Reform Pathways for Healthcare Financing in India

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Session 4

PMJAY: Getting it to punch above its (fiscal) weight

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Dr. Langenbrunner: We have three excellent panellists today. Dr. Ajay Tandon, Lead Economist from the World Bank, Mekhala Krishnamurthy, Senior Fellow, Centre for Policy Research, and Owen Smith, Senior Economist of the World Bank.

So, we have three excellent panellists. But before we go on to that I want to make a couple of final points and that is if there is cost growth projections and fiscal impacts to consider, we've got a big challenge here. The ability of PMJAY [Pradhan Mantri Jan Arogya Yojana]¹ to deliver on this promise for the 500 million beneficiaries is directly linked to the total funds required to implement the scheme and the willingness of the government to commit the required funds even in the face of competing budgetary priorities, as we all know. The note² suggests [that based on] the enrolment and the utilization rates of the past two years, and then once you add in medical inflation, [PMJAY] could lead to absorbing more than half of the MOHFW [Ministry of Health and Family Welfare] budget in the next few years whereas now it accounts for just about 9% of the budget allocated.

So, these are very big challenges from both an expenditure and quality perspective. Do we do it with the traditional direct public system mechanisms where financing and delivery are joined? Or can these newer PMJAY type mechanisms help to bolster implementation capacity? So PMJAY does both. It pools funds, and it allocates funds in a new way through what has been called strategic purchasing that looks at allocating funds in a non-traditional way and allocates funds less on inputs into the sector and more on allocating funds for actual activities, for outputs, and ultimately outcomes. For those of you who have read the NITI Aayog November 2019 report, it talks about strategic purchasers having four or five tools at their prospect, at their disposal. In the shorthand is the ‘who’, the ‘what’, the ‘from whom’, the ‘how’ and ‘at what price’, and the ‘how well’. So let me just explain these sort of shorthand levers that purchasers have. The ‘who’ would be understanding their client base or population, its needs, its demands, both the present and future and this often translates into a card or an electronic ID that empowers both the consumer and the purchaser. The ‘what’, developing explicit package of benefits, ideally cost-effective and responsive as well as optimal for achieving outcomes, although we know it’s complicated work. The ‘from whom’ contracts with both public and private providers to identify and make available the most efficient and highest quality providers for the consumer, for the beneficiary. The ‘how’ and ‘at what price’, new payment incentives to encourage improved provider behaviour. And finally, the ‘how well’, accountability mechanisms

¹ Text in [text] format indicate editor’s notes/insertions.
that verify actual improved behaviour. As the Russians like to say, trust but verify. So, these levers will depend upon a certain set of underlying factors as well.

While you have the levers, you also need some underlying factors such as a basic and working IT system, a relative provider autonomy so that providers can respond to these new incentives, to these new contracts, and a monitoring and evaluation system to help identify and correct early challenges and challenges on an ongoing basis. So, the NITI Aayog book of November 2019 looked at this approach as a way to move India to a more responsive and optimal sector. But I think it’s fair to say that not everyone is so sure, not everyone is convinced that this is the way to go and this sort of gives us a platform for going deeper with our distinguished panel with us today and thanks for bearing with me in this little introductory session of remarks.

So, I want to say to the viewers we will take your questions for our panellists and please use the chatbox. Let’s first go to Mekhala. Mekhala Krishnamurthy is a Senior Fellow at the Centre for Policy Research [CPR] and then Associate Professor of Sociology and Anthropology at Ashoka University. Her long-standing area of research interest and commitment, which she is currently pursuing in a number of field-based and writing projects, involves understanding the institutional dynamics in everyday life of the state, market and economy, and contemporary India. At CPR, she is engaged in building up a new initiative on state capacity and I’m looking forward to hearing more about that. She’s also a non-resident visiting scholar at the Centre for Advanced Study of India at the University of Pennsylvania, and she holds degrees from Harvard, from Cambridge, and the University College of London.

So, Mekhala, question number one to you. Obviously, the new PMJAY model introduces market-like principles or so-called market mechanisms into state-sponsored healthcare and explicitly attempts to integrate public and private provision. I wonder, could you reflect initially on a country’s thinking about the role of the market versus the state in management of the health care system? Are the two viable and what are the limits of PMJAY’s attempts to blend the two? Mekhala, over to you.

Dr. Krishnamurthy: Thank you so much, Jack and it’s a great privilege to be here. I’ll keep my comments quite brief so that we can have enough and I’m really looking forward to learning from the other speakers as well. So just to get started, I think you’ve asked a question that is at the heart of health policy in India and everywhere in the world. And I think particularly in this moment after Covid, there is a very strong return to an understanding of health as a public good. And so, I think you know, in terms of Indian policy and the evolution of Indian policy and thinking, I think that’s actually where we have come from and in some ways are at a moment perhaps to return to, with a new way of thinking about the challenge and the role of the state. Because as you say, you know, it’s easy to think about health as a public good only in the context of market failure and therefore the role of the state
becomes vitally important. But we also know that in a complex sector like health where the private sector plays an important role, it is not a competitive role that the public sector has to take.

So, you actually have to think about the role of the state not only in terms of its role as a provider but also very critically as a role in policy, stewardship, regulation, all of which, if it takes a sort of an anti or a competitive state position versus the market, the state doesn’t do its role as it should, right. So I think this is a moment where it really is a great time to be talking about this because it asks us to really reflect on the roles of the state, not necessarily versus the market but in terms of being able to shape better outcomes that involve of course very importantly, the role of the state itself which in the Indian context, when it comes to primary health care is still pre-eminent as well as when it comes to thinking about its role I markets.

Secondly, I think for all of this investment and support and understanding of the role of the state in public systems and to think about India as a country that has invested in public systems, we of course have, if you look at out-of-pocket expenditure, one of the most privatized health systems, right, and very very poor health outcomes. And so, I think it’s very very important to understand that context and I think this is where the point that you mentioned about the role that PMJAY is playing not only as a program but in the imagination -- because this focus on out-of-pocket expenditure has really led to investments by state governments initially and now by the central government in publicly funded health insurance. So, I think it’s important to put this in a little bit of context. And while PMJAY is new, it comes out of on over a decade of work at different states in India where we have experimented with state-level experiments in publicly financed health insurance. And of course, then we had a national program RSBY [Rashtriya Swasthya Bima Yojana] which again, as you quite rightly said, PMJAY pools both, you know, integrates with the RSBY work as well.

