

The Big Push toward Universal Health Coverage: Metrics, Data, and Impact

Adam Wagstaff
 Research Manager
 Development Research Group, The World Bank

Introduction

2) UHC index: principles

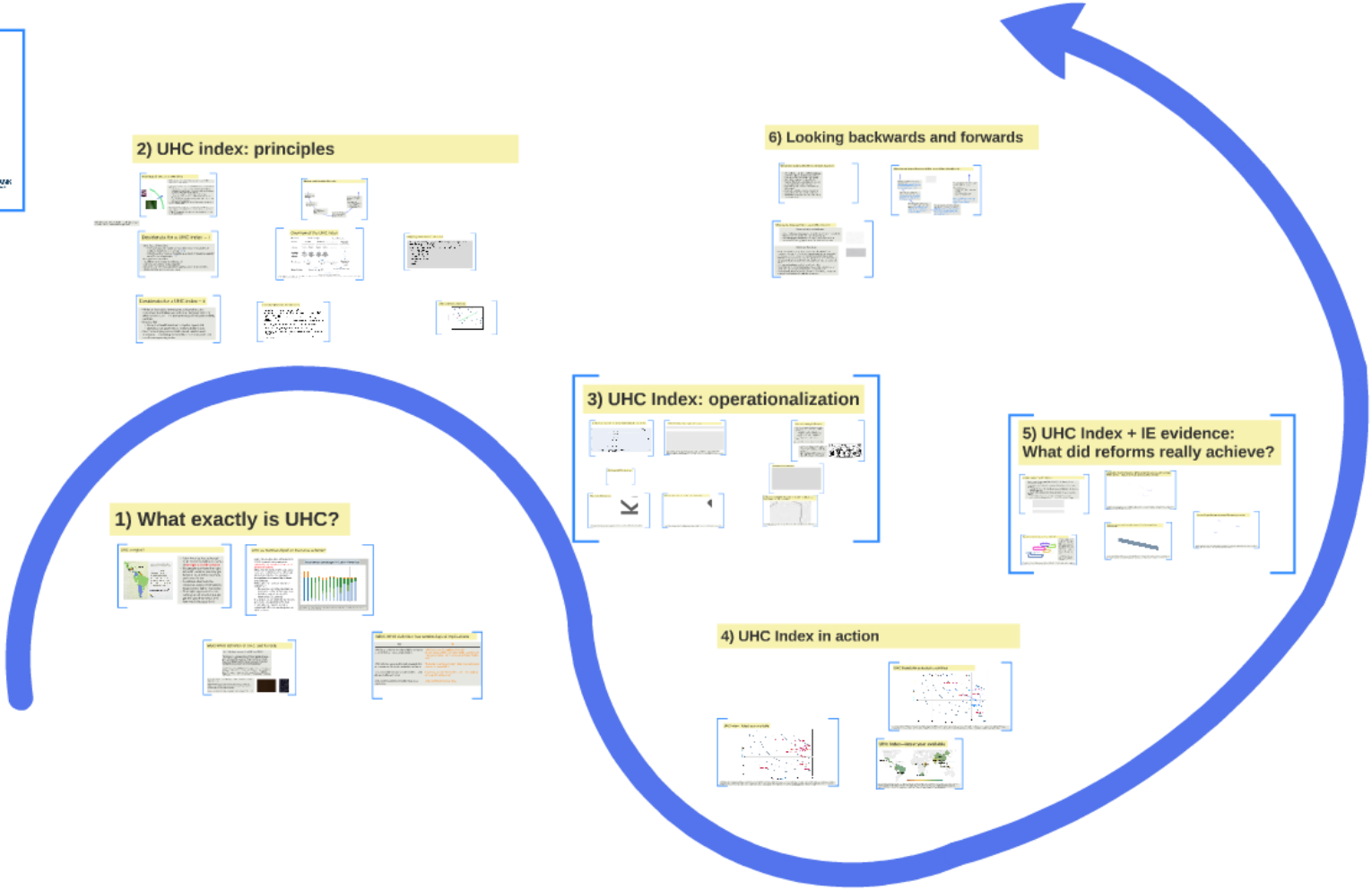
6) Looking backwards and forwards

3) UHC Index: operationalization

5) UHC Index + IE evidence: What did reforms really achieve?

1) What exactly is UHC?

4) UHC Index in action



The Big Push toward Universal Health Coverage: Metrics, Data, and Impact

Adam Wagstaff

Research Manager,
Development Research Group, The World Bank





Robert Marten, Sr. Program Associate at the Rockefeller Foundation, blogpost June, 2013, reporting on WBG President Jim Yong Kim's speech to the World Health Assembly, May 2013

"This was the **first time a World Bank President would speak to the World Health Assembly...**

Prior to this speech, **some questioned whether or not the Bank would work on UHC.** This speech removed any doubt..

His words and speech had the World Health Assembly on its feet more than once. Kim's remarks felt like another defining moment in the ... quest to see UHC become a global reality..."

WBG President Jim Yong Kim, World Health Assembly, May 2013

"We can do so much more. We can **bend the arc of history** to ensure that everyone in the world has access to affordable, quality health services in a generation..."

Now is the time to act.

WE MUST BE the generation that delivers universal health coverage."

WBG President Jim Yong Kim, World Bank IMF Annual Meetings, Tokyo, 2012

"It is time to **bend the arc of history.** With global solidarity underpinned by a relentless drive for results, we can, we must, and we will build shared prosperity and end poverty."

US President Barack Obama, Chicago, 2008

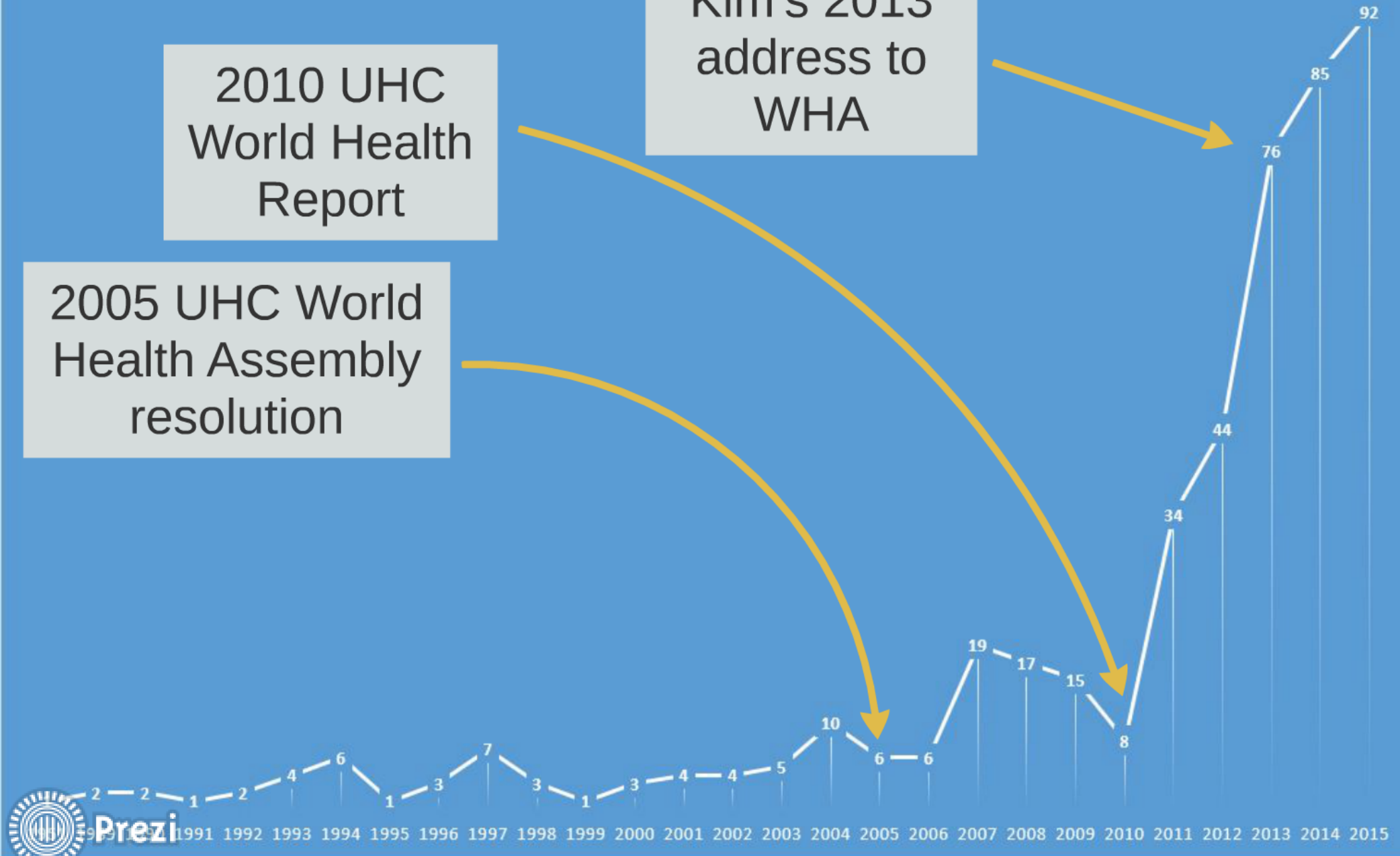
"It's the answer that led those who've been told for so long by so many to be cynical and fearful and doubtful about what we can achieve to **put their hands on the arc of history and bend it** once more toward the hope of a better day."

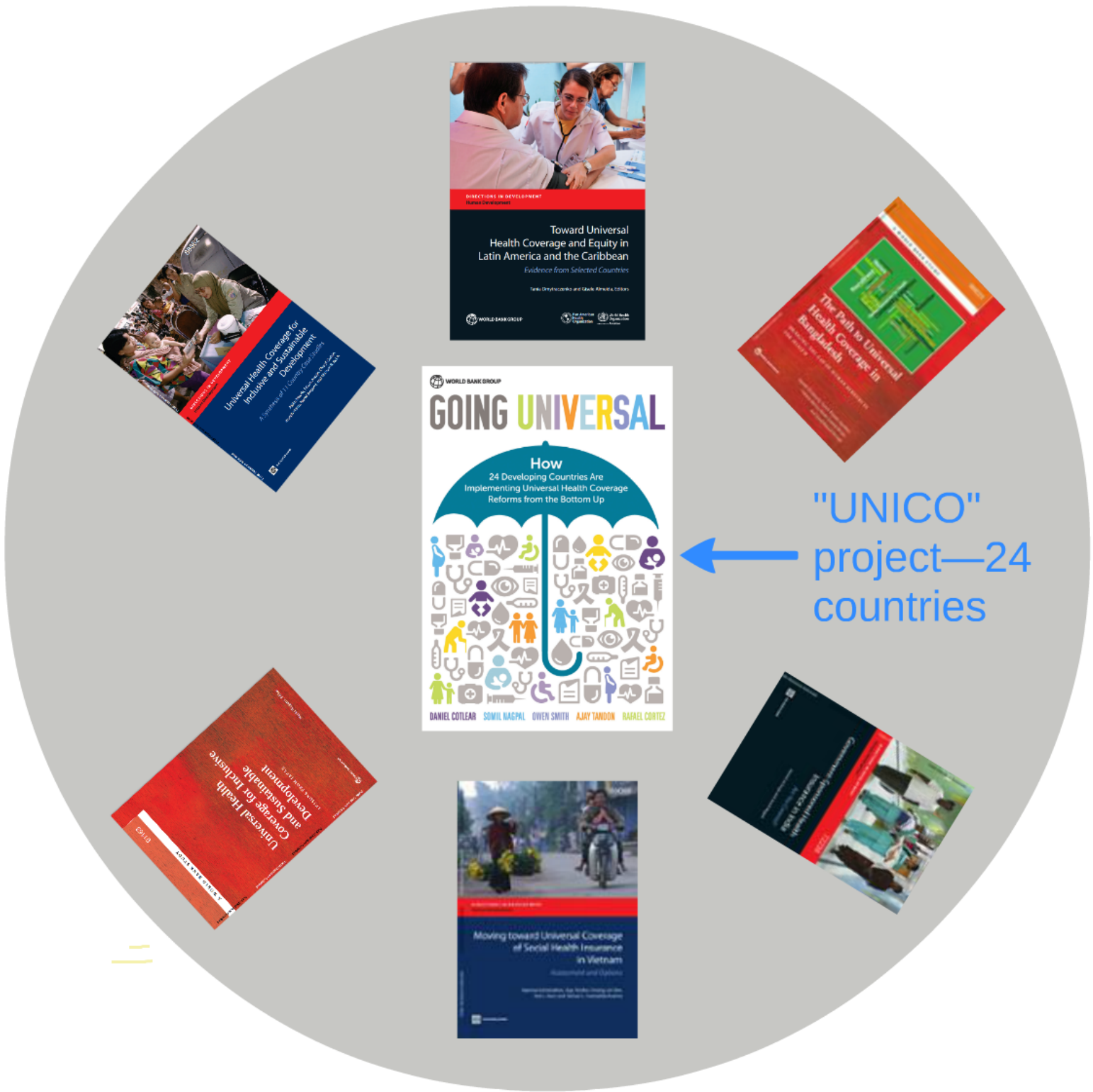
PUBMED ARTICLES WITH UHC IN TITLE

2010 UHC
World Health
Report

Kim's 2013
address to
WHA

2005 UHC World
Health Assembly
resolution





But what is UHC?

