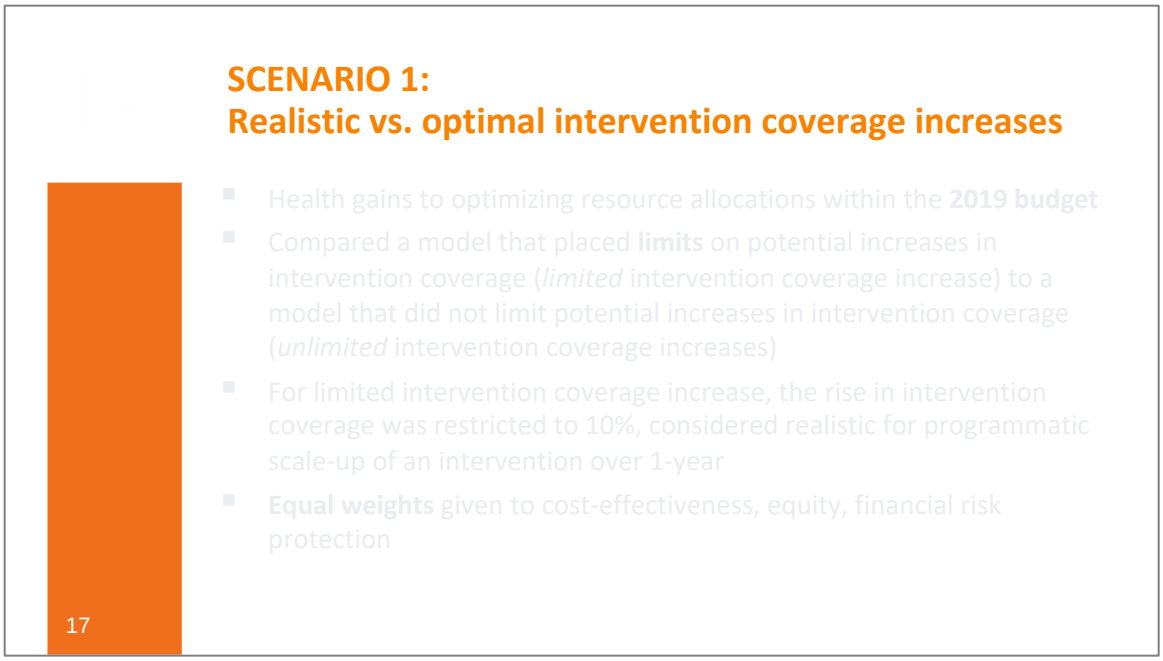


Challenge 4: disease burden – spending – impact
Minute 00:27:28

The last challenge I want to outline is that it is important to triangle between disease burden, spending and impact. And for many interventions this relationship was sound and for about 27 there were problems. And very often the problem was that there was not enough disease burden to meet with the spending we saw in the documents and with the ICER we applied. We had to work on the triangle to make things match.

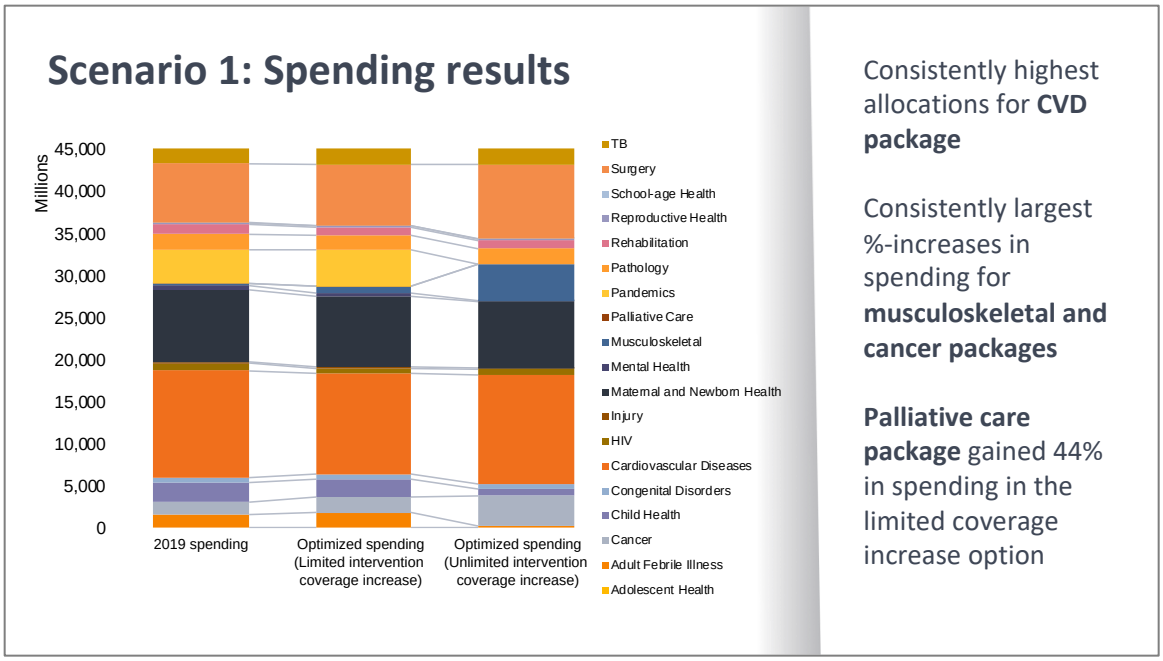
Solutions were for instance: better linkage of all relevant burden. It was also identification of an alternative, valid ICER for the Armenian development context. And lastly for some few interventions we actually edited the burden estimate

The best example is: there is one DALY for tetanus in the statistics for Armenia, which is extremely low. And we increased it to ten DALYs, which is still very low, and then this relationship between the three variables worked well. So that's just a really practical way of dealing with saturation in the model.