So, in this context, we are talking not so much about a new idea but about a new scheme and a next phase of thinking about this and next phase of implementation. And in that context, I think there’s quite a lot that we can learn from what has already happened. So, as I said, sort of over a decade ago it was started with Andhra Pradesh and Karnataka, and then other states also explored health insurance programs, and then we've had these years of RSBY. And the studies that have been done so far and our experience so far does show that there are some critical challenges here. So, there was lack of information from the outset. There have been instances of denial of care, double billing that has happened with private sector, supply-driven care that we have seen the impact of where there has been substitution instead of supplementation of key public services and we've also seen inappropriate care and late referrals, after care has been exhausted. So, all of these have been reported at various times and various studies that have been done over this last decade. We also have evidence from recent studies like the one done on Tamil Nadu’s Chief Minister's Comprehensive
Health Insurance Scheme by Rajalakshmi Ramprakash and Lakshmi Lingam which point out very significant equity issues, particularly when you look at programs from the perspective of gender and women’s access to health care.

So, I think the overall context in which we're coming into this is, is one where we know that there's quite a long journey to travel from coverage under health insurance which itself is a challenge, but from coverage to go to utilization to better health outcomes as a result of care and then to actually see reductions in out-of-pocket expenditures and catastrophic health expenditures for families. So, this is a very long pathway and particularly with PMJAY, we are at the beginning of a process to see where we go with this. But clearly, the results from other experiences should leave us thinking very carefully about this and be cautious about it because there are critical questions of not only political engagement and citizen engagement, and civil society vigilance but also key issues of both design and implementation. And as we know, those issues in the context of India, really reside with the states. So, you know, that's the answer to your first question.

Dr. Langenbrunner: Thank you, thank you. This is very very helpful. I really appreciate the kind of telling us about the what's come before PMJAY. You’re absolutely right. It's been a number of states and taking initiatives and building on that we are now seeing a PMJAY benefit from. So, I want to push you a little bit further because you say it's a long process but at the same time people vote on a regular basis and they're impatient right. And so, we've had a couple of years now to watch the new way of allocating funds into PMJAY using strategic purchasing and I'm just wondering sort of thumbs up or thumbs down at this point with new leadership coming on. Can you comment on the wisdom of using strategic purchasing to improve health system performance? To what extent has it occurred, where and where not? I mean you've touched on this already but maybe drill down a bit more. Thanks.

Dr. Krishnamurthy: Yeah. So, I think first and foremost it’s really important to remind all of us that PMJAY is about secondary and tertiary care and it’s really about hospitalization and hospital-based care. This is important because so much of out-of-pocket expenditure and so much of health care in India is primary care. And of course, Ayushman Bharath, the scheme, has a component of Health and Wellness Centres which are focused much more on comprehensive primary care, private care of a certain degree and then there are many other programs of course in India as well that’s focussed on it. So, I think it’s really important to think about the strengths and limitations of using a publicly financed health insurance scheme that is focused on tertiary care to bring system-wide impacts, especially in the context of a country for whom public health and primary health care remains extremely important. So, I think we don’t have to belabour this, whether it’s important or not. I think there’s no doubt that tertiary care is extremely important and a major driver of expenses. But it is important to understand the lever, as you said right at the beginning, and it is not about the entire
health system. In fact, there have been very few good examples of using this kind of work and primary health care is even harder, right. So, we’re really focused on tertiary health care and to some extent secondary health care here too, but it’s really hospital-based that we’re looking at here.

The second point I think we should remind ourselves again is that it’s a two-year-old program and the second year was Covid. And Covid has had actually quite a big impact in terms of how PMJAY was able to do it, right. In the early phases particularly, you saw quite an impact of the pandemic on the scheme even though it was included—there was a Covid package that was included. So, I think one has to remember the second year has been the pandemic year. So, one, it is only fair to take that into careful account when you think about this. And secondly, to also point out that I think what the pandemic brought up to us was the importance of the public health system and the public hospitals as well because a lot of Covid hospitalization also did happen in the public system. So, I think that’s another sort of context to bring back. So, I just wanted to highlight those.

But in terms of implementation and how it’s done, again my colleagues at the accountability initiative at CPR produce very careful budget briefs and their budget brief on Ayushman Bharath, I would encourage everyone to spend some time with it. It gives you a very good sense of how the scheme has done over this period of time and the kinds of variations that we really see across states, right. So, four states and union territories, so Delhi, Odisha, Telangana, and West Bengal have not signed up for the scheme at all and then the remaining, we actually see in terms of budget estimates. They have remained at about [Rs.] 6,400 crores which are actually double the revised estimates, which have been in the range of [Rs.] 3,200 crores and 3,100 crores. So that, I think, is important to keep in mind. At the moment, given the revisions and the number of eligible PMJAY families, about 58% of the total number of families are covered. But here again, you see very wide differences across states. And of the total number of families covered by any health insurance scheme, about 87% of them are covered by PMJAY, but you do see differences. So, in states like Arunachal Pradesh, Meghalaya, and Jharkhand, you see high coverage of those. In Andhra, it was 80%, in Chhattisgarh it was high, in Punjab— but you see very low coverage in Assam. In Uttar Pradesh it was 39%, Assam is 42%, Himachal Pradesh is 32%, Maharashtra, 31%, Goa is 14%. So, you see quite a big difference here in terms of coverage and we already talked about the sort of long line from coverage to utilization to actually claiming and then seeing the impact of both better care on health outcomes as well as on out-of-pocket expenditures.

But I think the second point that I think is really important here and it goes back to your point about the market is that, you know, under PMJAY, there are about currently 24,500 or so empanelled healthcare providers. And of these, about 46% are privately run and as per their policy brief by the NHA [National Health Authority], private hospitals have fewer beds than public hospitals and are more
likely to be empanelled for surgical packages and super specialty care. But what we also see is that across India, the percentage of private enrolled and empanelled health care providers has remained roughly the same, between 25\textsuperscript{th} November 2019 and the same date in 2020. And so there again you see state variations where you’ve seen an increase in Kerala, 10 percentage point increase in Madhya Pradesh, but you see reductions in Manipur and Sikkim. So, I think again here when it comes to the private sector and its participation, you’re seeing big changes.

I think the third very important point is, what kind of private sector participates. And this is a major challenge because, in India, we have a small-scale private sector in healthcare as well. Particularly in the districts, you aren’t looking at the kinds of organized actors that we might otherwise imagine and it’s really important to take into account who the private sector is here. And therefore, you have major questions that you ask both in terms of these kinds of schemes or PMJAY scheme actually being able to increase both access but even more so questions like quality, when it comes to private sector provision. And then you have the flip side, which is a question you can ask about, can you use such a scheme to then improve or discipline the public sector itself and I think this is something we need to ask and look into very carefully. But you don’t want to make the public sector act just like the private sector because then you’re not solving the problem.