Today will explain rationale of WBG-WHO definition of UHC, and clarify terminological implications

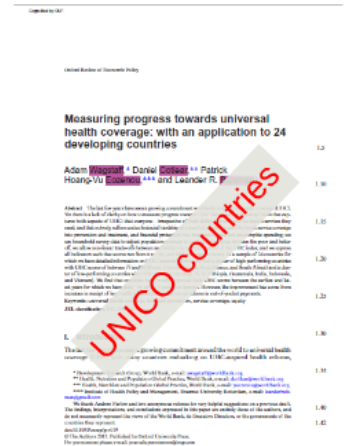
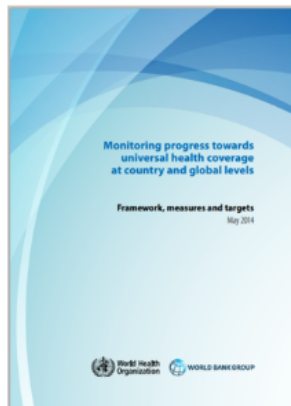
And how can we measure UHC?

Today will **pitch a new idea**—a UHC index

Recently developed and tested the index in 2 groups of countries w/ WBG collaborators

Acknowledgments

Abdo Yazbeck, Anthony J. Culyer, Caryn Bredenkamp, Daniel Cotlear, David Evans, Davidson Gwatkin, Eddy van Doorslaer, Gisele Almeida, Leander R. Buisman, Magnus Lindelow, Marcel Bilger, Owen O'Donnell, Patrick Hoang-Vu Eozenou, Pierella Paci, Ravi Kanbur, Tania Dmytraczenko, Ties Boerma, Tim Evans



The Big Push toward Universal Health Coverage: Metrics, Data, and Impact

Adam Wagstaff
 Research Manager
 Development Research Group, The World Bank

Introduction

2) UHC index: principles

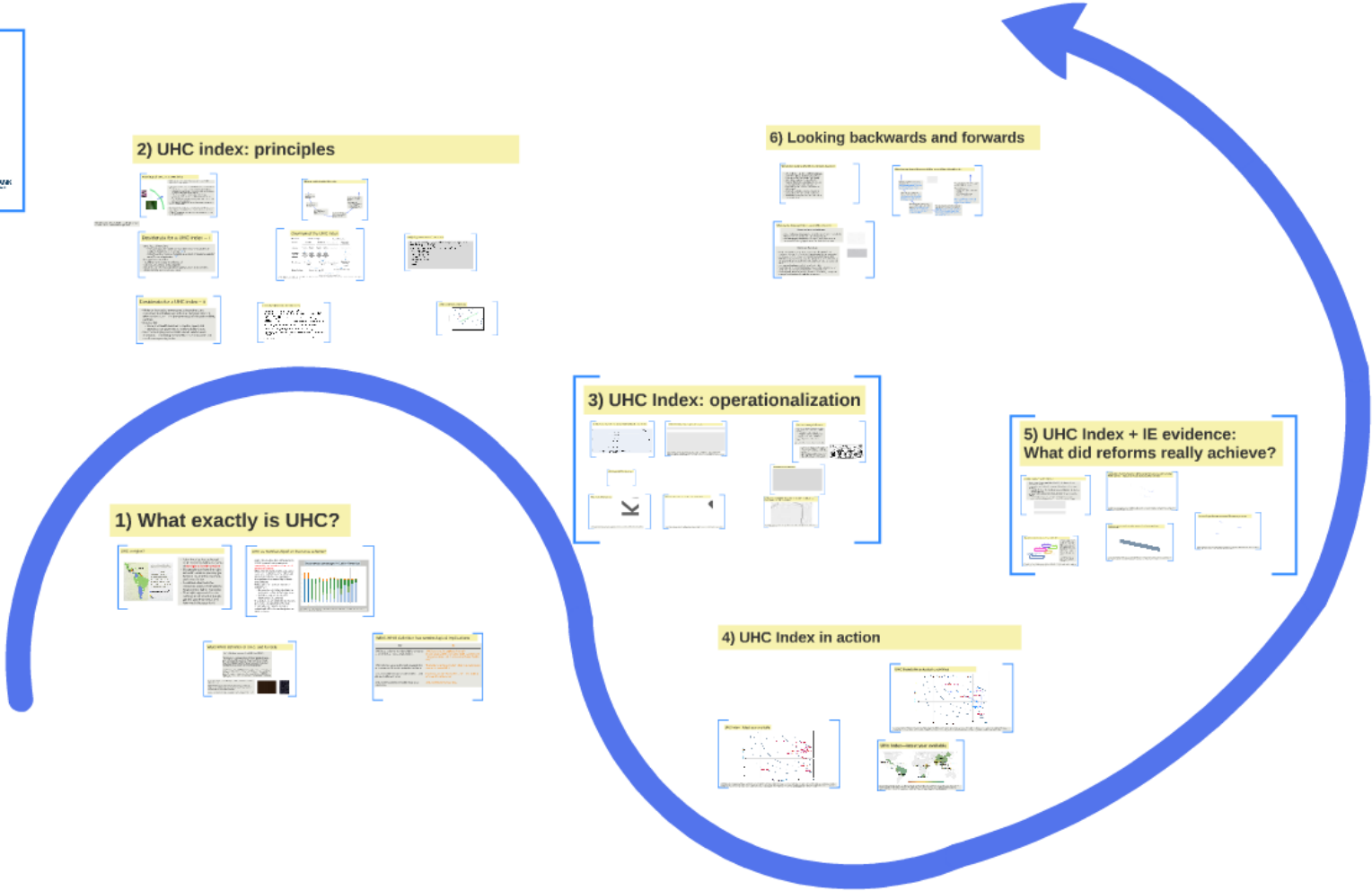
1) What exactly is UHC?

6) Looking backwards and forwards

3) UHC Index: operationalization

5) UHC Index + IE evidence: What did reforms really achieve?

4) UHC Index in action



1) What exactly is UHC?

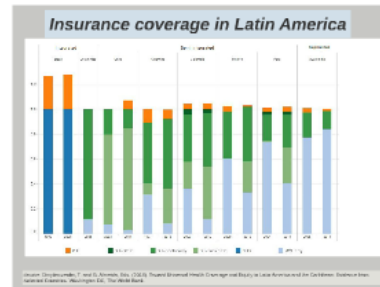
UHC as rights?



- Latin America has achieved UHC if UHC is defined in terms of **the right to health services**
- But people can have the right to health services yet may get to the clinic and find no drugs and/or no doctor
- Countries often lack the resources and/or mechanisms to guarantee rights in practice
- The rights approach tells us nothing about whether people get the care they need, and how much they pay for it

UHC as membership of an insurance scheme?

- Latin America has also achieved UHC if UHC means having everyone covered by an **insurance or financial protection scheme**
- Ministries of health deliver subsidized care, and in effect operate a financial protection scheme. So **everyone, everywhere is covered by at least one scheme**
- But people can be in an insurance scheme yet
 - Be required to make out-of-pocket payments – often quite large ones
 - Find that only a limited set of interventions is covered
- In practice, not all schemes are equally generous – **inequality is the key**. That's why e.g. Mexico set up a subsidized SHI scheme alongside the MOH scheme



WBG-WHO definition of UHC, and its roots

UHC definition proposed by WBG and WHO:

"Everyone – irrespective of their ability-to-pay – gets the health services they need in a timely fashion without suffering any undue financial hardship as a result of receiving them."

World Bank, World Health Organization (2014). *Measuring Progress Towards Universal Health Coverage: Country and Global Level Framework, Indicators, and Targets*. Joint International Bank-Governance Working Paper Series, World Bank, World Health Organization.

CF: egalitarian definition of health equity evident in most OECD countries' policy statements:

Health services ought to be allocated on the basis of need, not ability-to-pay, and payments for health care ought to be linked to ability-to-pay, not to receipt of services.

Wagstaff, A., E. van Doorslaer and G. Pina (2006). 'Equity in the Financing and Delivery of Health Care: Some 'Western' Policy Statements', *Contributions to Economic Policy* 5, 37-52.



WBG-WHO definition has terminological implications

Out	In
UHC (e.g. scheme membership) is a means to an end (e.g. financial protection)	UHC is an end. It captures in an all-encompassing definition what health systems are trying to achieve. (UHC means to better health too)
UHC reforms are about bringing people into an insurance / financial protection scheme	That's just one type of reform that may help move a country toward UHC
Lots of countries have 'reached' UHC – and did so in different ways	Countries are 'on the road' to UHC – it's unlikely any country is there yet
UHC is the business of health financing specialists.	UHC is everyone's business

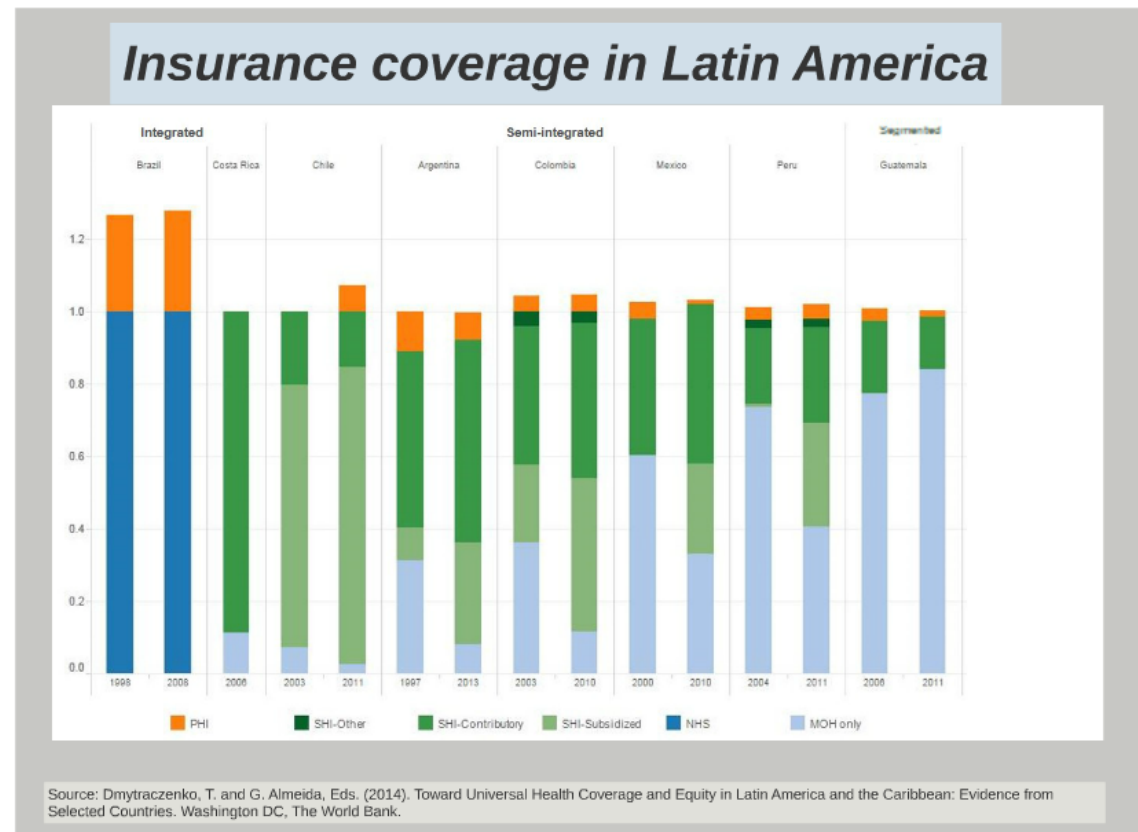
UHC as rights?



- Latin America has achieved UHC if UHC is defined in terms of **the right to health services**
- But people can have the right to health services yet may get to the clinic and find no drugs and/or no doctor
- Countries often lack the resources and/or mechanisms to guarantee rights in practice
- The rights approach tells us nothing about whether people get the care they need, and how much they pay for it

UHC as membership of an insurance scheme?

- Latin America has also achieved UHC if UHC means having everyone **covered by an insurance or financial protection scheme**
- Ministries of health deliver subsidized care, and in effect operate a financial protection scheme. So **everyone, everywhere is covered by at least one scheme**
- But people can be in an insurance scheme yet
 - Be required to make out-of-pocket payments – often quite large ones
 - Find that only a limited set of interventions is covered
- In practice, not all schemes are equally generous – **inequality is the key**. That's why e.g. Mexico set up a subsidized SHI scheme alongside the MOH scheme



WBG-WHO definition of UHC, and its roots

UHC definition proposed by WBG and WHO:

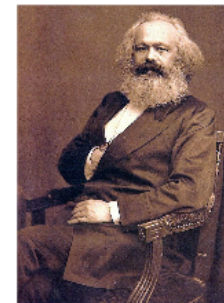
"Everyone – irrespective of their ability-to-pay – gets the health services they need in a timely fashion without suffering any undue financial hardship as a result of receiving them."