Scenario 1
Minute 00:28:52

Here I am showing you three scenarios, and this is the first one where we simply look at the 2019 spending amount and what did the optimization do.

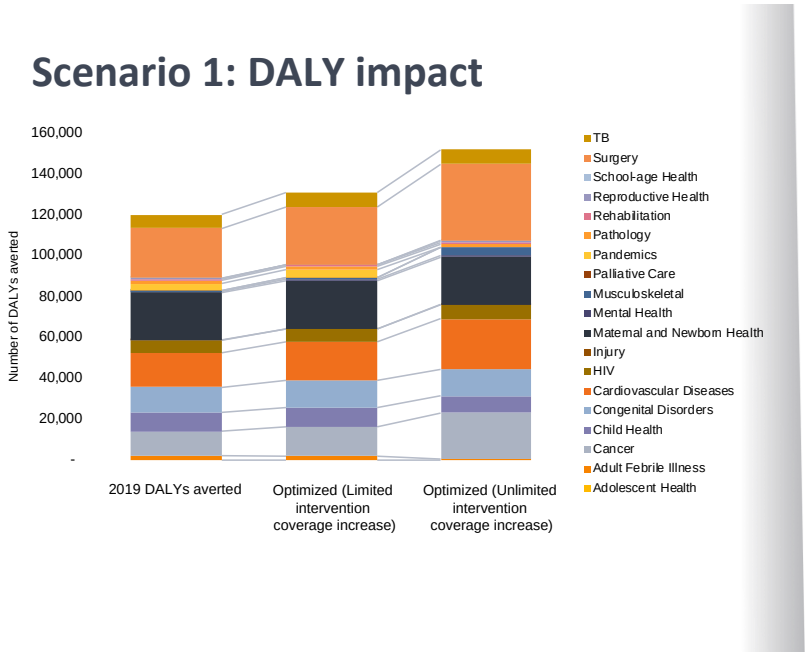


Scenario 1: spending results
Minute 00:29:06

This is the spending slide with the three columns of how much was spent and you see that they all are the same height. We used the same spending amount but we optimized to have better health impact. And the middle column is optimizing by constraining how much money can be moved around. And this is basically realistic. No country can just stop an intervention and triple another intervention. So this was sort of the reality, a 10% change maximum.

And then the column on the right-hand we have a free optimization with no constraints and here we saw that, for instance, a palliative care package gained some spending in the constraint middle column but once we just let the optimization play for free, there was no more additional allocation to palliative care because all the other interventions and packages just had a better cost-effectiveness.

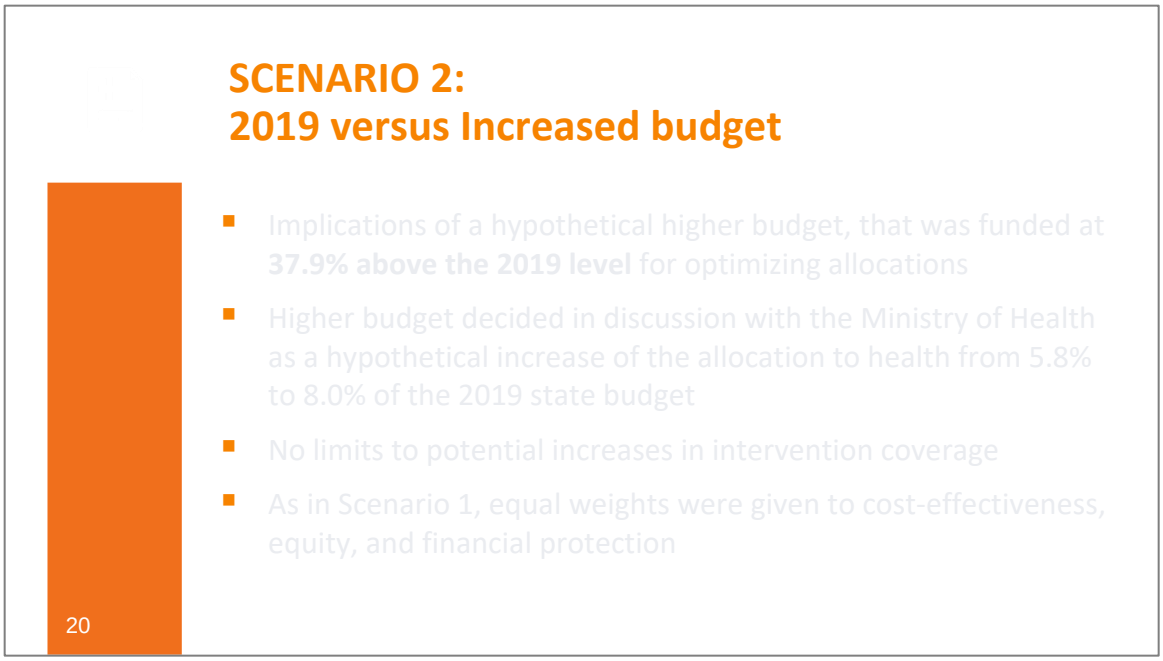
But consistently cardio-vascular diseases package was the winning package here in current spending and in optimized spending. And then large increases in the optimization were also obtained for the musculoskeletal and cancer packages kind of pointing to the lack of spending there.