So how do you use these market instruments if you are going to invest in them in the context of more comprehensive changes required in public sector hospitals and public provision? But also, I think the point that gets frequently forgotten is that it’s very hard to use market instruments even in a mixed model without very good state capacity, right. And this actually, engaging the private sector, is not about failing as the state, and then stepping out, which I think continuously we fail to realize that it’s not deregulation and giving up, but it’s actually increasing your capacity to design better schemes, to monitor, to have greater institutional capacity. And all of that—even, you know, if you are going to pull off better insurance programs and of course, all of that needs to be done with a lot more that happens to strengthen health systems altogether. So, I think a big challenge for us going forward is to think about which states actually do have the capacity and what kinds of institutions are you going to require at different levels of the state to be able to do this, keeping in mind that it is a limited instrument. There is certainly things that we can do to pool financing better, to actually deploy it much more creatively and much more effectively than how we have done it in the past. But that this requires more and better state, right, not less. So, I think that is the key point that I think I would like to make.

Dr. Langenbrunner: Great points, great details, and lots of good data that you’ve given us right off of your fingertips. So very nice, thank you very much. Before I leave you, maybe just a minute on something you mentioned in your first answer which was the civil society. This is an important sort of
third force or dimension besides the state and the market. And how can civil society hold public action accountable in the healthcare domain? And is the challenge bigger or is it less so with the new PMJAY model?

Dr. Krishnamurthy: Well, I think that the problems in terms of vigilance or even participation, understanding the process is extremely important and continues from previous experiences as well and this is not just for the insurance schemes but across the public system. I think we have a challenge both when it comes to political accountability and engagement with healthcare and we certainly have a problem at the level of just making sure that people know their rights under the program, they understand how they are to be enrolled. These are complex elements in terms of getting cards, understanding denial of care, understanding the process well enough, there is a grievance redressal system ensuring that these work and also being vigilant on the ways in which, the point you mentioned at the beginning, which is that there is a larger healthcare context which requires the state to make a range of investments. So, it is important that those investments do get made.

And in some ways I would say, this moment is about getting PMJAY to punch above its weight in terms of what it can deliver as a health insurance program and as a way to think about how you can increase efficiencies and better utilization of pools, but at the same time, it is a moment for us to put it in its place in terms of thinking about our approach to health care reform altogether, right. So, I think it’s a both of having it punch above its weight but also put it in its place as what it can and cannot do and begin with its strengths and limitations and that will actually allow us to design these better, in my understanding.

Dr. Langenbrunner: Great, punching above its weight. That is a big theme for this hour and I’m going to move to Owen and if we have time I’ll come back to you. And I expect Owen to take up a lot of the questions that you’ve raised and certainly answer at least half of them. So, Owen Smith is a Senior Economist with the World Bank’s Health, Nutrition and Population Global Practice. He’s based in New Delhi since 2016. He joined the bank in 2005 and he’s worked extensively on health financing and health policy issues in the Europe and Central Asia region and the South Asia region. Owen, I really like the Europe and Central Asia health financing book that you and others produced. I am blanking on the title but maybe you can remind us at least in the chatbox before we’re finished here. And prior to joining the World Bank, he was an Economist at the Canadian Ministry of Finance. So Owen, welcome, and following up on some of the things we’ve heard so far from Mekhala, taking the tools mentioned at the beginning of this hour and some of the things that she has said, can you sort of give us a response from your perspective on how far PMJAY has gone, sort of what stands out to you and perhaps even more important, what could be the crucial or critical next steps for PMJAY, especially...
with regard to the benefit package issues and maybe some of the other levers that strategic purchasers have. Over to you, Owen.

Dr. Smith: Thanks Jack and thanks to Dvara Research for organizing this. It's a pleasure to be here. So, I think maybe, first of all, I would just reiterate what you said at the beginning, which is that PMJAY is sort of a set of building blocks – purchaser-provider split, payment follows the patient, so it's demand-side financing, there's an explicit benefit package, there's some autonomy for hospitals to manage their own revenues, there's a requirement for a robust IT system. So, these are building blocks and I think PMJAY should be seen not as sort of a monolithic program but as a set of building blocks put together in kind of a modular way. And everything, those building blocks I'd mentioned already, are extremely common sort of reforms in middle-income countries around the world. So, Mexico, Thailand, Turkey, Indonesia, Vietnam, China, Philippines, they've all done pretty much the same things that PMJAY is doing, at least the ones I mentioned so far, and these features are virtually universal in high-income countries as well. So even a National Health Service in the UK [United Kingdom], the famous model for the last 20-25 years or more, perhaps, has had most of these elements of demand-side financing and so on.

So, I think that the controversial building block is probably the heavy use of private hospitals because that's something you don't see in most high-income countries. There are some exceptions, but for the most part, it's not so common. Anyway, all that to say that assessments of PMJAY should sort of look at each individual building block rather than sort of the monolithic approach of the whole program. So having said that I think you ask how is it doing so far. I think I would say it's a strong foundation [that] has been built so far. It's only been going for two and a half years which is not a very long time and as Mekhala was saying, one out of those two and a half years was the Covid pandemic which was very disruptive. And I think the core of that foundation is things like the creation of new institutions like the National Health Authority and State Health Agencies at the state level. There's a pretty robust IT architecture in place, there's a benefit package with 1500 services that was developed and then revised, you have a payment system, you have sort of emerging systems to try to tackle quality and fraud control. So, all of those are sort of very important foundation stones for the system. But when I say foundation, I guess I really mean foundation in the sense that we can't really say that the walls and the roof are there yet because if you look at the spending level and the claim volumes, it's very very low.

So even putting aside the Covid influenced year last year, even if PMJAY had spent the [Rs.] 6400 crores in the budget last year and in the budget this year, this is still less than 0.1% of GDP [Gross Domestic Product] and I think that reflects the fairly small claim volumes that you're seeing, particularly in the larger, more populous states. So, there's still a lot to do, particularly in terms of
institution building at the state level and all the way down to sort of the hospital level and that's what's required to sort of build up those walls and roof and have a stronger kind of architecture going forward. But again, these reforms take 10 to 20 years in other countries. So, it should be expected that it's not a fully blown system yet.