World Bank, World Health Organization. (2014). *Monitoring Progress towards Universal Health Coverage at Country and Global Levels: Framework, Measures and Targets*. Joint WHO/World Bank Group paper. Washington, DC; Geneva, World Bank, World Health Organization.
Boerma, T., P. Eozenou, D. Evans, T. Evans, M.-P. Kieny and A. Wagstaff (2014). "Monitoring Progress towards Universal Health Coverage at Country and Global Levels." *PLoS Medicine* 11(9): e1001731.

Cf. egalitarian definition of health equity evident in most OECD countries' policy statements:

Health services ought to be allocated on the basis of need, not ability-to-pay. And payments for health care ought to be linked to ability-to-pay, not to receipt of services.

Wagstaff, A., E. van Doorslaer and P. Paci (1989). "Equity in the Finance and Delivery of Health Care: Some Tentative Cross-country Comparisons." *Oxford Review of Economic Policy* 5 1: 89-112.



WBG-WHO definition has terminological implications

Out

UHC (e.g. scheme membership) is a means to an end (e.g. financial protection)

UHC reforms are about bringing people into an insurance / financial protection scheme

Lots of countries have 'reached' UHC – and did so in different ways

UHC is the business of health financing specialists.

In

UHC is an end. It captures in an all-encompassing definition what health systems are trying to achieve. (UHC a means to better health too)

That's just one type of reform that may help move a country toward UHC

Countries are 'on the road' to UHC – it's unlikely any country is there yet

UHC is everyone's business

2) UHC index: principles

From ingredients... to a UHC index

- Index approach offers promise of having progress towards UHC captured in a single number
- The index approach offers several advantages over a list of indicators
 - Evidence
 - A more focused discussion of criteria for inclusion of different indicators - "it's not obvious" we might need to include several key indicators for things that may be important
 - A discussion of weights - not everything matters equally
 - An approach that policymakers are willing to trade off success in different areas
 - A consideration of how to integrate inequality into the analysis, not known to an optimal add-on
- An index approach doesn't mean we can't have a dashboard as well - we can use sub-indicators
- Instead of deriving a UHC index from scratch, starting with a conceptual model - use for a "dashboard" index, or combine elements from existing approaches
 - CI: Human Development Index (HDI) from which proposed UHC index borrows several ideas

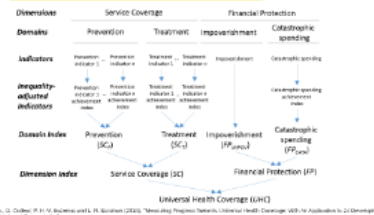
What we could do with a UHC index



Desiderata for a UHC index – i

- UHC has 2 dimensions:
 - Everyone gets the health services they need, irrespective of ability-to-pay (Service coverage, SC)
 - Nobody suffers financial hardship as a result of receiving needed care (Financial protection, FP)
- A higher score is better
- [0,100] to make it easy to understand
- Sub-indices need to be aggregable
- Index should reflect policymakers' willingness to trade off UHC dimensions (at a non-constant rate)

Overview of the UHC index



Weighting components of UHC index

- Use geometric weighted averages (i.e. Cobb-Douglas function) to combine the quality-adjusted sub-indices
- Allows for unequal emphasis on eliminating marginal vs. substitution, or replacement investments for equality access, e.g. dimensions
- Non-constant elasticity
 - $UHC = SC^\alpha \cdot FP^{1-\alpha}$
 - $\alpha = SC^{\alpha-1} \cdot FP^{1-\alpha}$
 - $\alpha = SC^{\alpha-1} \cdot FP^{1-\alpha}$
 - $\alpha = SC^{\alpha-1} \cdot FP^{1-\alpha}$
- For financial protection:
 - $\alpha = 1 - SC^{\alpha-1} \cdot FP^{1-\alpha}$
 - $\alpha = 1 - SC^{\alpha-1} \cdot FP^{1-\alpha}$
- For UHC:
 - $\alpha = SC^{\alpha-1} \cdot FP^{1-\alpha}$

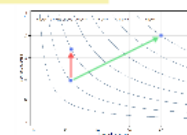
Desiderata for a UHC index – ii

- While on the road to universality, policymakers are concerned about **who** pays out-of-pocket payments and **who** receives care – the **pro-pooriness of the path to UHC matters**
- Need to link
 - Receipt of health services to medical need, and
 - Out-of-pocket payments to family's ability-to-pay
- Want to track progress on UHC overall, **and** on each dimension – combining the benefits of a "dashboard" and an all-encompassing index

Inequality-adjustment in the UHC index

- Policymakers want to see a **pro-poor path** on UHC
- See also higher weight on $\alpha > 0$ as means of adjusting the loss to self
- Use **quality-adjusted indices**
 - Prefer high inequality because the achievements **improve the population on mean**
 - Equity index: $Q = \frac{1}{n} \sum_{i=1}^n x_i^\alpha = \frac{1}{n} \sum_{i=1}^n x_i^\alpha$ (where $\alpha > 0$ is the parameter that "tunes" the index)
 - When $\alpha = 1$, it is the arithmetic mean
 - When $\alpha \rightarrow 0$, it is the geometric mean
 - When $\alpha \rightarrow -\infty$, it is the harmonic mean
 - When $\alpha \rightarrow \infty$, it is the maximum value
 - More $\alpha > 0$ means "weight" given to the "poorest" people
 - More $\alpha < 0$ means "weight" given to the "richest" people
 - More $\alpha > 0$ means "weight" given to the "poorest" people
 - More $\alpha < 0$ means "weight" given to the "richest" people
- SC UHC inequality-adjusted quality-adjusted index for population

UHC contours and index



From ingredients... to a UHC index

- Index approach offers promise of having progress towards **UHC captured in a single number**

- The index approach offers several **advantages over a list of indicators**
- It forces:
 - A more focused discussion of **criteria for inclusion of different indicators**—"if it's in, it counts"; we may need to include second-best indicators for things that must be captured
 - A discussion of **weights**—not everything matters equally
 - A recognition that policymakers are willing to **trade off** success in different areas
 - A consideration of how to **integrate inequality** into the analysis, not leave it as an optional add-on
- An index approach doesn't mean we can't have a **dashboard** as well—we can use **sub-indices**

- Instead of deriving a UHC index from scratch, starting with a theoretical model, opt for a **'mashup' index**, i.e. combine elements from existing approaches
- Cf. Human Development Index (HDI) from which proposed UHC index borrow several ideas



What we could do with a UHC index

See how far countries are from attaining UHC

Track countries' progress towards UHC over time

Compare UHC performance across different types of health system

Evaluate (actual and likely) effects on UHC of govt. programs and reforms

Evaluate (actual and likely) effects on UHC of WBG projects

WBG could use to:

- Monitor performance of lending portfolio
- Inform choices between alternative operations

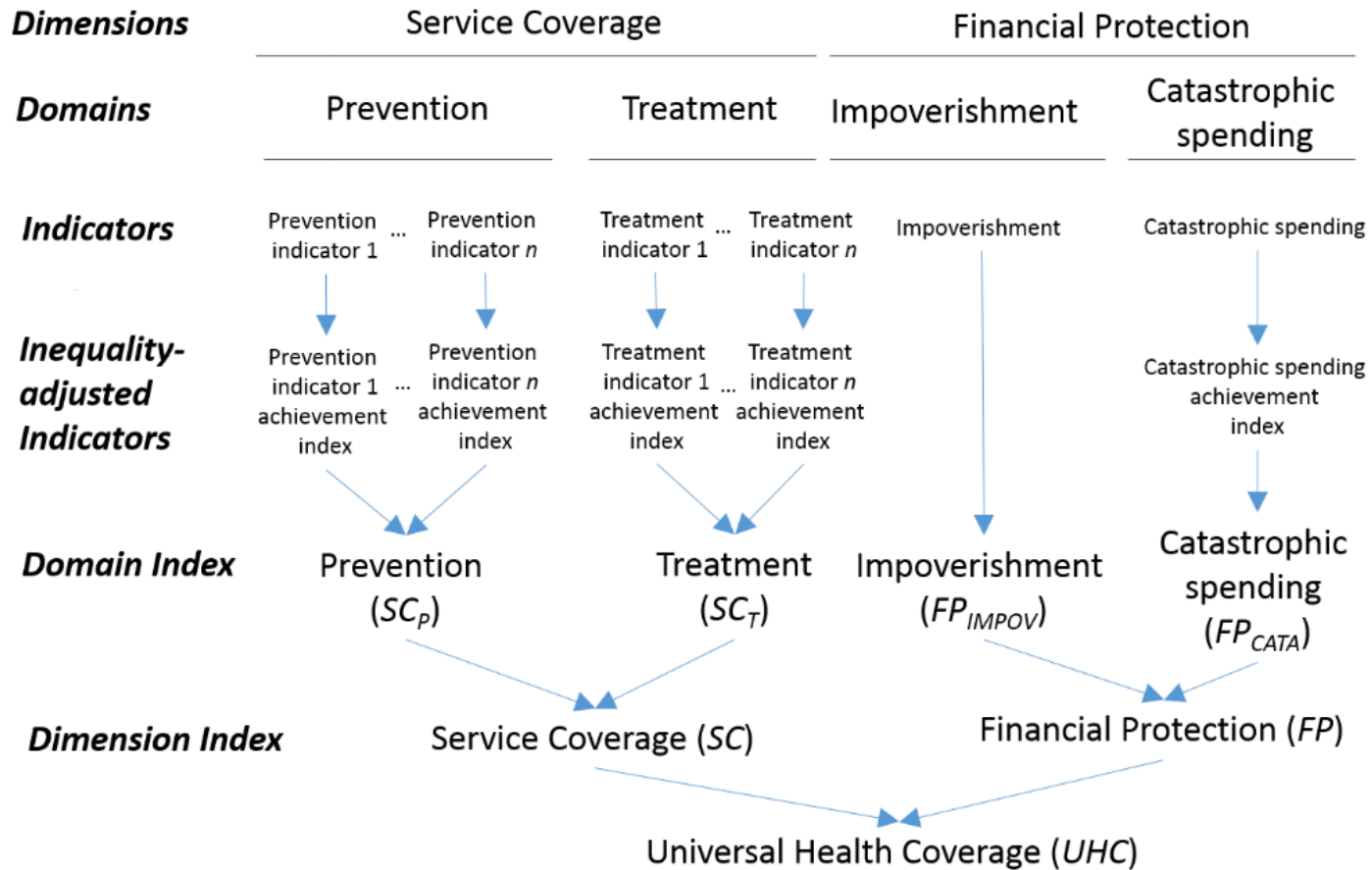
Desiderata for a UHC index – i

- UHC has 2 dimensions:
 - *Everyone gets the health services they need, irrespective of ability-to-pay* [Service coverage, **SC**]
 - *Nobody suffers financial hardship as a result of receiving needed care* [Financial protection, **FP**]
- A higher score is better
- [0,100] to make it easy to understand
- Sub-indices need to be aggregable
- Index should reflect policymakers' willingness to trade off UHC dimensions (at a non-constant rate)

Desiderata for a UHC index – ii

- While on the road to universality, policymakers are concerned about *who* pays out-of-pocket payments and *who* receives care – the **pro-poorness of the path to UHC matters**
- Need to link
 - Receipt of health services to medical need, and
 - Out-of-pocket payments to family's ability-to-pay
- Want to track progress on UHC overall, **and** on each dimension – combining the benefits of a “dashboard” and an all-encompassing index

Overview of the UHC index



Source: Wagstaff, A., D. Cotlear, P. H.-V. Eozenou and L. R. Buisman (2015). "Measuring Progress Towards Universal Health Coverage: With An Application to 24 Developing Countries" Oxford Review of Economic Policy.