- 2019 baseline: **120,000 averted DALYs**
- Limited coverage increase: **9% higher DALY impact**
- Unlimited coverage increase: **26% higher DALY impact**
- Packages without increasing spending can gain impact through **internal re-allocations** in a package's interventions

Scenario 1: DALY results
Minute 00:30:36

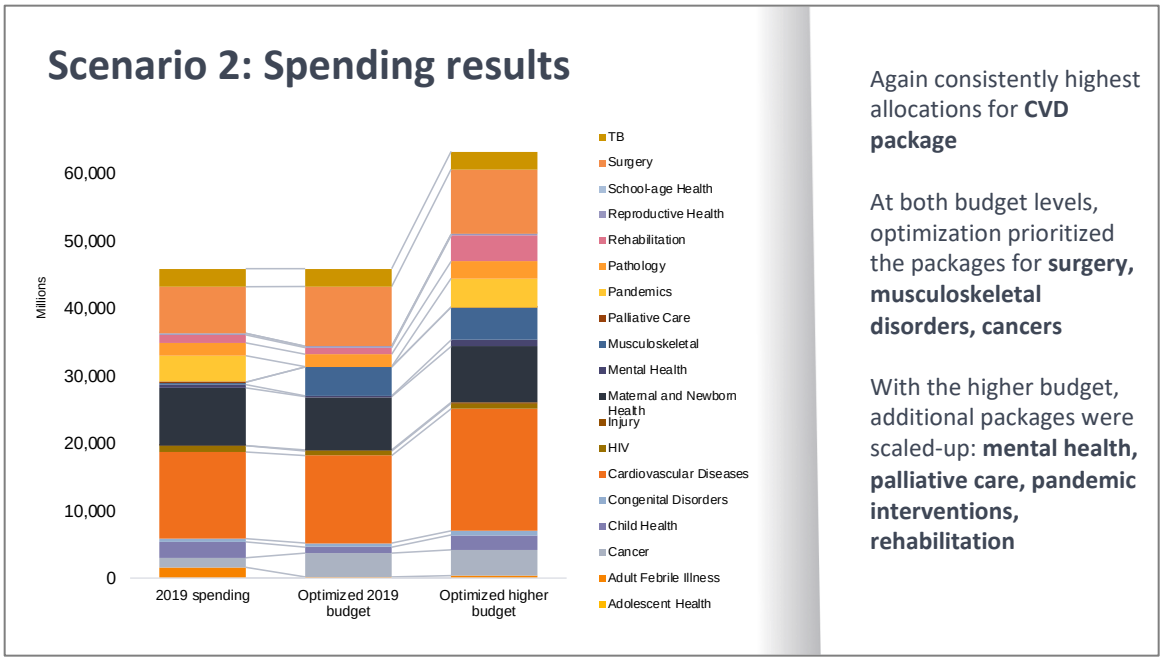
And the next slide show us the health impact. Of course, the more you spend the more health impact you have. Here we have the same amount of spending we just optimize it. And you see that the estimated impact does go up, particularly in certain intervention packages like cancer, really important increases. And, of course, this really points to, for instance for cancer, to underfunding, high burden, low coverage and a big gap in even essential UHC interventions getting the funding.



Scenario 2
Minute 00:31:18

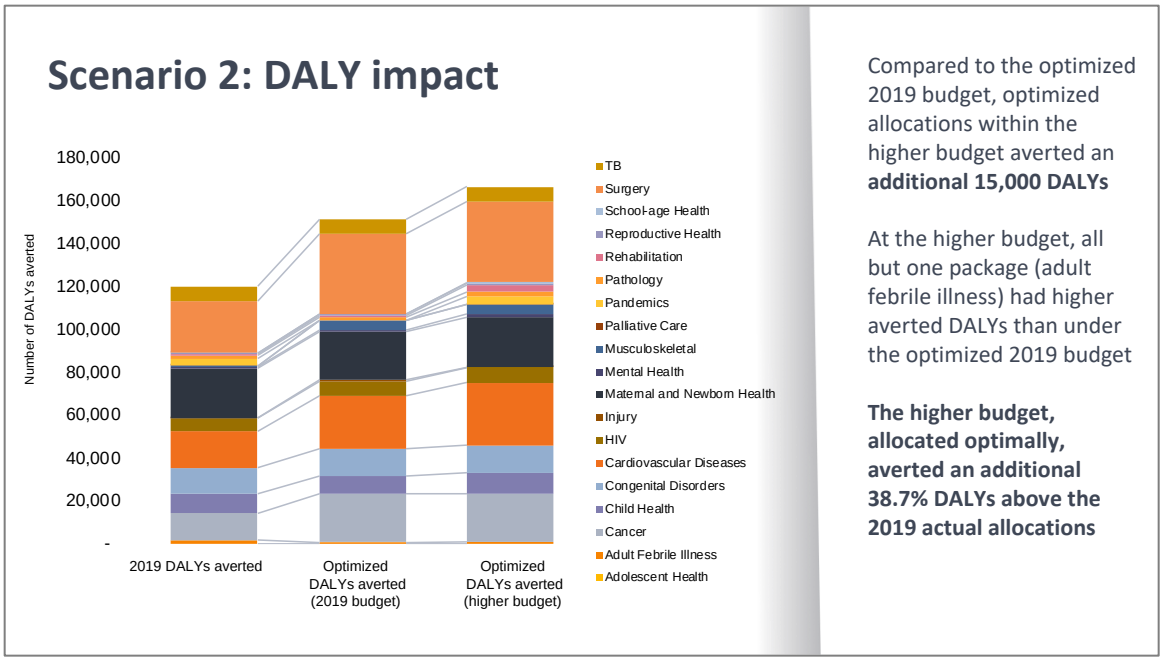
Then the second scenario looked at the very interesting question of what if we actually have more money to spend on essential interventions, how much impact can we gain and how do we allocate the money.