In terms of top priorities going forward, I'm not sure I would put benefit package revision at the top of the list. I think there are some refinements that need to be brought in there, but I would instead emphasize the population coverage. As people probably are aware of the eligibility for PMJAY is based on the Socio Economic and Caste Census of 2011 and I think there’s a couple of problems there. One is, it's a proxy means test, it's not a perfect targeting approach. And if you compare the eligibility with the household consumption quintiles, you see that a lot of people who are eligible are in the third and fourth quintiles, so somewhat higher up the income ladder. And it’s missing a lot of people at the bottom of the distribution. So that’s one problem and the second problem is, it’s a 10-year-old database. So obviously there’s a lot of change in household status and migration and so on. And it’s not particularly well understood by the population because it’s based on a set of questions, of assets and demographics as of 2011 and that creates a bit of confusion in terms of who’s eligible and who isn’t. And I think the alternative approach would be to align the eligibility with the NFSA [National Food Security Act, 2013] criteria for food subsidies because that’s based on a pretty dynamic, much better-understood targeting mechanism. But that would imply coverage would go up from 40% to around 65%. So, the constraint there is, it would cost more both to the centre and the states. But I would like to see, so the population coverage issue taken up before making any major changes to the benefit package if we’re talking about what’s the priority for the next year or two. So, I’ll leave it at that.

Dr. Langenbrunner: Thanks, Owen. I would tend to agree with you that the population coverage is sort of a front and centre issue. And of course, it will run in, I mean to the extent that you solve that problem you will run very quickly into the fiscal impact issue. So, thanks, but excellent points. I want to go back and ask you. In the early days, you and I had some nice relatively informal discussions on the challenges of PMJAY, particularly in poor states in the concern that some of the basic underlying factors for strategic purchasers such as IT systems were not in place or not yet in place, that the technical capacity might be a bit lagging. And that regardless of the state we talked about, that some of the challenges we saw under the old programs, whether they be state programs or the RSBY program for the poor, could reappear. How do you see this now after two and a half years or so? Are you still somewhat concerned or has some of the progress alleviated your concerns? Over to you.
Dr. Smith: Yeah, I think it's still definitely a major concern. I mean Mekhala touched on this as well, but basically, PMJAY is sort of a highly transactional approach to health financing. You have to identify the 40% of the population who’s eligible. There’s empanelment of 25000 hospitals, there’s the claims management system and every single sort of patient contact requires a fairly comprehensive set of information to be provided by hospitals. The fraud control issue is a big challenge. It’s just a much more complex way of managing a health financing system. And I think when you look globally, it’s a bit of a simplification, but very low-income countries, all start with very simple health financing systems, and high-income countries have these very complex ones and so there’s this sort of reform trajectory that has to happen over time. And the fact is that I think within India, there are states that are more ready to embrace that reform agenda and other states that are less capable. And we’ve seen this with the experience with RSBY that Mekhala touched on and the individual state schemes.

The states in the south and in the west have a lot of experience, have stronger state capabilities to implement a more complex scheme, and some of the larger states like UP [Uttar Pradesh] and MP [Madhya Pradesh], and Bihar did not have such a good experience with RSBY. They struggled with it and you can see that they’re struggling a lot with PMJAY. And this is sort of the fundamental challenge of designing health policy in a federal system like India where you have such a range of, even just looking at income levels across states, it’s a huge range, from a Bihar up to a Haryana, or Maharashtra, or some of the richer states in the south. So, if Bihar was a country of its own and of course it’s much bigger than most, you probably would never be recommending that insurance should be the reform priority. There’s other challenges that should come first. But here we are in a federal system with wide range of state income levels and health system challenges, and it becomes a little bit one size fits all even though there is a lot of flexibility for states to adapt PMJAY as they see fit. And you would think that maybe the lower-income states would be best off just staying with the simpler, old-fashioned system where you just pay doctor salaries, build some hospitals, and say it’s universal coverage, which obviously is not a long-term solution. But it’s perhaps the easiest way to proceed in the near term for those states, just for the same reason that’s what you see in other countries which are at that same income level.

So, I think this is certainly a concern. And on top of that, there’s always the major challenge of fraud and that’s never going to go away. You see in the US [United States] system they’re estimating maybe 5 or 8% of Medicare spending gets eaten up by fraud and other countries like Korea which have large private hospital sector also struggle with this issue. So that’s always going to be there. But I wouldn’t put the focus only on fraud. I think it’s all these aspects of a transactional health financing system which are just very demanding of states. And some are ready for it, and some are less.
Dr. Langenbrunner: Owen, thanks. You’ve got a great global perspective and let’s go back to the simpler, old-fashioned model. My former boss Bill Gates among many others sees our neighbour to the south Sri Lanka—they use the old model of fund allocation yet have some of the best outcomes in the world. You’ve lived there, you worked there, I’m wondering if you could comment on the comparative strengths and weaknesses of the Sri Lankan model and Indian models of curative care and maybe to briefly touch on as a pan-Asian expert some of the models we see now emergent in places like Vietnam. Over to you.

Dr. Smith: Yeah, so Sri Lanka is, for those who I think—most people are generally familiar with it. But just to say that its reputation for a strong health system is very much deserved. It’s had very good health outcomes, very good financial protection, to the extent there are out-of-pocket payments, it’s mostly concentrated in the richest 10% of the population and they’ve achieved all of this at pretty low cost. So, it’s certainly done very well. And I think, besides doing well it’s worth emphasizing that it’s basically done none of the health financing reforms that we’ve just been discussing. So, it’s never tried to do a purchaser-provider split. The financing comes on the supply side. They haven’t tried to do demand-side financing yet; They haven’t done social insurance; They don’t try to target; They don’t even have an explicit benefit package. So, all the sort of reforms that we like to say as health economists are very important, they haven’t done them, and I think that’s a very useful sort of corrective to when we want to sort of overprescribe certain solutions.

But I think maybe two points I would sort of highlight for as lessons for India. One is, as I said, systems start with easy health financing, and they end with complex. So, it’s not really a question in my mind of, ‘if’ most of these reforms are going to happen, it’s really a question of ‘when’. And what Sri Lanka has shown is that ‘when’ is perhaps later than sometimes we think. Its GDP per capita is I think something like twice as high as India’s. It’s about $4000 per capita and it’s taken an old-fashioned system for quite a long time without making these reforms. So, the ‘when’ issue should be given as much attention as whether these reforms are important.