Inequality-adjustment in the UHC index

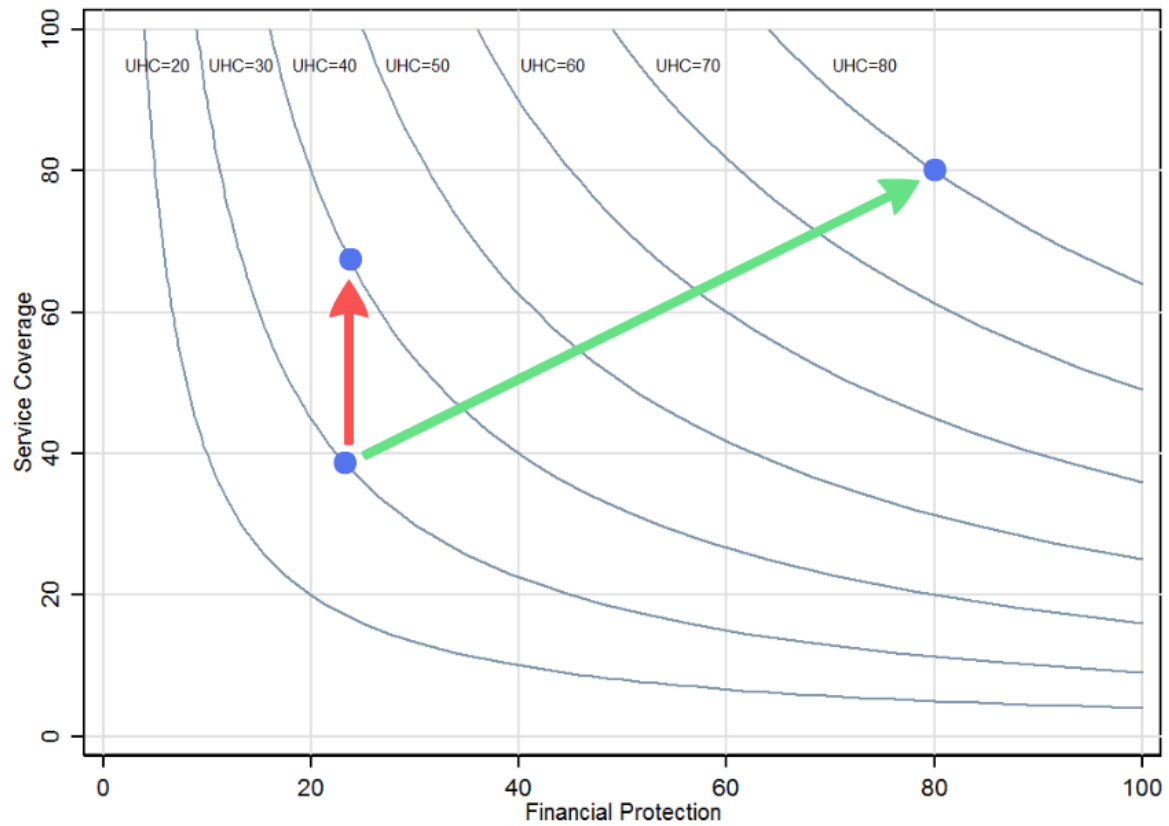
- Policymakers want to see a pro-poor path to UHC
- So attach higher weight to (good) outcomes among the less well-off
- Use achievement index*:
 - **Pro-rich inequality lowers the achievement index below the population mean**
 - Equal to $I = (2/n) \sum_{i=1}^n y_i (1 - R_i)$ where R_i is the person's (fractional) rank in the income distribution
 - Also equal to the population mean times the complement of the concentration index, i.e. $I = \mu(1 - C)$
 - And equal to area under 'generalized concentration curve'
 - Analogous to Sen's[‡] abbreviated social welfare function (except he looks at 'pure' inequality, and we're looking at inequality in a health indicator across the income distribution)
 - Cf. HDI inequality adjustment which adjusts for 'pure' inequality

*Wagstaff, A. (2002). "Inequality aversion, health inequalities and health achievement." *Journal of Health Economics* 21(4): 627-641. † Sen, A. K. (1976). "Real National Income." *Review of Economic Studies* 43 1: 19-39.

Weighting components of UHC index

- Use geometric weighted averages (cf. Cobb-Douglas function) to combine inequality-adjusted sub-indices
- Allows for nonlinear tradeoffs, i.e. diminishing marginal rate of substitution, or equivalently aversion to inequality across e.g. dimensions
- For service coverage:
 - $SC_P = SC_{P_1}^{\alpha_1} SC_{P_2}^{\alpha_2} \dots SC_{P_n}^{\alpha_n}$
 - $SC_T = SC_{T_1}^{\beta_1} SC_{T_2}^{\beta_2} \dots SC_{T_n}^{\beta_n}$
 - $SC = SC_P^\pi \cdot SC_T^{1-\pi}$
- For financial protection:
 - $FP = FP_{CATA}^\gamma \cdot FP_{IMPOV}^{1-\gamma}$
- For UHC:
 - $UHC = SC^{0.5} \cdot FP^{0.5}$

UHC contours and index



3) UHC Index: operationalization

Decisions needing to be taken in operationalizing the UHC index

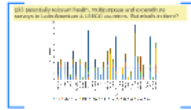
Indicator	Source	Indicator	4th Year	5th Year	6th Year
Service coverage	Service coverage	Population with essential services	10	10	10
		Population with essential services	10	10	10
		Population with essential services	10	10	10
		Population with essential services	10	10	10
Financial protection	Financial protection	Population with essential services	10	10	10
		Population with essential services	10	10	10

UHC Index 1.0, indicators, weights and thresholds

Indicator	Source	Indicator	Weight	Threshold	Target
Service coverage	Service coverage	Population with essential services	10	10	10
		Population with essential services	10	10	10
		Population with essential services	10	10	10
		Population with essential services	10	10	10
Financial protection	Financial protection	Population with essential services	10	10	10
		Population with essential services	10	10	10

Service coverage indicators

- SC indicators should capture 'effective coverage', i.e. not just whether someone received a service, but also that they:
 - They needed it (i.e. correct diagnosis), and
 - The service had the intended effect on health status (i.e. correct treatment, administered correctly)
- Should SC indicators include public health interventions?
- SC indicators should capture a large spectrum of the services received by patients, in quality or expenditure terms. So should go beyond MDG indicators
- Measuring coverage of some services is easy, but when these services cause a tiny fraction of a typical health system's expenditures, CI, the strength, the last quarter, and the lamp-post

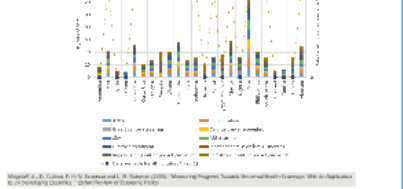


Financial protection indicators

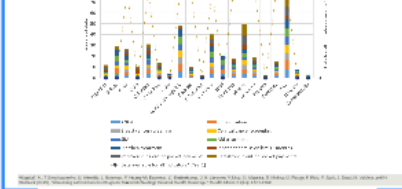
- **Impoverishment:** Equals 1 if household is (A) below poverty line using consumption (or out-of-pocket spending) and (B) above poverty line using household consumption gross of out-of-pocket spending
- **Catastrophic spending:** Equals 1 if household's out-of-pocket spending > x% of its total consumption
- Beware as higher values are better – use % not experiencing impoverishment and catastrophic spending
- In practice, % experiencing impoverishment and catastrophic payments never gets close to 100, so we rescale (0-100):
 - $PI_{rescaled} = (1 - Impov) / (1 - Impov_{max})$
 - $CS_{rescaled} = (1 - Catastrophic) / (1 - Catastrophic_{max})$

Wagstaff, A. and D. van Doorslaer (2003), 'Catastrophe and impoverishment in paying for health care: with application to Vietnam 1995-1998', Health Economics 23(1): 11-36.

More data in UNICO countries



Limited data even on these few indicators, even in Latin America



Limited (readily available) microdata even on these few indicators in Latin American & UNICO countries



Decisions needing to be taken in operationalizing the UHC index

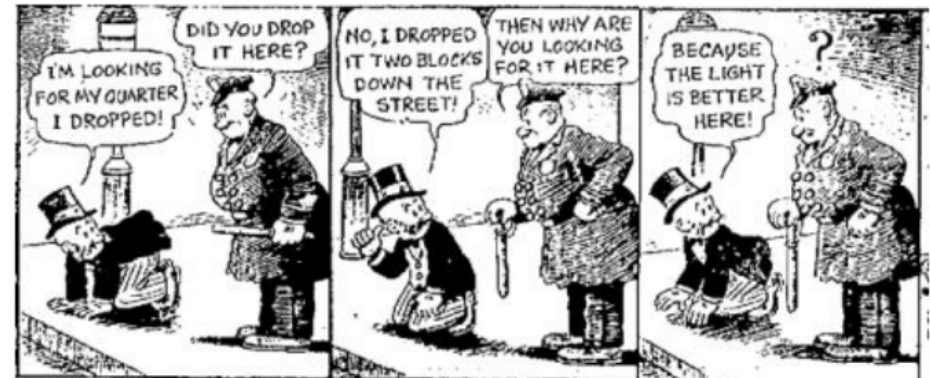
Dimension	Domain	Indicator	As % Domain	As % Dimension	As % UHC
Service coverage	Prevention	Prevention indicator #1	α_1	π	0.5
		Prevention indicator #2	α_2		
			
		Prevention indicator #n	α_n		
	Treatment	Treatment indicator #1	β_1	$1-\pi$	
		Treatment indicator #2	β_2		
			
Treatment indicator #n		β_n			
Financial protection	Impoverishment	% <i>not</i> impoverished at \$y-a-day		$1-\gamma$	0.5
	Catastrophic payments	% <i>not</i> incurring catastrophic payments using x% of total consumption		γ	

Service coverage indicators

- SC indicators should capture '**effective coverage**'*, i.e. not just whether someone received a service, but also they:
 - they **needed** it (i.e. correct diagnosis), and
 - the service had the **intended effect on health status** (i.e. correct treatment, administered correctly)
- Should SC indicators include public health interventions?

*Shengelia, B., A. Tandon, O. B. Adams and C. J. L. Murray (2005). "Access, utilization, quality, and effective coverage: An integrated conceptual framework and measurement strategy." *Social Science & Medicine* 61(1): 97-109.

- SC indicators should capture a large spectrum of the services received by patients, in quantity or expenditure terms. **So should go beyond MDG indicators**
- Measuring coverage of some services is easy, but often these services cover a tiny fraction of a typical health system's expenditures. Cf. **the drunk, the lost quarter, and the lamppost**

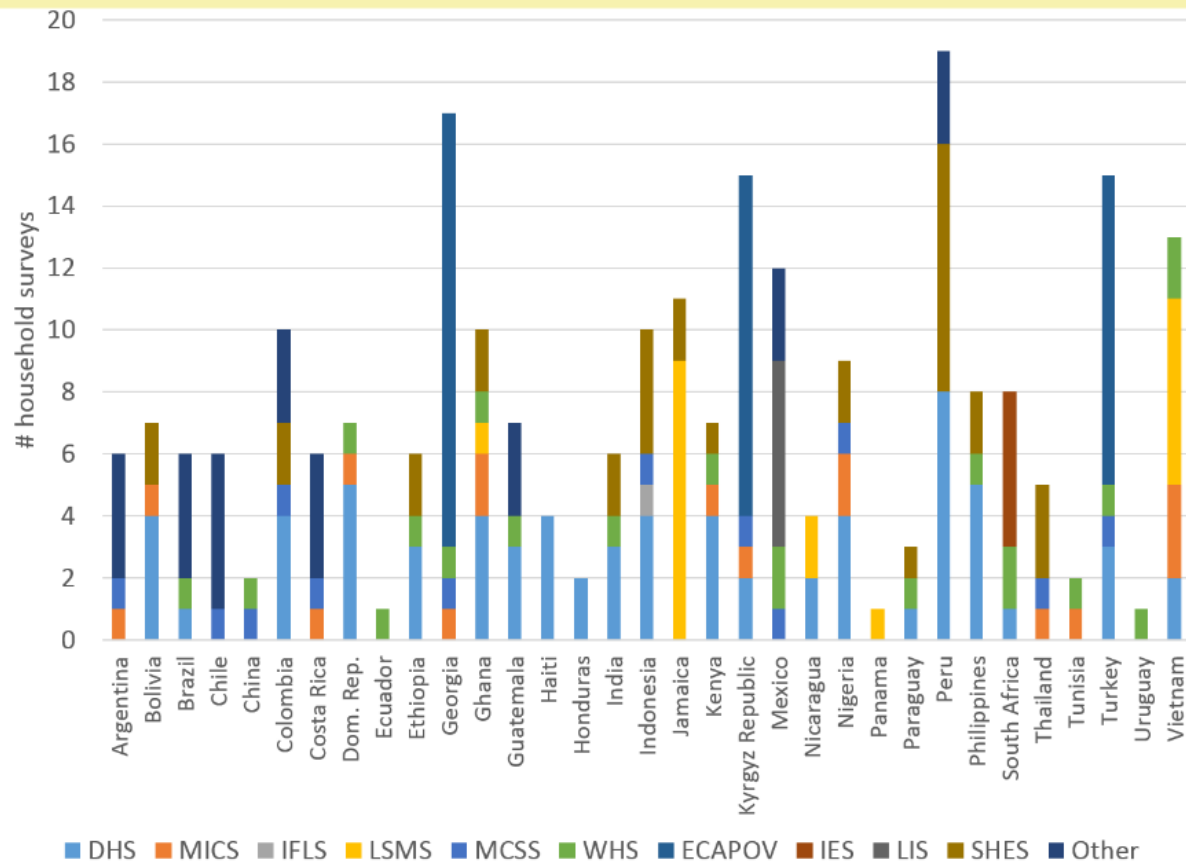


Financial protection indicators

- **Impoverishment:** Equals 1 if household is (a) below poverty line using consumption net of out-of-pocket spending and (b) above poverty line using household consumption gross of out-of-pocket spending
- **Catastrophic spending:** Equals 1 if household's out-of-pocket spending > x% of its total consumption.
- Rescale so higher values are better – use % not experiencing impoverishment and catastrophic spending
- In practice, % experiencing impoverishment and catastrophic payments never gets close to 100. So, we rescale (cf. HDI):
 - $FP_{IMPOV} = ((1-Impov)-(1- Impov_{MAX}))/((1- Impov_{MIN})-(1- Impov_{MAX}))$
 - $FP_{CATA} = ((1-Cata)-(1-Cata_{MAX}))/((1-Cata_{MIN})-(1-Cata_{MAX}))$

Wagstaff, A. and E. van Doorslaer (2003). "Catastrophe and impoverishment in paying for health care: with applications to Vietnam 1993-1998." Health Economics 12(11): 921-934.