This is the scenario where 38% more funding would be available and that was based on a hypothetical, but deemed feasible, increase in allocation to the health budget from 5,8% to 8% of the state budget.



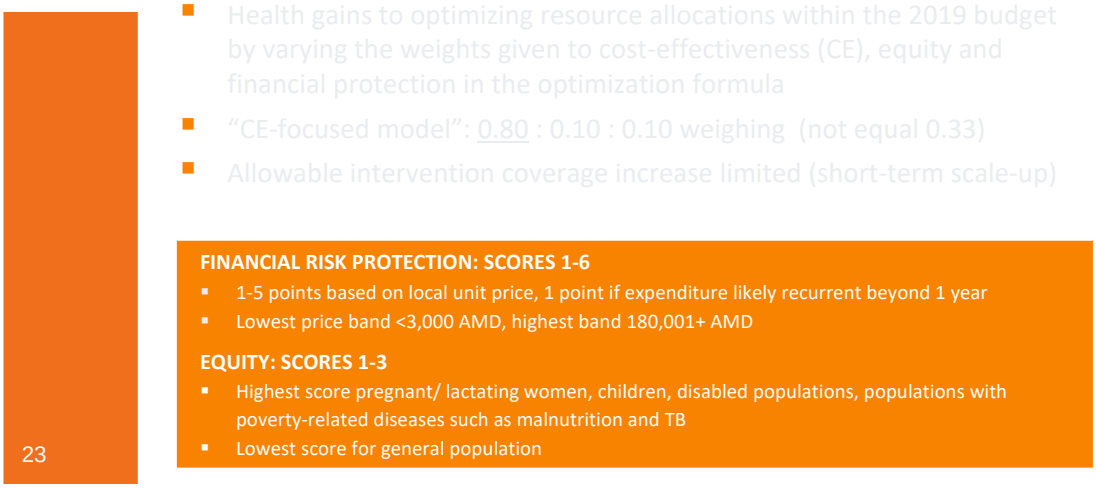
Scenario 2: spending results
Minute 00:31:58

Here you see that the right-hand column is indeed much higher because we now have more money. Again, the cardio-vascular disease package is a constant really good investment but at both budget levels we have surgery, musculoskeletal disorder and cancer packages really prioritized. And then also interestingly with this higher amount of money, additional packages which have a lot of really cost-effective interventions can be scaled up, mental health, palliative care, pandemic interventions and rehabilitation. And I think we know it from most health systems which are in that transition to chronic and NCD burden, that these are typically programs which are underfunded, also of course mental health.



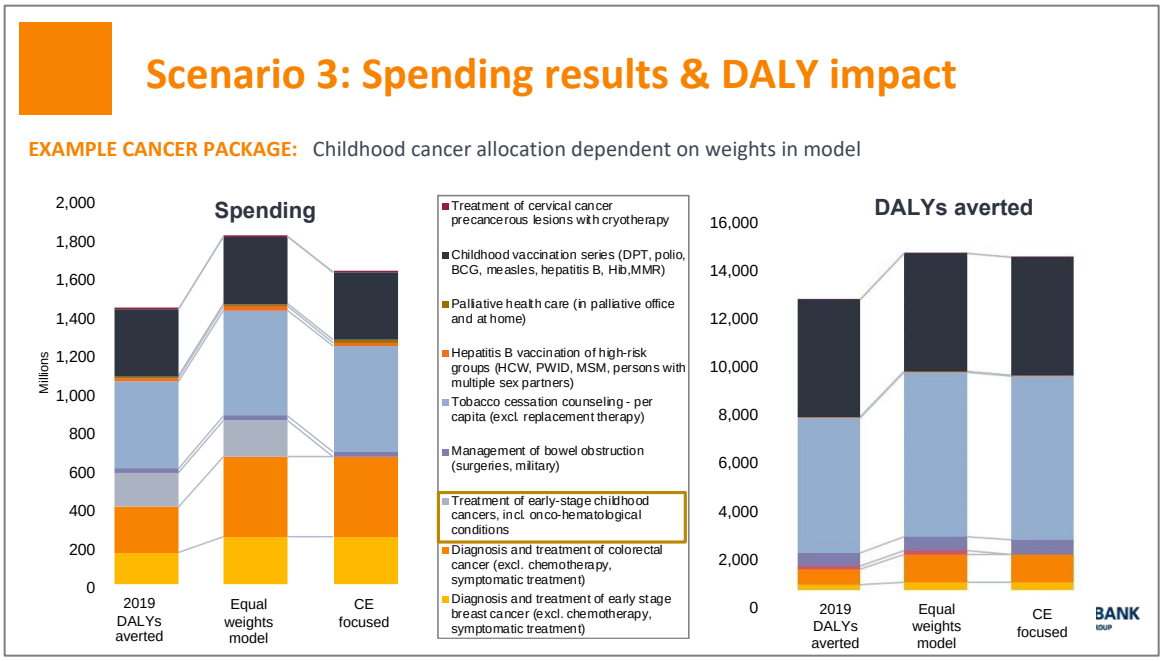
Scenario 2: DALY impact
Minute 00:32:56

And this is the impact. Again, optimization gives us more impact and because we have higher amounts of money we can gain additional DALYs. I think it is quite impressive that even with the higher budget optimized, we can still see some packages really gain a lot of priority just because a bit more money is available. And I think the general observation was that there was such a lack of money and resources to be allocated around these essential health interventions that even very deserving interventions didn't get funding because there was too much competition for the resources played out in the model.