I think the other point would be there’s policy on paper and then there’s policy implementation on the ground. And the system in Sri Lanka and the traditional system in the Indian health system or health financing are very similar. There’s not such a huge difference. Hospitals and primary health care centres are managed by the Ministry of Health and the financing is through line-item budgets and salaries and so on. It’s the same system but with very different sort of results. And I think partly that’s related to governance issues on the ground sort of the foundation on which the same architecture is built. So, to take a concrete example, if you look at the system by which doctors and nurses, particularly doctors in the government system are recruited and posted and transferred and promoted within the system. In Sri Lanka, if you’re sent to a small village out of medical school,
you have to go there and if you don’t go there then you’re probably not going to be able to practice in the country. And there’s some exceptions to that but generally, the system works as it is on paper. We know in India that there’s parallel systems and informal payments and ways to get around some of these issues and there’s absenteeism at the front lines. So, it’s the same system that’s implemented very differently. So sometimes we put too much emphasis on the model on paper without sort of thinking about how it translates on the ground. You asked about Vietnam. I think I want to leave time for Ajay to speak. I would just say that Vietnam provides—its basic reforms are pretty common to what we’ve just been discussing in terms of an insurance system and so on. It identified the poor and put them in the same program as the formal sector which I think is quite commendable.

It would be like PMJAY not being PMJAY but taking that same 40% of the population and giving them CGHS [Central Government Health Scheme] or ESIS [Employees’ State Insurance Scheme] and so that’s a slight difference. But on the purchasing side, one of the cautionary tales of Vietnam is, they spend a lot of money on their system. It’s an expensive system and there’s—government hospitals have started becoming very entrepreneurial with privatized wings that generate revenues for government doctors and so on. So, I think these systems can become—costs can escalate very quickly if one isn’t careful. So anyway, I’ll leave it at that, and Ajay will speak more about Asia, I presume.

Dr. Langenbrunner: Thank you very much, Owen. Mekhala, I’m going to come back to you in the Q&A session. We’re really running a little late on time and I think Dr. Tandon has been very very patient in waiting for his turn. So let me turn to Ajay Tandon, PhD. He’s currently a lead economist with the World Bank. He works on several countries including most recently on India, Indonesia, Bhutan, (audio lost) Vietnam. Previous to his work at the World Bank he has worked in a research department at the Asian Development Bank and also with the WHO [World Health Organisation] in Geneva from 1998 to 2003. He has held visiting research appointments at both Oxford and Harvard University, and he is the author of several books and publications and Ajay, I really appreciated your recent publication on Covid and the potential fiscal impact. So, welcome.

I know you’re based in Delhi right now and you also have a very rich experience in history in Asian countries. So, Ajay, last year right before the pandemic shut everything down, I saw Mr. Indu Bhushan speak virtually at PMAC 2020 [Prince Mahidol Award Conference] about Indonesia. And he was very polite and said Indonesia was perhaps five years ahead of India. So, with this comment, Ajay, my first question to you is can you briefly tell us about Indonesia. What are the design features of the new Indonesian universal health coverage model Jaminan Kesehatan Nasional or JKN for short? Why is it an attractive model for India or why not? And could you touch on both areas of pooling and purchasing? Over to you.
Dr. Tandon: Thanks very much, Jack for that introduction and for inviting me to be part of this panel. Just very briefly, before I get into the design features of Indonesia's insurance scheme and insurance model, just wanted to flag a couple of ways in which Indonesia is perhaps different from India. So just to keep that in mind. I think as Owen pointed out, Sri Lanka's per capita income is about double that of India's. So is Indonesia. In fact, Indonesia and Sri Lanka are almost identical in terms of their per capita income, about $4000 or just above $4000 and India is just above $2000, and Indonesia is now categorized as an upper-middle-income country. It made that transition last year. It's also a federated system. Unlike India, health is a district subject in Indonesia. So, Indonesia has more than 500 districts. They have 34 provinces. So as just as health is a state subject in India, in Indonesia it's actually a district subject. So just to keep that in mind. And in terms of its population, it's about 270 million. It's the fourth largest country in the world. About one-fifth the size of India in terms of population and very diverse in terms of ethnicities. A couple of other key points to keep in mind, that despite it being much richer than India, the size of its government is relatively small. The government doesn't raise as much revenue there as might be expected for its income level and the size of government spending is only about 17% of GDP. By way of contrast in India, if you take government spending across the centre and the state, it’s closer to 30% or more like 28%. And also, in terms of its health financing profile, whereas public spending on health in India is about $20, in Indonesia, it’s about three times as much, it’s almost $60 per capita, and whereas India, as other speakers have pointed out, the largest fair share of financing is out of pocket, more than 60% of financing for health is out of pocket. Currently, in Indonesia it’s about half that much, it's about 35%. So just to put those things in context—

And so, I wouldn’t necessarily say that Indonesia is the model for India to follow. But as you also was pointing out in your question, Jack, I think there are some design elements of Indonesia’s model that are attractive. And again, I want to emphasize two things-- one thing again that what’s on paper versus what gets implemented are two very different things. So, when I'm talking about design elements here I'm talking about how it’s designed on paper and then later on we can talk a little bit about what goes wrong in-- when that design gets implemented. But in terms of the design mechanism, it's really a single-payer, modified social health insurance model that is intended by design to cover the entire population. So, it's intended by design to cover 270 million people. It doesn't as yet cover 270 million. I think the latest numbers are it's got coverage rates around 75% or 80% of the population. But still, the aspiration is that this single model will cover everybody. And this gives everybody in the population, this whole idea of a universal benefits package. So, everybody on paper and in principle has access to the same benefits package. There are slight differences in hoteling,
basically meaning in terms of your access to a private room versus a public ward, that's the only difference that is there.

So, it's a mixed model. So, there is a large share of the population that's covered in a similar way to PMJAY. So about 100 Million of Indonesia's population, the premiums are paid for by the government. The government pays on behalf of the poor but then it's got a contributory element in that people in the formal public sector and the formal private sector, a certain percentage I believe, 5% of their salaries are deducted mandatory and that goes into the same single pool. And then there's sort of a middle part which is also the path that's currently missing most of the coverage, the 20% that's not covered currently as the informal sector non-poor, those that are not poor enough to be covered by the government and also are not in the formal sector. So, they don't have those wage-based deductions that are automatically taken out. So, I think those are some good elements in terms of population.