193 potentially relevant health, multipurpose and expenditure surveys in Latin American & UNICO countries. But what's in them?



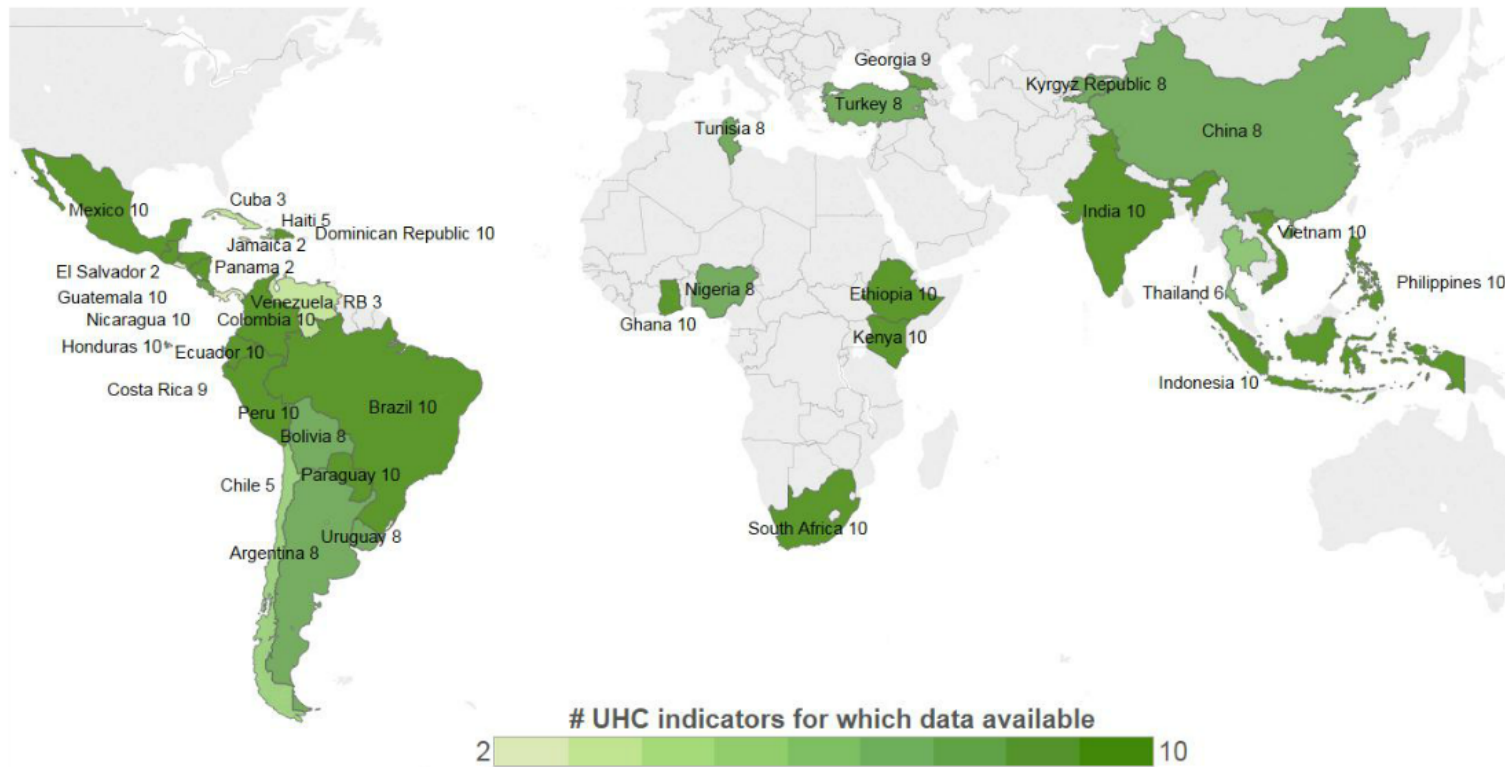
UHC Index 1.0. Indicators, weights and thresholds

Dimension	Domain	Indicator	As % Domain	As % Dimension	As % UHC
Service coverage	Prevention	Antenatal care (4+ visits)*	1/4	1/4	1/2
		Child fully immunized*	1/4		
		Breast cancer screening (women aged 40-49)*	1/4		
		Cervical cancer screening (women aged 18-49)*	1/4		
	Treatment	Skilled birth attendant at delivery*	1/6	3/4	
		Child treated for acute respiratory infection*	1/6		
		Child treated for diarrhea*	1/6		
Inpatient admission in last year†		1/2			
Financial protection	Impoverishment	% not impoverished at \$2-a-day‡	1	1/2	1/2
	Catastrophic payments	% not incurring catastrophic payments using 25% of total consumption*‡	1	1/2	

* Inequality-adjusted. † Relative to WHO benchmark rate (0.093). ‡ Rescaled using global maxima (CATA: 0.25; IMPOV: 0.15).

Wagstaff, A., D. Cotlear, P. H.-V. Eozenou and L. R. Buisman (2015). "Measuring Progress Towards Universal Health Coverage: With An Application to 24 Developing Countries " Oxford Review of Economic Policy.
 Wagstaff, A., T. Dmytraczenko, G. Almeida, L. Buisman, P. Hoang-Vu Eozenou, C. Bredekamp, J. A. Cercone, Y. Diaz, D. Maceira, S. Molina, G. Paraje, F. Ruiz, F. Sarti, J. Scott, M. Valdivia and H. Werneck (2015). "Assessing Latin America's Progress Toward Achieving Universal Health Coverage." Health Affairs 34(10): 1704-1712.

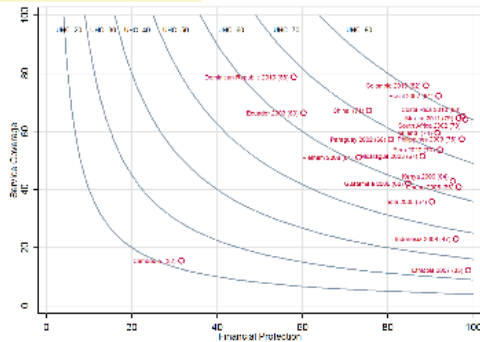
Limited (readily available) microdata even on these few indicators in Latin American & UNICO countries



Source: Wagstaff, A., T. Dmytraczenko, G. Almeida, L. Buisman, P. Hoang-Vu Eozenou, C. Bredenkamp, J. A. Cercone, Y. Diaz, D. Maceira, S. Molina, G. Paraje, F. Ruiz, F. Sarti, J. Scott, M. Valdivia and H. Werneck (2015). "Assessing Latin America's Progress Toward Achieving Universal Health Coverage." *Health Affairs* 34(10): 1704-1712. Wagstaff, A., D. Cotlear, P. H.-V. Eozenou and L. R. Buisman (2015). "Measuring Progress Towards Universal Health Coverage: With An Application to 24 Developing Countries." *Oxford Review of Economic Policy*.

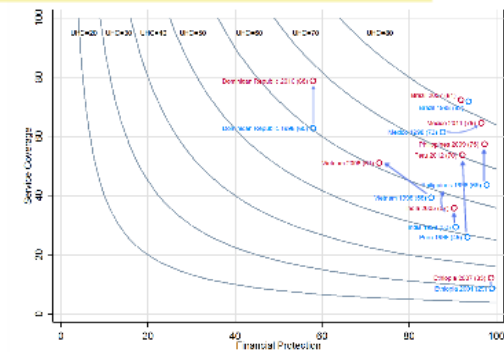
4) UHC Index in action

UHC Index—latest year available



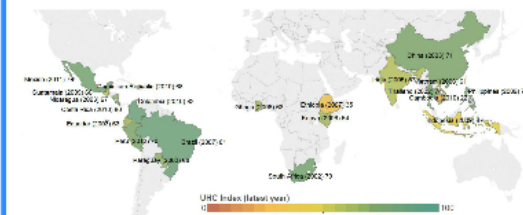
Data from various sources, including Wiggall, A., T. Dmytrachenko, G. Almeida, L. Bauman, P. Hoang-Vu, E. Ferrero, C. Broderick, J. A. Carone, Y. Chiu, D. Mucilio, S. Molina, G. Ponce, R. Ruiz, F. Sassi, J. Scott, M. Yachiro and H. Wernick (2023), 'Assessing Latin America's Progress Toward Achieving Universal Health Coverage', *Health Affairs*, 42(10), 1204-1212. Wiggall, A., G. Collier, G. H. M. Coenen and L. G. B. Berman (2015), 'Measuring Progress Towards Universal Health Coverage: An Application to 24 Developing Countries', *Journal of Economic Surveys*. Red data points have been reworked using resulting parameters in Health Affairs article.

UHC trends in selected countries



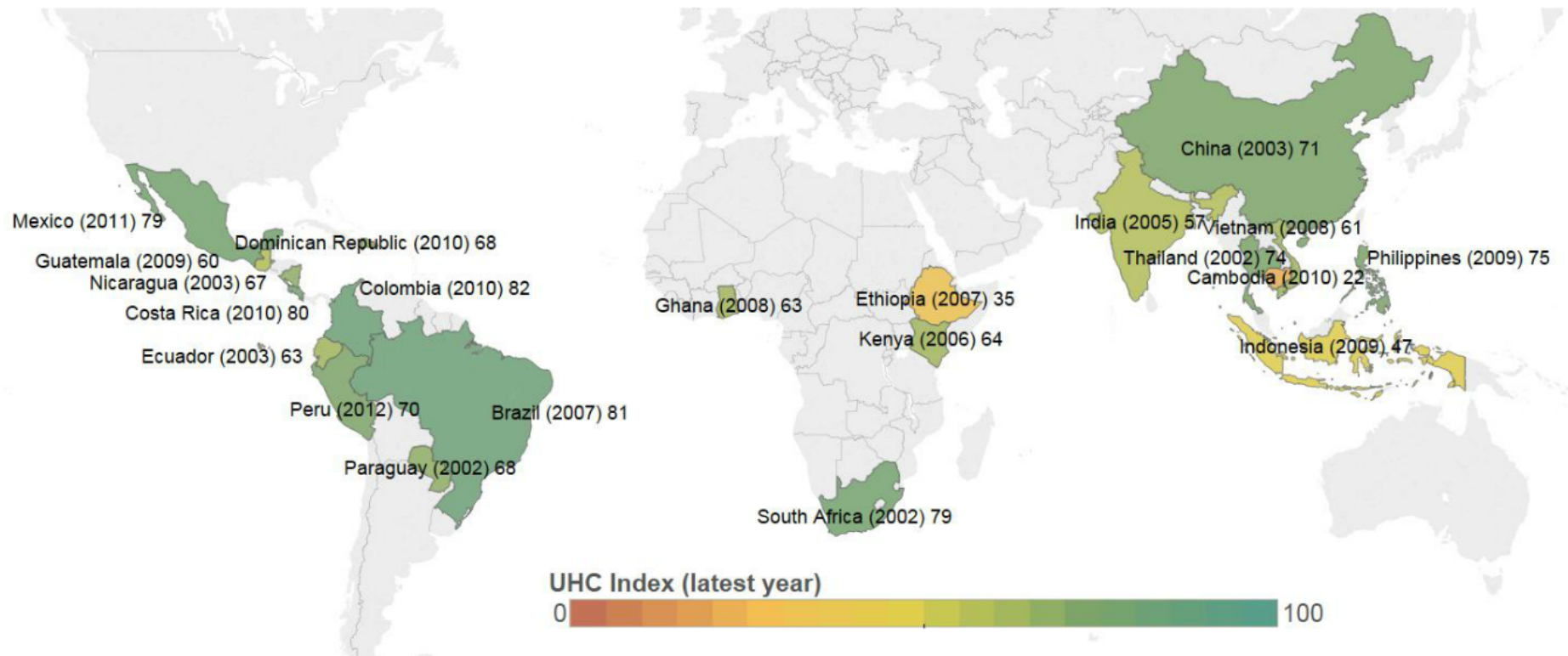
Data from various sources, including Wiggall, A., T. Dmytrachenko, G. Almeida, L. Bauman, P. Hoang-Vu, E. Ferrero, C. Broderick, J. A. Carone, Y. Chiu, D. Mucilio, S. Molina, G. Ponce, R. Ruiz, F. Sassi, J. Scott, M. Yachiro and H. Wernick (2023), 'Assessing Latin America's Progress Toward Achieving Universal Health Coverage', *Health Affairs*, 42(10), 1204-1212. Wiggall, A., G. Collier, G. H. M. Coenen and L. G. B. Berman (2015), 'Measuring Progress Towards Universal Health Coverage: An Application to 24 Developing Countries', *Journal of Economic Surveys*. Red data points have been reworked using resulting parameters in Health Affairs article.