Scenario 3
Minute 00:33:50

That is the last scenario and now we actually look into one of the packages. So far, we have just looked across the packages. And this is all about how we weigh the optimization. So far, we have given equal importance to cost-effectiveness, equity and financial protection. Here we formulated a "Cost Effectiveness-focused model" which gives more weight to cost-effectiveness. So these ICERS really start to bare now.



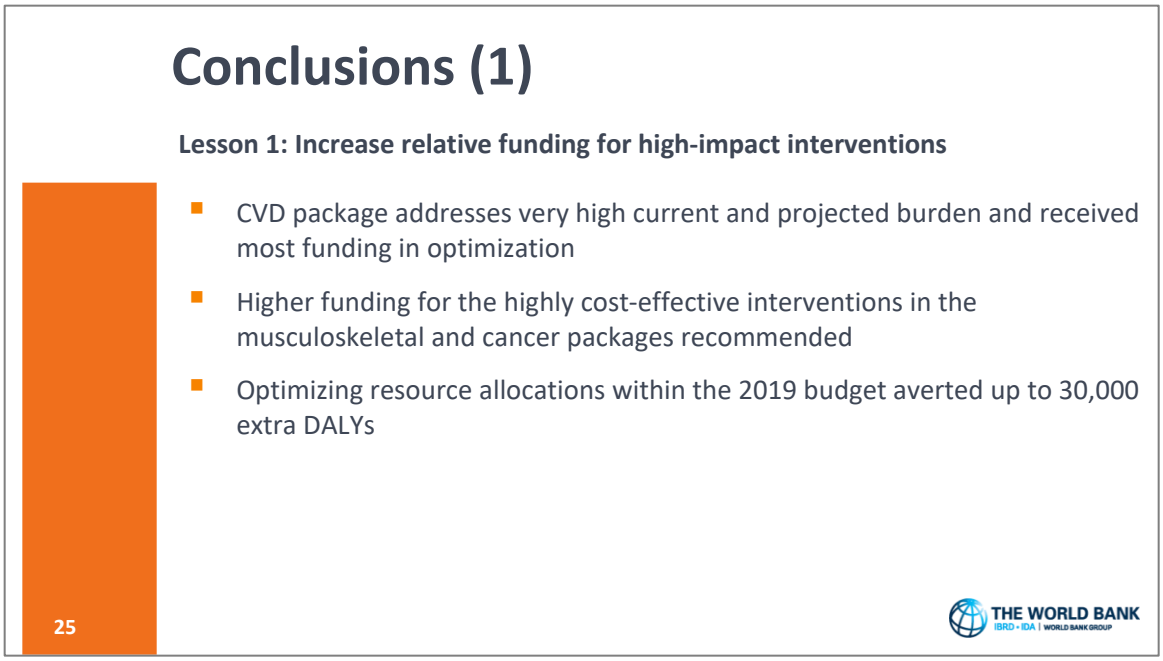
Scenario 3: spending results & DALY impact
Minute 00:34:31

Here we have an example from the cancer package. You see that there are like eight different interventions, essential cancer interventions in that package. And I want to particularly highlight the childhood cancer allocations. It is highlighted in orange in the middle. On the left-hand side we have spending, and the middle column is the equal weights model, so equity and financial risk protection are still important here.

On the following column to the right-hand side we have a cost-effectiveness focused model applied. And the childhood treatment of early-stage childhood cancers actually disappears because we are not any more giving proper weight to equity and financial risk protection. And it is a story again in every country that cancer leads very quickly to impoverishment in a family.

Interestingly, on the right-hand side, in the equal weights model, where we give importance to equity and financial risk protection, we still have a very high health impact. So even when we don't just prioritize cost-effectiveness we can have a powerful health impact.

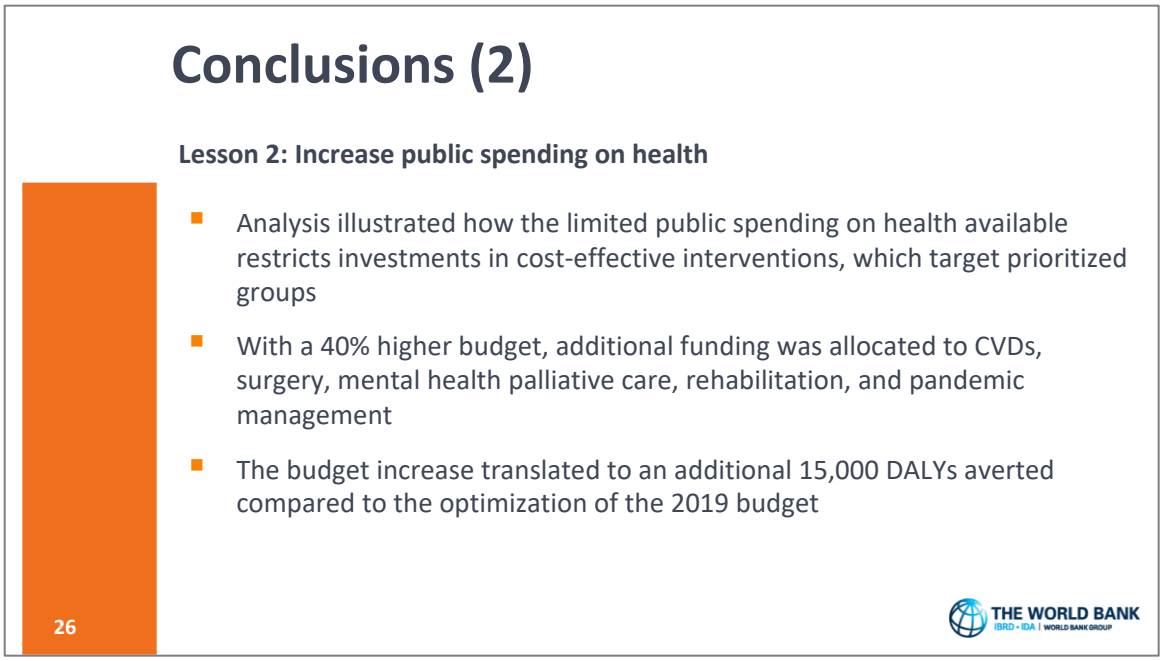
And I will hand over to Adanna.