It's intended for the entire population and in doing so it reduces fragmentation in financing that we often see in many countries, in that, you have a separate program for the poor, a separate program for the formal sector, a separate program for some other employee sectors, and so on so forth. And in its design, it's designed in to be efficient and equitable. It has a diversified revenue source, both non-contributory coverage, and contributory coverage. It's a large single-payer model. It's a single pool of funds. So, in principle, it allows better risk pooling because of its large size and also cross-subsidization. So, the principle is that those who are paying into the system, contributing, can also subsidize those who are not able to pay or not able to pay as much. And it has a single purchaser of healthcare services - gives it a strong potentially purchasing power to negotiate payment rates with the providers using different payment methods.

And I think one other key design feature that's attractive about Indonesia's JKN health insurance scheme, JKN is their equivalent name to PMJAY, is that, unlike PMJAY which I think as Mekhala was pointing out, it's more of a financial risk protection scheme, JKN is designed as a health-enhancing scheme. So, all levels of care are covered. This is again a talk on paper. So, you have primary care, secondary as well as tertiary under the same scheme. There are no co-payments whatsoever. There are no caps to the scheme. So, there is no cap in terms of what the annual floater-- that is there in PMJAY. So, nothing similar to that. There's no cap in terms of how much coverage you can get as part of that scheme and no co-payments whatsoever. It allows for access to empanel facilities both public as well as private. And I think the other very nice feature of JKN is that it streamlines the process of contact with the health system. So, if you have a JKN card, everybody who has a JKN card has to register with either a private primary care provider or a public primary care provider in the catchment area where you live. In some rural areas and other places, you may not have that choice but at least
in urban areas, you do have that. And also in rural areas, many times the private primary care services are provided by those who actually are civil servants and work during the day in the public system, and sort of in the evening and weekend hours they open their own dual practice models.

In that sense, there’s a competition for the money in terms of, if you choose to register with a public primary care provider, the money goes to the public primary care provider versus the private and you can switch every three months or so. And it streamlines access, that’s your first point of contact. The gatekeeping function of the primary care at least on paper is very clear. They guide you through the system with the referrals that you need, and they also help manage some of the public health aspects. So, in terms of purchasing, they’ve implemented capitation for the primary care and that’s where you see that competition come in for primary care providers to want to have you registered with them because as soon as you register a capitation payment flows to you and then you are eligible to seek services from that provider. And for secondary and tertiary care, the Indonesian model uses case-based payments, a modified form of DRG payments. And so, they have been using innovative provider payment mechanisms in the system. So again at least in principle and on paper, some very attractive elements of the scheme - the size, the comprehensiveness of the benefits package, the choice that it gives, and the use or the potential to use some of these provider payment mechanisms is attractive elements.

Dr. Langenbrunner: Thank you, thank you Ajay, and so very nice in principle and on paper. So now I’m going to ask you to move to some of the messier issues. Maybe in the interest of time, I’m going to ask you to touch briefly on the pooling issue. One of my favourite provocations with the India PMJAY system is that maybe it should be pooling money from the National Health Mission under the NHA to be more effective. Could we consider this? And on the other hand, you and I, both worked in Indonesia and afraid I cannot be quite as polite as Mr. Indu Bhushan, especially with regards to some of the challenges of implementation of JKN. I think there’s been a number of challenges regarding implementation and I’m also a little sceptical when I look at some of the impacts and outcomes as we move to year seven under JKN. And I’m wondering if you could just touch on that briefly. And let me just say to viewers, we’re going to run over a little bit, but we will come back to your questions. Over to you Ajay.

Dr. Tandon: Okay. So very briefly even though on paper the Indonesian system, it looks very good - it allows for a big, huge pool of funds that can be allocated where needs are the most and can allow for cross-subsidization. Unfortunately, Indonesia is one of the countries where the pooling has worked completely the opposite way of how it was intended. So instead of helping promote equity, it has actually contributed to inequities. So, the basic issue here is that this single sort of national fund ends up paying for the same benefits package across the country. But because the supply side
readiness is so different between rural and urban areas across provinces and so on and so forth, so the ability to actually seek services is not equal across the country. So, what has happened is those who live in urban areas or the relatively well-off people are able to access the full range of benefits and are actually able to -- in many ways what’s happening is the poor are subsidizing the rich because of supply-side differentials across the country and because of the way in which the benefits package is designed in terms of being very open-ended and comprehensive. But the supply-side readiness across the country is not the same. So, for instance, neurosurgery is included in the benefits package. I hope Jack, you didn’t avail of that. I hope not. But you know but there are very few neurosurgeons in the country and most of them are in urban centres in Jakarta. So, if you’re in a far-flung province and do need that care, even though there are mechanisms for which you can get referred up, in effect that utilization tends to be much more constrained. So, a bigger share of the pool ends up financing coverage for those who have access to the supply if that’s one way to put it. So that’s one of the challenges. That doesn’t mean one should not put in place a single pool model. It’s just that one has to be careful that when you design a system to ensure that at least the basic benefits package is reasonably available to all where you have coverage, and the pool is utilized to allow for use of those services more equitably. So that’s one of the challenges the country is facing and continues to face - this mismatch, how you can call it between the benefits package and the supply side readiness. And so, I think that’s one of the challenges.

The other big challenge I think in the Indonesian case is this issue of the missing middle of so-called. So basically, they have coverage for the poor, and they have formal sector coverage. But even though on paper there’s a mandate that even if you are informal and non-poor you do have to contribute and purchase insurance, this is not enforced. So, what ends up happening is that the people among the informal non-poor are -- really those who sign up are the ones who are far more likely to utilize. They may have chronic conditions, or they may have need to seek care. So, what they pay into the system is much less than what they take out from the system. And so, there is again a subsidization of this to the healthy in other ways within this missing middle and have not signed up to the scheme and it has been a huge problem for Indonesia for several years now. The scheme is in deficit. And they’re continuing to try and find ways to deal with this. But I think again it’s this coming together of having a very open-ended benefits package with no restrictions, no caps together with depending on financing to come from contributions from the informal sector and not being able to mandate those contribution collections has caused this deficit problem. So, like I said, it looks very good. There are good design elements. And as Owen was pointing out, very similar in design to the systems in Philippines as well as in Vietnam and many other countries, this hybrid sort of social health insurance
model. But again, big challenges remain in terms of how it’s implemented across the country in terms of getting all the blocks to come together. Over.

**Dr. Langenbrunner:** Thank you, Ajay. I think even though you’ve been sitting in Delhi for a year, you’re still may be the premier expert on the JKN model. Thank you very much. I really appreciate it. So, Mekhala, I'm going to look at the Q&As and I’m wondering if you want to have just 60 seconds to have a re-joinder or retort to anything you heard from, particularly from Owen or from Ajay, and then I want to plunge into a few questions. So, I’m going to give you 60 seconds and I’m going to be very tough. Over to you.