UHC Index—latest year available



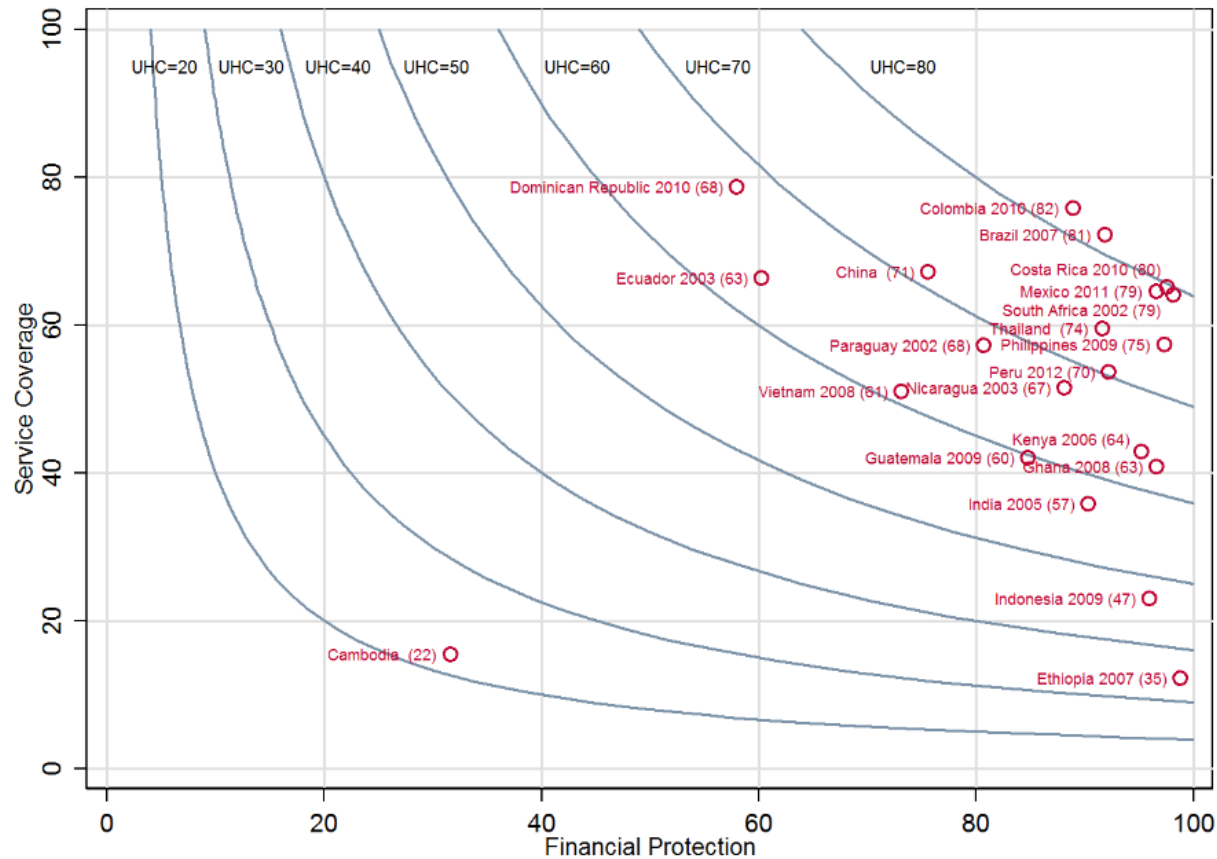
Data from various sources, including Wiggall, A., T. Dmytrachenko, G. Almeida, L. Bauman, P. Hoang-Vu, E. Ferrero, C. Broderick, J. A. Carone, Y. Chiu, D. Mucilio, S. Molina, G. Ponce, R. Ruiz, F. Sassi, J. Scott, M. Yachiro and H. Wernick (2023), 'Assessing Latin America's Progress Toward Achieving Universal Health Coverage', *Health Affairs*, 42(10), 1204-1212. Wiggall, A., G. Collier, G. H. M. Coenen and L. G. B. Berman (2015), 'Measuring Progress Towards Universal Health Coverage: An Application to 24 Developing Countries', *Journal of Economic Surveys*. Red data points have been reworked using resulting parameters in Health Affairs article.

UHC Index—latest year available



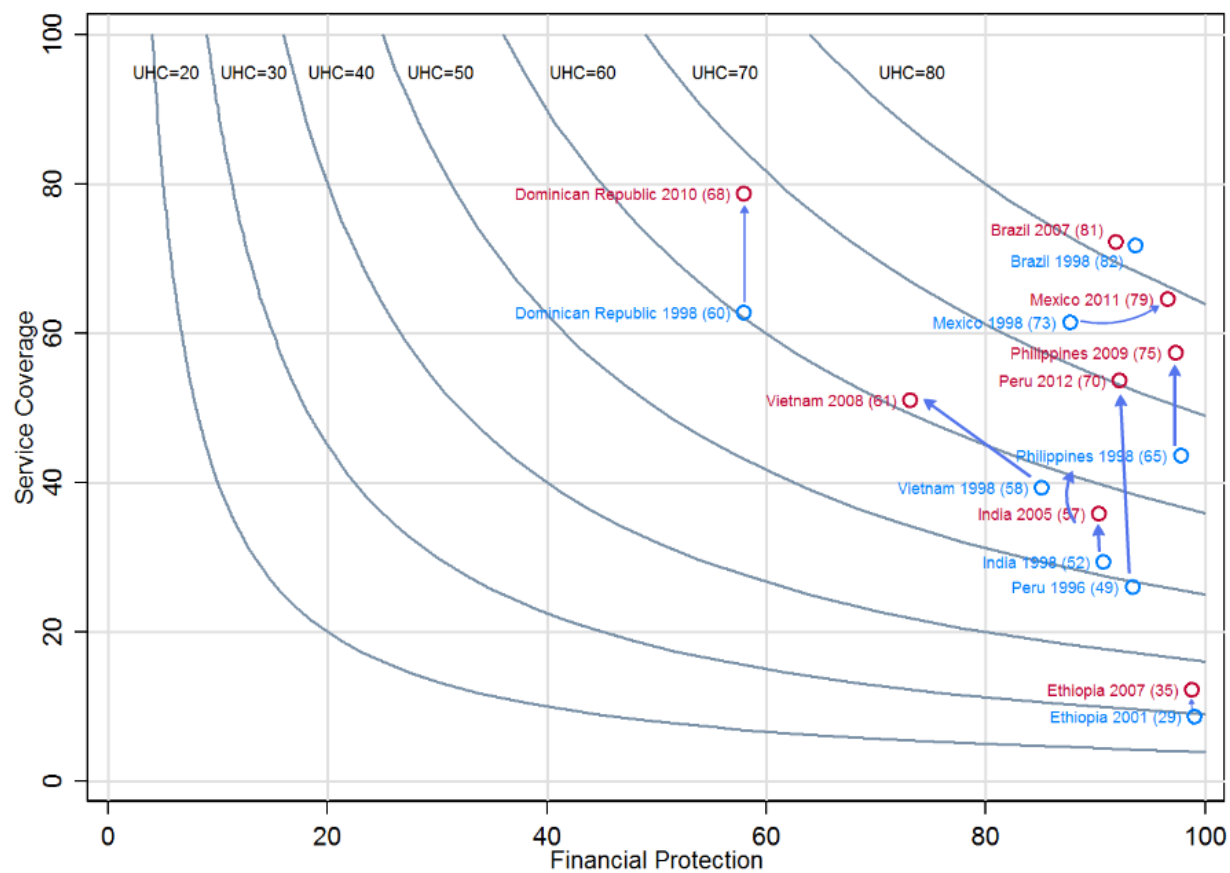
Data from various sources, including Wagstaff, A., T. Dmytraczenko, G. Almeida, L. Buisman, P. Hoang-Vu Eozenou, C. Bredenkamp, J. A. Cercone, Y. Diaz, D. Maceira, S. Molina, G. Paraje, F. Ruiz, F. Sarti, J. Scott, M. Valdivia and H. Werneck (2015). "Assessing Latin America's Progress Toward Achieving Universal Health Coverage." *Health Affairs* 34(10): 1704-1712. Wagstaff, A., D. Cotlear, P. H.-V. Eozenou and L. R. Buisman (2015). "Measuring Progress Towards Universal Health Coverage: With An Application to 24 Developing Countries." *Oxford Review of Economic Policy*. **NB data from OXREP article have been reworked using rescaling parameters in Health Affairs article.**

UHC Index—latest year available



Data from various sources, including Wagstaff, A., T. Dmytraczenko, G. Almeida, L. Buisman, P. Hoang-Vu Eozenou, C. Breckenkamp, J. A. Cercone, Y. Diaz, D. Maceira, S. Molina, G. Paraje, F. Ruiz, F. Sarti, J. Scott, M. Valdivia and H. Werneck (2015). "Assessing Latin America's Progress Toward Achieving Universal Health Coverage." *Health Affairs* 34(10): 1704-1712. Wagstaff, A., D. Cotlear, P. H.-V. Eozenou and L. R. Buisman (2015). "Measuring Progress Towards Universal Health Coverage: With An Application to 24 Developing Countries." *Oxford Review of Economic Policy*. NB data from OXREP article have been reworked using rescaling parameters in Health Affairs article.

UHC trends in selected countries



Data from various sources, including Wagstaff, A., T. Dmytraczenko, G. Almeida, L. Buisman, P. Hoang-Vu Eozenou, C. Bredenkamp, J. A. Cercone, Y. Diaz, D. Maceira, S. Molina, G. Paraje, F. Ruiz, F. Sarti, J. Scott, M. Valdivia and H. Werneck (2015). "Assessing Latin America's Progress Toward Achieving Universal Health Coverage." *Health Affairs* 34(10): 1704-1712. Wagstaff, A., D. Cotlear, P. H.-V. Eozenou and L. R. Buisman (2015). "Measuring Progress Towards Universal Health Coverage: With An Application to 24 Developing Countries." *Oxford Review of Economic Policy*. NB data from OXREP article have been reworked using rescaling parameters in Health Affairs article.

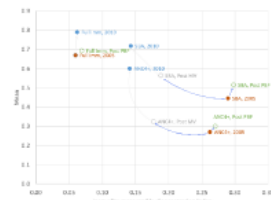
5) UHC Index + IE evidence: What did reforms really achieve?

Getting evidence on reforms and UHC

- Lots of types of reform **might** affect the UHC indicators and help a country towards UHC
- What matters are (a) the **actual impact** of the reform, and (b) its **proportion**
- Get this information from **credible impact evaluations**—prospective and retrospective
- What's a "UHC" reform depends on the evidence, not on what it's called:
 - Some "UHC" reforms may not be so UHC-friendly after all!
 - Some "non-UHC" reforms may actually be more UHC-friendly!

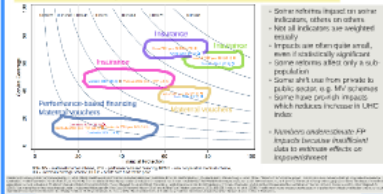
Country	Reform Type	Impact on UHC Index
Cambodia	Maternal Vouchers (MV)	Positive
Cambodia	Performance-based Financing (PBF)	Positive
Burundi	Performance-based Financing (PBF)	Positive
Burundi	Maternal Vouchers (MV)	Positive
Other Countries	Various Reforms	Mixed

Cambodia's maternal vouchers (MV) and performance-based financing (PBF) reforms—impacts on mean and concentration index



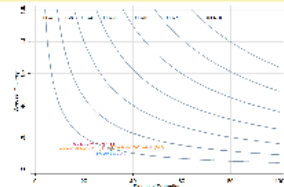
Calculations based on data from Brindley, C. et al. (2013) Health equity and financial protection: Evidence from Cambodia. *Health Affairs*, 32(10), 1811-1818. doi:10.1371/journal.pone.0181111

How far have reforms pushed a country toward UHC?