Conclusions
Minute 00:36:00

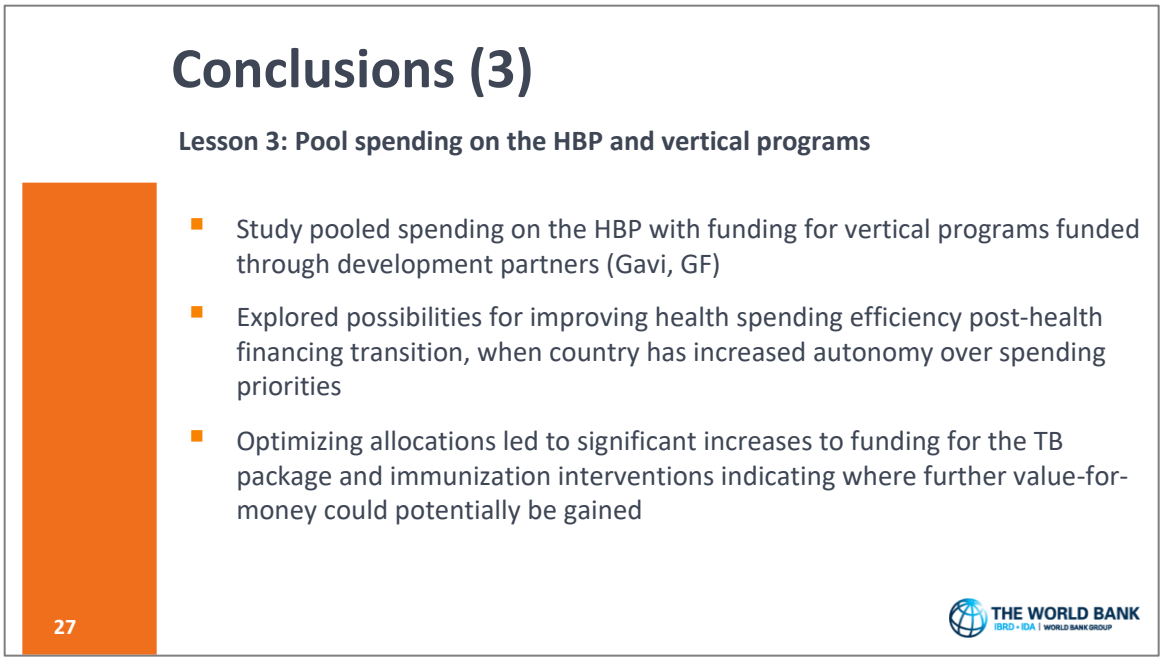
Thank you Nicole.

Here are some take-aways for the work that we are doing with our clients in Armenia. I think the first piece is on how the HIPtool illustrates where to prioritize funding. In the draft law that is submitted to the prime minister this month, there is language there around the introduction of HTA, including consideration for the burden of disease, cost-effectiveness, financial protection, in-the-future sort of reflections on the essential benefits package. And we see from the analysis that we did that even focusing on less than half of the budget that we are able to optimize, that within the same budget we can avert an additional 30,000 DALYs. So these numbers really have helped to move forward the dialogue.