**Dr. Krishnamurthy:** No, I mean I think just two or three really important points. I learned a lot from listening to both Owen and Ajay and I think the key thing is how do we learn. So, I think they constantly pointed out this difference between paper and what actual happens in practice and what's on policy. But also, just which elements, how do we learn about processes right, and this links directly to how we think about capacity, how we think about institutional preconditions, and I think that's critical.

The second thing that I took away from both of them and a really important point I think that needs to be emphasized is the importance of scale and the site. So, in India, it is a state subject. I thought it was really interesting to hear that health is a district subject in Indonesia or a district priority and it really brought back to you that you have to think about the states very very seriously and think about health systems at that and they are the size of countries. We are really looking at a lot of complexity and diversity, different scales of development, and I think unless we go back to thinking like that—and you know the one of the problems of these national programs, Owen said it very well, it's not only just I think the one-size-fits-all problem which is happening across a number of different sectors, but it also actually leads to an accountability problem. Because there's a lot of—both in terms of prioritization, in terms of who signs on to PMJAY or doesn’t, the current debates around West Bengal for example, but if you look at Telangana, [it] has 61% overall health insurance coverage even without signing up for PMJAY. So, states have their different trajectories. And if you actually end up having a fight over centre and state for both political mileage from these programs, you actually fix accountability less well, right. And I think it’s really important that states are held accountable, and the centre plays an important role here. But it isn’t actually this one-size-fits-all approach at all and that states have the capacity to also make better choices about the instruments that they need to build and the kinds of health systems that they need to build. I’ll stop there.

**Dr. Langenbrunner:** Good, very good. Thanks, Mekhala. I’m going to ask you the first question as well. It’s the first question that came in I think, it’s a good question. What are the aspects of state capacity that are relevant to strategic purchasing in health? Are there parallels in other sectors reform
Dr. Krishnamurthy: So, in some ways the answers about the kinds of capacities required, I think were very well illustrated in all of our comments but particularly in Owen and Ajay going over in quite a lot of detail – the kinds of capacities you need, and I think the idea that we actually need to look at each of these separately. So, there’s been a very interesting discussion in the chatbox about identification of beneficiaries, right and who should actually be enrolled, and do we have the systems and schemes. And here it is where we have built up NFSA, we have that database, we have an NREGA [MGNREGA, The Mahatma Gandhi National Rural Employment Guarantee Act, 2005] database. I think Covid has brought a lot of attention to combining databases. I know, for example, in agriculture, with a direct transfer scheme in Odisha called Kalyan, the government has spent a lot of time trying to improve identification. And we know historically in India we have erred on the side of errors of inclusion. And therefore, we actually really suffer from the problem of great number of errors of exclusion because we are so obsessed with errors of inclusion, and we let people out. And this is possibly why in a design of this kind—and I know some have suggested that you focus on a thinner, more focused but more universal cover, right. And that takes care of some issues. So, I think choosing this but also learning from other sectors about how to do identification better.

Another point that was raised very interestingly is that the NHA is the one looking at the data and analysing the data. Now a whole new set of institutions, the NHA, these SHAs are being created. How to get their institutional design right? How to get—in this case, the point is that they’re doing the evaluation, the data is not publicly available. This is not good practice in terms of thinking about accountability. It’s not good practice in terms of thinking about evaluation. It produces certain kinds of conflicts of interest. But also, when you have new kinds of authorities and regulatory authorities, how do they approach the public and private sector, right. Especially if you are a public authority, but you have to regulate both the public and private sector, it requires both careful attention to design but also to the kinds of people who come in to regulate the sector and this point about not becoming competitors with the private sector but actually doing the ring-fencing and the regulation that is required. So, each of these areas actually requires, whether it’s institutional design, whether it’s getting the people who actually occupy these positions, particularly regulatory positions right, whether it’s getting your IT systems correct and also having adequate decentralization. I think for all of its challenges the NREGA is a good example of how India did build up a demand-side program and get decentralization to a good order, right. And actually, build up the conditions, put different kinds of people and it’s a very different sector and it’s not comparable to the kinds of challenges of tertiary hospitalized based care. But I think it raises important questions about the fact that we can do initiatives that we can draw on to understand whether India can do this well? So, it’s kind of looking across sectors. Over to you.
decentralization also much better if we get the systems right and that actually we can move to demand-side and demand-led programs and that's one experience of that as well.

So, I think there are experiences that we can draw on, on particular elements. I think getting all the pieces together is the real challenge and that again, I think it’s right that which states need to be doing this, which states need to build up other kinds of preconditions, much stronger public systems, and public provision before you introduce a PMJAY kind of approach. So, the ongoing importance of that in the Indian context because this is a very specific kind of coverage. Unlike the one in Indonesia, we are talking about tertiary care here. I'll stop there.

**Dr. Langenbrunner:** Thanks, Mekhala. Here's a question for our World Bank colleagues which I think they might be able to help on. The National Health Agency as a government institution analyses all of the PMJAY-wide data and publishes its findings as a report, which I see as a conflict of interest. So far there has not been any independent research nor is data freely accessible in this context. How to demand for an impact evaluation to account for the millions of taxpayer money? Owen, maybe you want to start and Ajay you can add over.

**Dr. Smith:** Sure. That's a good question. I think Ajay can come in on this, but I believe that countries like Indonesia have started to publicly share like 1% of their claims data. So, they've anonymized the claims data, taken away any sort of identifying details, and just made that 1% available for researchers to analyse. So, I think that's certainly a direction that NHA could consider. Obviously, the privacy issues are there and that has to be handled very carefully. I think there should be impact evaluations. I think some of that needs to be done at the household level as well and so I think researchers, by all means, should be doing some studies on this. I think in the first year or two of a program there’s so much instability in the system, so many things changing at the same time that- - I did this years ago when I was working in Georgia and you got the impression that the impact of a program 12 months in and the impact of a program 24 months in were two entirely different things just because the system is so unstable in the early days as stakeholders kind of get a handle on things. But as the system stabilizes, then there should absolutely be a lot more scrutiny and evaluations going on and sharing a slice of the claims data I think makes a lot of sense. Let me just very briefly go back to the state capacity story.