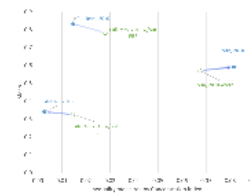
- Some reforms impact on some indicators, others on others
- Key all indicators are weighted equally
- Impacts are often quite small, even if statistically significant
- Some reforms affect only a sub-population
- Some shift cost from private to public sector (e.g. MV) so some reforms have private impacts which reduces increase in UHC index
- Many do not have AP impact (decide sufficient data to evaluate effects on expenditure)

Cambodia's maternal vouchers and performance-based financing reforms—impacts on UHC



Calculations based on data from Brindley, C. et al. (2013) Health equity and financial protection: Evidence from Cambodia. *Health Affairs*, 32(10), 1811-1818. doi:10.1371/journal.pone.0181111

Burundi's performance-based financing reforms



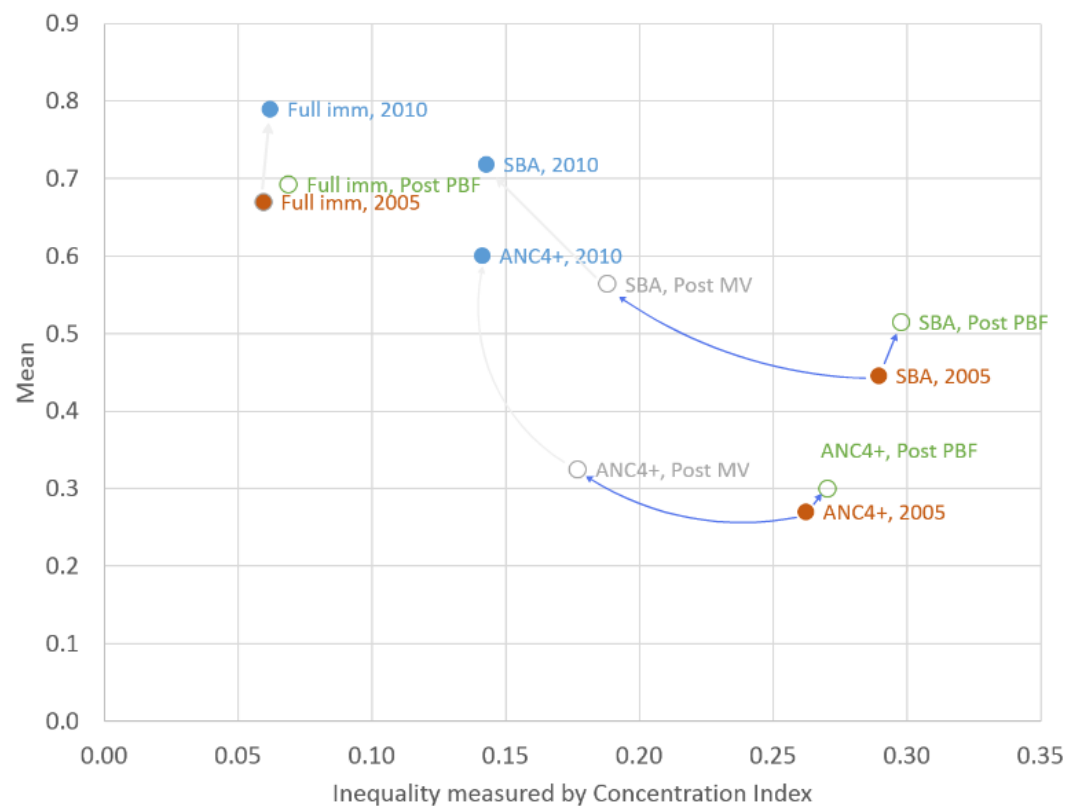
Calculations based on data from Brindley, C. et al. (2013) Health equity and financial protection: Evidence from Cambodia. *Health Affairs*, 32(10), 1811-1818. doi:10.1371/journal.pone.0181111

Getting evidence on reforms and UHC

- Lots of types of reform **might** affect the UHC indicators and help a country towards UHC
- What matters are (a) the **actual impact** of the reform, and (b) its **pro-poorness**
 - Get this information from **credible impact evaluations**—prospective and retrospective
- **What's a "UHC" reform depends on the evidence**, not on what it's called:
 - Some "UHC" reforms may not be so UHC-friendly after all!
 - Some "non-UHC" reforms may actually be more UHC-friendly!

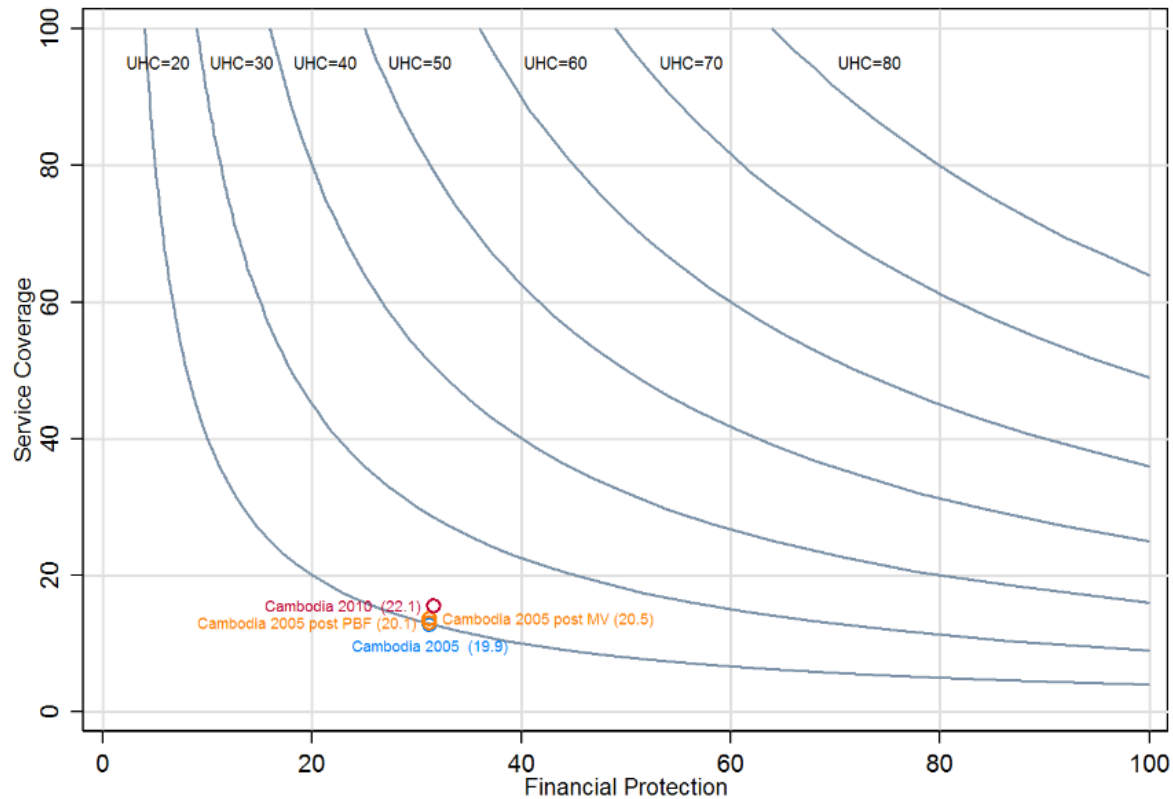
Dimension	Domain	Indicator	As % Domain	As % Dimension	As % UHC
Service coverage	Prevention	Antenatal care (4+ visits)*	1/4	1/4	1/2
		Child fully immunized*	1/4		
		Breast cancer screening (women aged 40-49)*	1/4		
		Cervical cancer screening (women aged 18-49)*	1/4		
	Treatment	Skilled birth attendant at delivery*	1/6	3/4	
		Child treated for acute respiratory infection*	1/6		
		Child treated for diarrhea*	1/6		
		Inpatient admission in last year†	1/2		
Financial protection	Impoverishment	% not impoverished at \$2-a-day‡	1	1/2	1/2
	Catastrophic payments	% not incurring catastrophic payments using 25% of total consumption*†	1	1/2	

Cambodia's maternal vouchers (MV) and performance-based financing (PBF) reforms—impacts on mean and concentration index



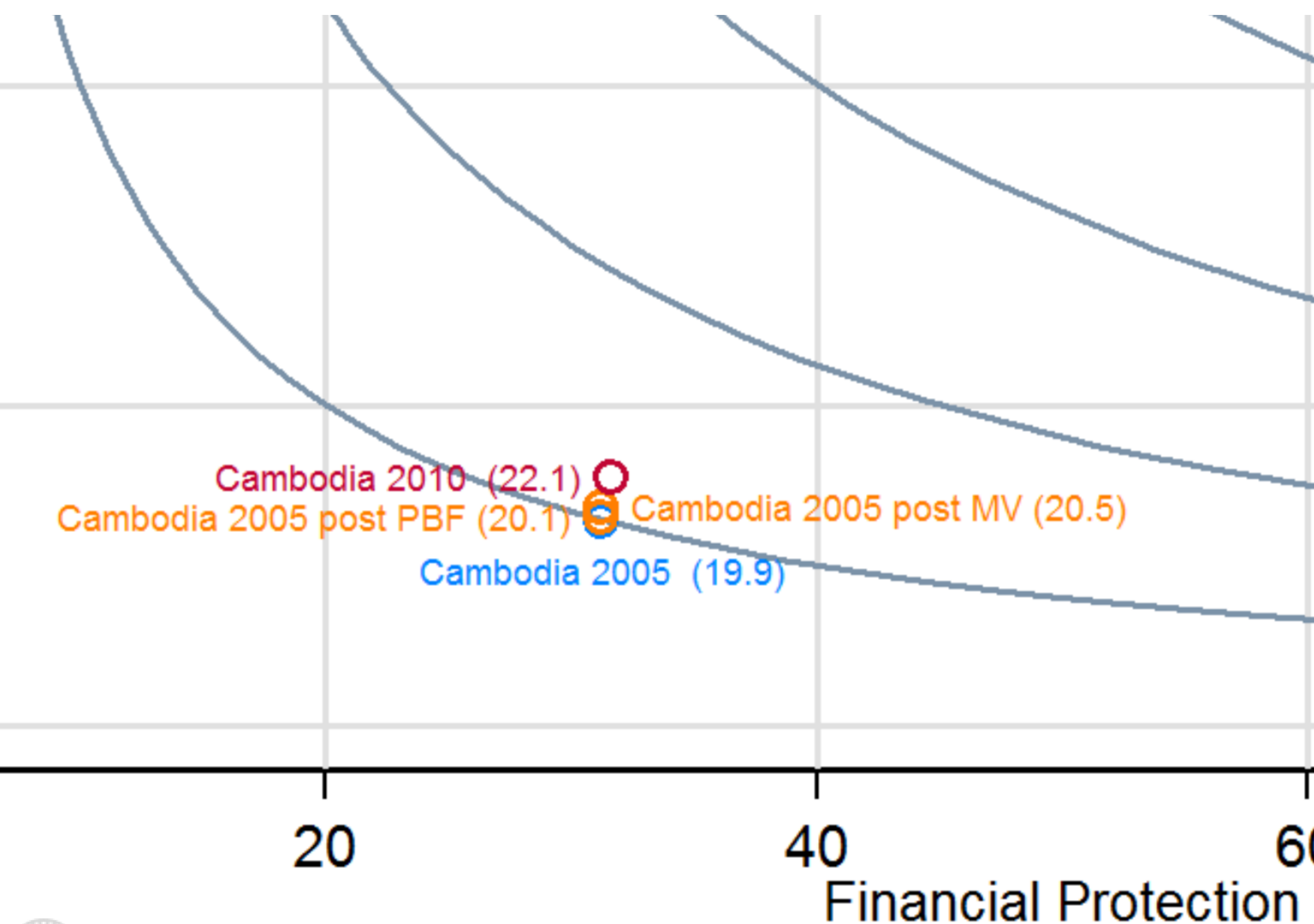
Calculations based on data from: Bredekamp, C., et al. (2012). Health equity and financial protection datasheet : East Asia & Pacific. Washington DC, The World Bank. Van de Poel, E., et al. (2015). "Impact of Performance-Based Financing in a Low-Resource Setting: A Decade of Experience in Cambodia." Health Economics. Van de Poel, E., et al. (2014). "Can vouchers deliver? An evaluation of subsidies for maternal health care in Cambodia." Bull World Health Organ 92(5): 331-339.