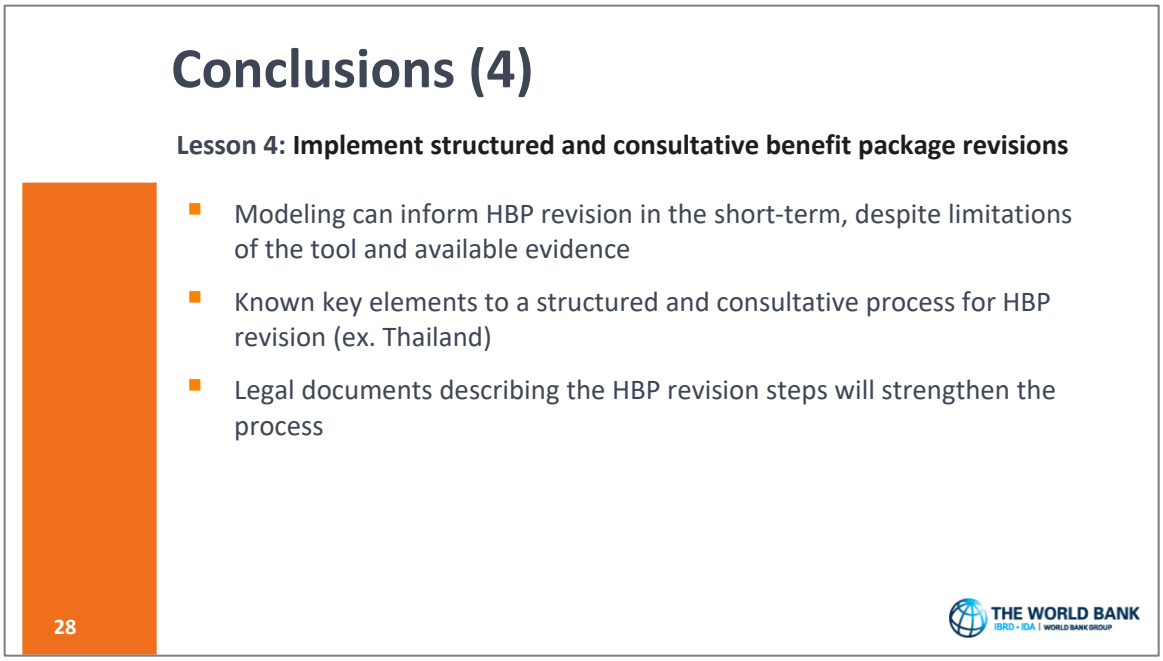
Conclusions
Minute 00:36:53

But I think a more important point for a country that spends 85% out of pocket is that we just need more money to be spent in health on the public budget. And it was really interesting, at least for me, to see how increasing the budget by 40% would have additional funding allocated to essential things like pandemic management, like rehabilitation, and avert additional DALYs.



Conclusions
Minute 00:37:19

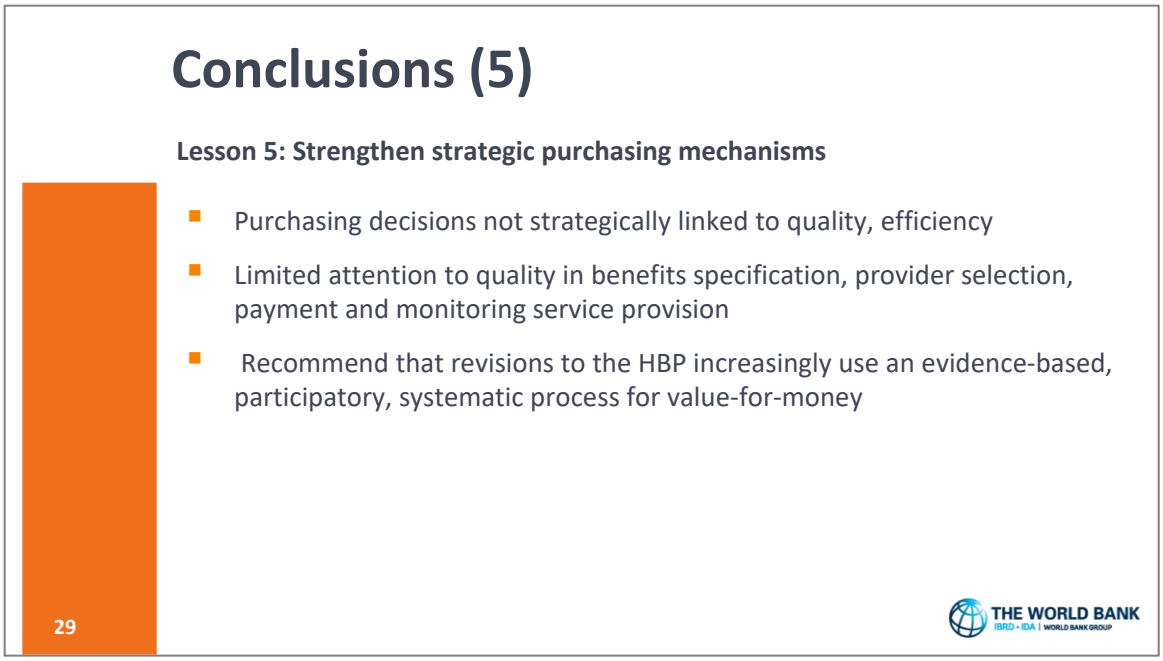
But beyond the conversation on optimizing in the package there are a couple of other things that this analysis was useful for. The package that we actually optimized is an artificial package. It is the benefits package, about 50% we could move around, and then we added into it services that were vertically provided through donors, so immunization through Gavi and care for HIV and tuberculosis through the Global Fund, to create a hypothetical package optimized across all those packages. It was interesting to see funding in the optimization reduced or increased in different packages including for HIV/TB and immunization. And we think there is an opportunity there. In countries at the transition away from vertically, fragmented programming to sort of pulling funds to be able to optimize across all those programs, as is happening in Armenia now that we have graduated from a lower-middle income to an upper-middle income country.



Conclusions
Minute 00:38:11

Then still in the broader conversation is what does it look like to modify a benefit package in a way that considers burden of disease and all these other factors objectively. Beyond the modeling that we have done we understand that a lot of other factors might matter, including perhaps in Armenia vulnerable groups that the government wants to prioritize whether or not the services are cost-effective or protect the population financially.

We think there are good examples of doing this. One we keep pointing to is Thailand, where you have an initial set of analysis that are done, and it feeds into a consultative process with stakeholders across the board, including providers, including patient groups, including experts in the different medical fields that reflect on the changes that we made on the margins of the existing benefits package. And this is a process we are advocating for in Armenia and a process that they undertook with the first package that they ever set.



Conclusions
Minute 00:39:09

Finally, on the broader conversation, benefits package design with the subjective, evidence-based, data-driven is one subset of a broader conversation on purchasing, a conversation that involves things like specifying how we pay providers, drawing up contracting templates, monitoring and selective contracting to see which provider gets contracted.

The conversation we are having in Armenia is how do we make sure that all these aspects are driven by consensus that we have about the burden of disease, of improving quality, improving access to care and strengthening value for money in general.

I want to thank you for your time. In a addition to the report that was shared in the link we have a publication that was led by Nicole that cuts across three countries, including Armenia, and examines the application of the HIPtool to optimize the health benefits package.