I think it’s only one small sliver of information. But we had looked at how many staff the typical social insurance agency in other middle-income countries has, so whether it's a Turkey or a Vietnam or Indonesia. And typically, these agencies have thousands and thousands of employees, anywhere from 2000 to 10000 or 15000. Now that's not to say that 15000 is the right number. It might well be too much and often these agencies are bloated in other countries. But when you compare with a State Health Agency in India or the National Health Authority, you’re talking about sometimes like 10 people
or 20 people running these schemes. And yes, they have TPAs [Third Party Administrators] that help with the claims management but the TPAs don't have a huge number of people either. So, the most basic aspect of state capacity is that when you've got a complex scheme there should be a reasonable sort of headcount of people working on it and I think that's part of the challenge of building out these institutions. We talk about the difference between a scheme and a system. A scheme is run by a couple dozen people. A system is managed by hundreds if not thousands of people in mature agencies and when I said that's a foundation is built but there's no walls and moves I think this institutional strengthening agenda and staffing up, easier said than done I know, but this is something that needs to happen over.

**Dr. Langenbrunner:** Ajay, you want to add to that? If not, I've got another question for you specifically.

**Dr. Tandon:** No, just wanted to just to say, yes that's correct. And in Indonesia, they do allow 1% anonymized sample. It just started I think one or two years ago. So, they allowed the system to stabilize a little bit. And I think it's not just Indonesia, even your ex-employer, Jack, CMS right, that provides anonymized claims data to do that. And I think that's where it's very important to for monitoring and evaluation to occur and not to occur independently as well. And I think one other aspect that's very helpful in Indonesia is they have an annual household income and expenditure survey called the SUSENAS. It's actually district representative and so that allows-- and it's available to the public, to researchers to analyse and it allows for a much more robust sort of-- much more frequent assessment of what's happening. Their questions could be improved. They still have not adjusted some of the questions they asked to the changes in their overall scheme. And we've been in discussions with them to try and adapt the questionnaires to sort of ask much more questions related to how their overall health reform has occurred. But nevertheless, it's good to have this kind of information available to allow for researchers and others to evaluate independently. Over.

**Dr. Langenbrunner:** Thanks, Ajay. I do think this 1%, a sample that they put online is a good model. It is very much an OECD [Organisation for Economic Co-operation and Development]. Like you say, in the US, you can buy it. You specify what kind of sample draw you want, and you pay for it and you get it and that has contributed to a lot of research and evaluation going forward. Last question for you, Ajay. Specifically, hi Ajay, can you distinguish the public health care in Indonesia and India? How different they are and what does India lack or is better from Indonesia in terms of public health care? Over to you, Ajay.

**Dr. Tandon:** It's very difficult to say that. In some respects, I think India does better than Indonesia. In other respects, I find that Indonesia does better than India. I think just the mere fact of decentralization to the district level adds a layer of complexity and capacity issues that are magnitudes
higher in Indonesia, as Jack, you know better than I do, than in the situation in India. Even finding out baseline information as to how much is being spent, public spending on health at the district level is a herculean task. At the central level, it’s impossible to even find that kind of information and let alone the diversity in terms of capacity of districts to be able to implement the health system and to be able to—there are also differences in their ability to finance the health system. So, I think there were political elements for the decentralization to go through the district level. But I think in some ways Indonesia’s JKN system was an attempt at least from a health financing point of view to try and re-centralize a little bit back so to allow the system to equilibrate and to function much more centrally. But it hasn’t happened completely because there still remains this partial financing model and I think that’s also the case for PMJAY, in that the public health system, a large chunk of it still remains financed using traditional budget line items.

So, for instance, when you go to a public hospital in Indonesia or a public primary care, the salaries, the equipment, even the medicines, and everything are purchased from line item budgets. They’re not coming from reimbursements from JKN. The reimbursements from JKN through capitation for primary care and through DRG are really for operating costs. So, the JKN has taken over—of course, those are very important at the margin. They’re also what help design the top-up of salaries and to be able to be much more responsive to patients. But it adds a layer of complication in that these reimbursements are then the same for the private providers who don’t get these subsidies and so on so forth. And then there remain some traditional public health programs like for TB and for immunization that are separate, that remain separate from JKN. And because of that separation, that adds to the fragmentation and then the inability to be able to use the strategic purchasing power of JKN to get quality enhancements and to able to really get the system to move towards effective coverage outcomes. That gets a bit diluted because of this remaining fragmentation of financing both in terms of this sort of top-ups role that the JKN plays but also the remaining traditional public health programs such as for TB and others so on and so forth.

So, in many ways Indonesia’s health outcomes, if you just look at them across the board, they are better than India. But if you control for levels of income, Indonesia is very similar to India. So, India is about average for infant mortality, under-five mortality, life expectancy. Indonesia is another average country. It’s average for its level of income, it's not a Sri Lanka. It has huge challenges remaining with regard to very high levels of maternal mortality and stunting and huge levels of inequality across the country. So, in many ways, it's India with a higher income level, an average performer has some good aspects but has a long way to go and it’s not a sort of a star performer in the Asian landscape. Similar in some ways to India but there are some areas within Indonesia that do
very well, just as there are some states within India that do very well. So, I hope I’ve addressed that question. Over.

**Dr. Langenbrunner:** Thank you, Ajay. And I would say that we tend to traditionally look to Europe and North America. I would caution you against looking too closely at the US because there's so many problems in the US, but certainly Canada. But I would also say the Asia landscape is quite dynamic and we really haven’t had time today to go further into places like Vietnam or Sri Lanka and there’s a lot going on in the Philippines, there’s a lot going on in China right now. Very very interesting changes in purchasing provider split as well as pooling of funds across the districts up to the provinces and states and nationally. And then, of course, the Thai model which we have a couple of questions in the chatbox about, but we're not going to have time to get into that. So, I can't summarize, I can't begin to summarize what we've discussed today. But I will thank our three panellists for some great insights, for some great points, for some great details and comparisons about the other countries in Asia and internationally.

I’ve really enjoyed sitting at the feet of Mekhala, of Owen, and of Ajay. So, thank you so much. Great comments, great points, I think we've learned a lot. And maybe we've raised more questions than answers. But nevertheless, I think this has been a great session. I know there's at least one comment for a summary of the discussion today and I will leave that to Dvara Research. And I’m also wondering if our panellists would be willing to share their email with Dvara Research so that if there are follow-up questions, people can write to them and ask questions, maybe even chat through zoom or whatever. So let me leave it there.

I want to thank again our panellists, our excellent panellists for some great points, great insight into what's going on in India and in other countries. And thanks once again to Dvara Research and IndiaSpend for a great series. And I hope you can continue, Dvara Research and IndiaSpend, to keep this discussion alive. So, thanks everyone and bye-bye.

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Transcript edited by Sowmini G. Prasad.