QUESTIONS AND ANSWERS

Minute 00:41:00 Ursula Giedion: There is a question on communication. You presented a lot of quantitative data on the methods etc. How did you communicate all this to the general public?

Adanna Chukwuma: I would say a lot of our communication has been with technical stakeholders and policy makers across ministries. The dialogue in Armenia involves three principle ministries: the ministry of health, the ministry of finance and the ministry of social affairs because this is a universal health coverage reform that is reflecting on fiscal space, including potential tax reforms, purchasing reforms and service delivery reforms. And what we have done is holding a series of workshops, one some those Nicole led and designed the workshop where we had people from the ministry of finance sitting down and thinking through what the findings were and why this tool is useful, in addition to people to people from health. We have a couple of forums planned across the next couple of weeks. I wouldn´t say we have done as good as a job communicating to the broader public. We actually really put our focus on the stakeholders necessary for the adoption of these reforms and the law, so these ministries and the parliament.
So that would be my answer on communication.

And then there is a question for Nicole: Did the model include also investments services related to health promotion?

Nicole Fraser: We did, and we used NHA categories for health promotion. I must say it was incredibly small. The local experts said that there are sort of other mass media communications which are not really funded through this ministry of health budget. This was one of the many weaknesses I would say. There was no significant data we could feed into the tool. The tool does have interventions pre-programmed on this.

Ursula Giedion: A second question comes from Manuel Espinoza from Chile. He says that from the data you presented he observed that you had more DALYs averted in the equity case compared to the cost-effectiveness analysis-focused approach and that he would have expected the opposite. Why do you think the situation turned out as it turned out?

Nicole Fraser: It is an excellent question. There is a lot going on in the model but with the optimization you can have relationships which run almost parallel and they flip very easily over in an optimization when the cost coverage outcome relationships run parallel. I must say I also thought about it and I can´t give a definite answer. The DALY averted are very similar but it´s true that in this particular example of the cancer package the equal weights model actually has slightly higher DALY.

One would need to try to understand the intricacies of the optimization as it happened. But it is a great question. Thank you.

Ursula Giedion: Given challenges of matching HIPtool with an AUHC package how will we ensure that services are actually being delivered?

Adanna Chukwuma: I think this is a question about the monitoring the services rather than the HIPtool. The HIPtool allows us to think about what service should we finance and at what level. And there is a separate conversation about whether people are actually getting those services. That is a question we are trying to answer through a parallel piece of work. We are doing an assessment with a survey across the entire country and of we are looking at the health implementation systems and what we can and cannot capture. So, I cannot definitely answer your question now about whether we knew if services are being delivered. But I know it is something on the government´s radar: can we answer that question using a survey and how well do our routine health information systems allow us to monitor what care people are actually receiving within the benefits package?

Nicole Fraser: I agree and the HIPtool is good because it is health sector wide. There are not many tools which should do allocation across all the different programs, we are very much otherwise looking at HIV or TB, so because it is health sector wide it really looks across the spectrum to see what would be a good money investment and I think it finds these high-burden, low-coverage places and it is a good illustrative analysis, or maybe a bit more than that, but don´t plan your budget based on the HIPtool outputs. It is really just one tool which highlights investment opportunities, in my view.

Ursula Giedion: Up to what point do you feel that this way of optimizing the allocation of health budget can now be part of the everyday business of the ministry of health or whoever is in charge of this? What are you planning to do to kind of transfer all these great analysis to the local people?

Adanna Chukwuma: I would say the answer to that question sort of starts with how we took on this work. We were very intentional about work that was not done unilaterally by the Bank. We did not entirely succeed but we did sort of set up a working group of sorts with different players which were involved in the conversation, so the national purchaser, the ministry of health, a group that helps think about the burden of disease, so that is the National Institute of Health. And this group of people sort of helps Nicole and the rest of the team think about the model, how we work, so a part of the workshop is that process. Now, as we move forward as this analysis that has been done, I think we sold them on the concept of using an analysis like this even if it is not done with the sophistication of the nice HTA to reflect on the benefit package. We are now in the "how-to-conversation". The first step of this is this law. In the law we have language there that says:" as part of the process for advising the benefits package we are going to consider the following objective criteria." And then maybe specify

the institution responsible. The Bank is advocating for an academic or research institution outside the Ministry of Health that already has capacity for modeling. Armenia has really good tools of public health to house an institute of sorts. This is something that would be supported through an investment. So just to say, we started in this process thinking about partnerships with government and building capacity. But that effort has to be backed by regulation that houses this officially somewhere and we are going to have to work with this team when it is set up to build capacity on that sort of analysis as part of a broader process of revising the package.

Nicole Fraser: Just to add, I mean one of the benefits for Armenia was to actually look critically at their benefit package as it is set up in their system. And they realized just how confusing it was, how many codes there were, that they had added codes for special populations again and again. I think we used about 3.000 codes but there were more in the system so that was already an insight that we need to simplify the package. Otherwise, just as Adanna said, it helps to support a structured systematic process and that in itself has value whether it is HIPtool or another tool is maybe less important but to have the participation and the structure provided through a process is really valuable.

Ursula Giedion: We have another question related to purchasing. Could you provide an example of innovative purchasing mechanisms that are linked to the optimization exercise?

Adanna Chukwuma: I would say it is too soon to answer that question. Like I was saying where we are right now is incorporating HTA into how Armenia thinks about the benefits package. Down the road we are reflecting on ways to incentivize and increase in demand or supply of the services that we think there should be higher utilization for everyone to sort of avert higher numbers of DALYs. So the conversations are on provider payments etc. that would link to this conversation on the benefits package. But that is not something we can do now. The next step for us is this big law on universal health coverage.

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