Cambodia's maternal vouchers and performance-based financing reforms—impacts on UHC



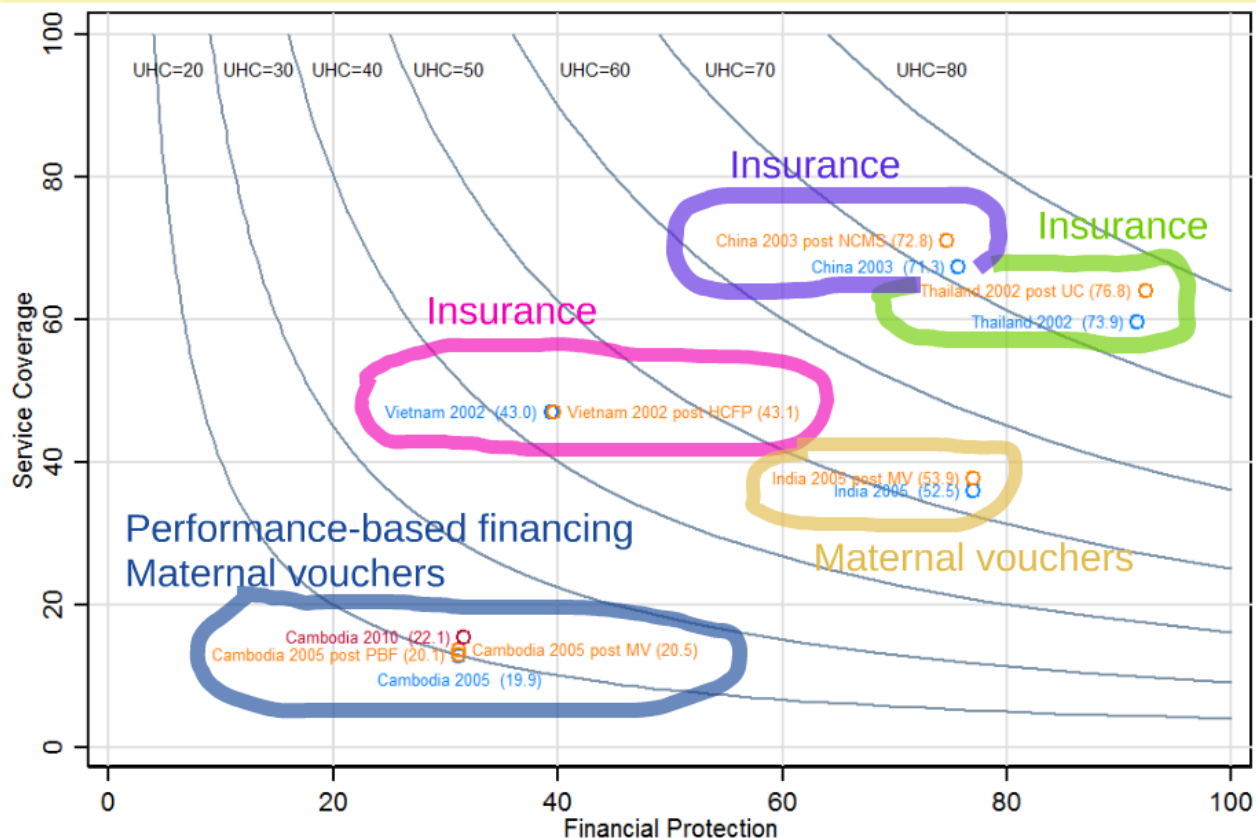
Note: MV = maternal voucher scheme, PBF = performance-based financing

Calculations based on data from: Bredenkamp, C., et al. (2012). Health equity and financial protection datasheet : East Asia & Pacific. Washington DC, The World Bank. Van de Poel, E., et al. (2015). "Impact of Performance-Based Financing in a Low-Resource Setting: A Decade of Experience in Cambodia." Health Economics. Van de Poel, E., et al. (2014). "Can vouchers deliver? An evaluation of subsidies for maternal health care in Cambodia." Bull World Health Organ 92(5): 331-339.



Maternal voucher scheme, PBF = performance-based financing

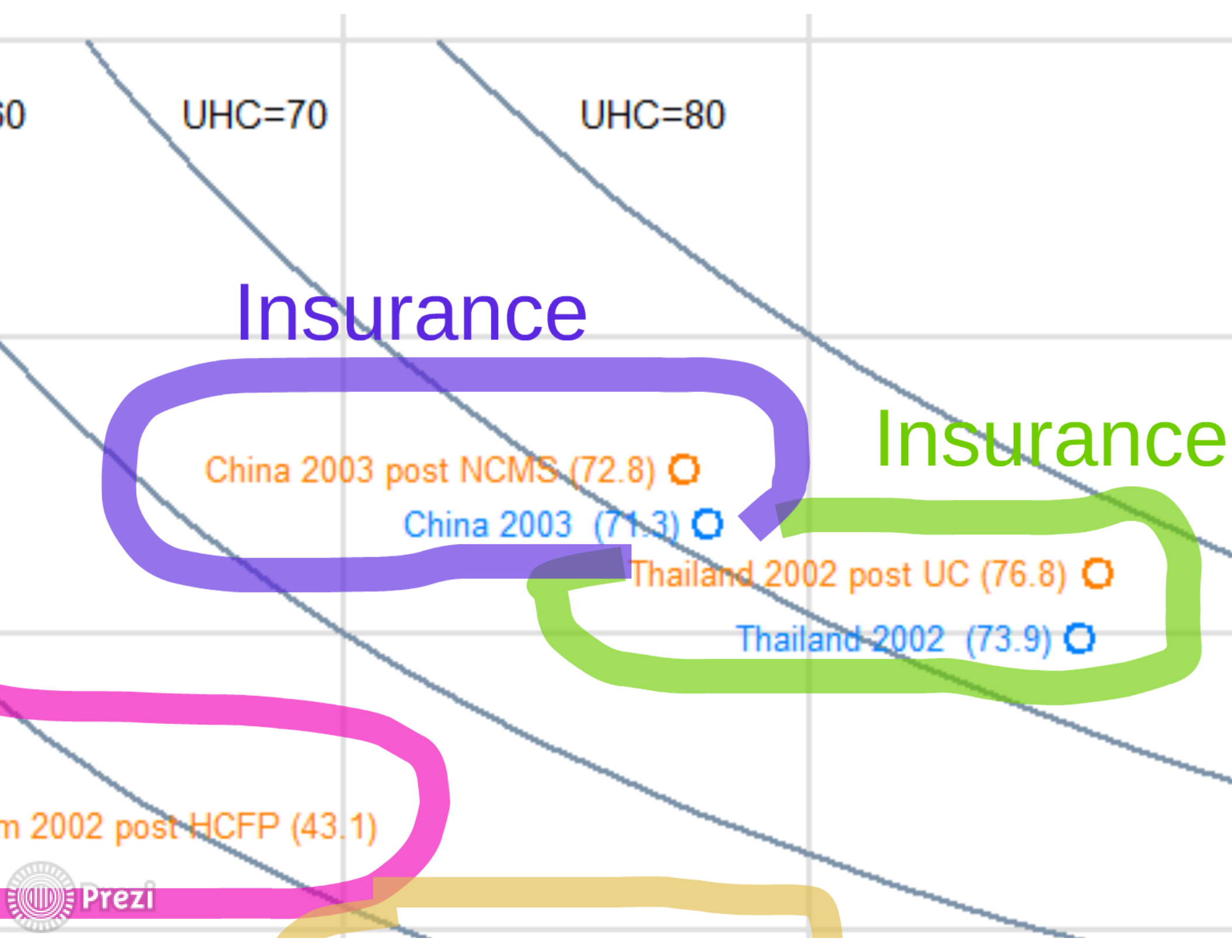
How far have reforms pushed a country toward UHC?



Note: MV = maternal voucher scheme, PBF = performance-based financing, NCMS = new cooperative medical scheme, UC = universal coverage scheme, HCFP = health care fund for the poor

- Some reforms impact on some indicators, others on others
- Not all indicators are weighted equally
- Impacts are often quite small, even if statistically significant
- Some reforms affect only a sub-population
- Some shift use from private to public sector, e.g. MV schemes
- Some have pro-rich impacts which reduces increase in UHC index
- *Numbers underestimate FP impacts because insufficient data to estimate effects on impoverishment*

Calculations based on data from: Bredenkamp, C., et al. (2012). Health equity and financial protection datasheet: East Asia & Pacific. Washington DC, The World Bank. Van de Poel, E., et al. (2015). "Impact of Performance-Based Financing in a Low-Resource Setting: A Decade of Experience in Cambodia." Health Economics. Van de Poel, E., et al. (2014). "Can vouchers deliver? An evaluation of subsidies for maternal health care in Cambodia." Bull World Health Organ 92(5): 331-339. Limwattananon, S., et al. (2015). "Universal coverage with supply-side reform: The impact on medical expenditure risk and utilization in Thailand." Journal of Public Economics 121(0): 79-94. Wagstaff, A., et al. (2009). "Extending Health Insurance to the Rural Population: An Impact Evaluation of China's New Cooperative Medical Scheme." Journal of Health Economics 28 1: 1-19. Wagstaff, A. (2010). "Estimating Health Insurance Impacts under Unobserved Heterogeneity: The Case of Vietnam's Health Care Fund for the Poor." Health Economics 19(2): 189-208. Axelson, H., et al. (2009). "Health financing for the poor produces promising short-term effects on utilization and out-of-pocket expenditure: evidence from Vietnam." Int J Equity Health 8: 20. Powell-Jackson, T., et al. (2015). "Financial incentives in health: New evidence from India's Janani Suraksha Yojana." Journal of Health Economics.



Insurance

Insurance

China 2003 post NCMS (72.8)

China 2003 (71.3)

Thailand 2002 post UC (76.8)

Thailand 2002 (73.9)

Insurance

Vietnam 2002 (43.0)

Vietnam 2002 post HCFP (43.1)

India 2005 post MV (53.9)

India 2005 (52.5)

e-based financing vouchers

India 2010 (22.1)

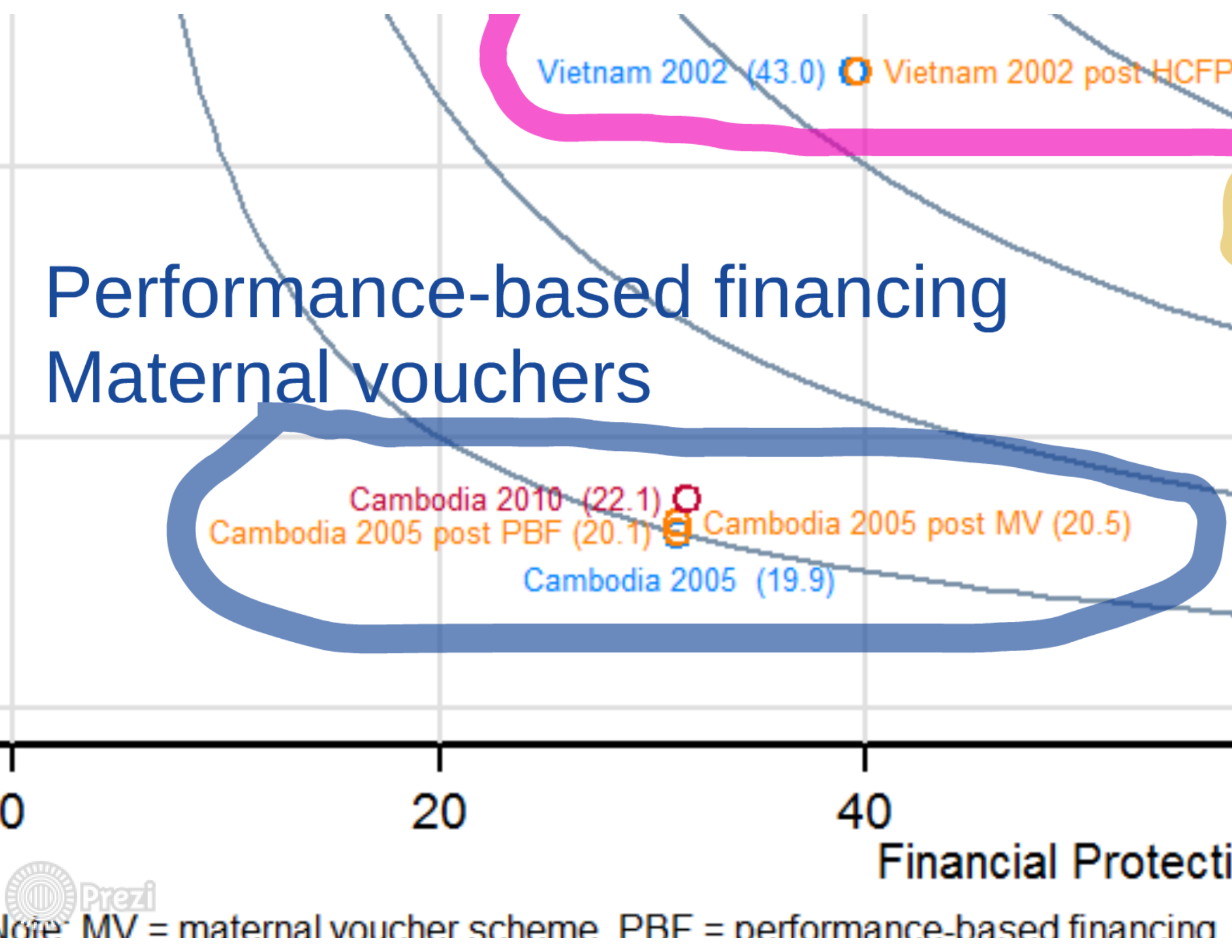
India 2010 post PBF (20.1)

Cambodia 2005 post MV (20.5)

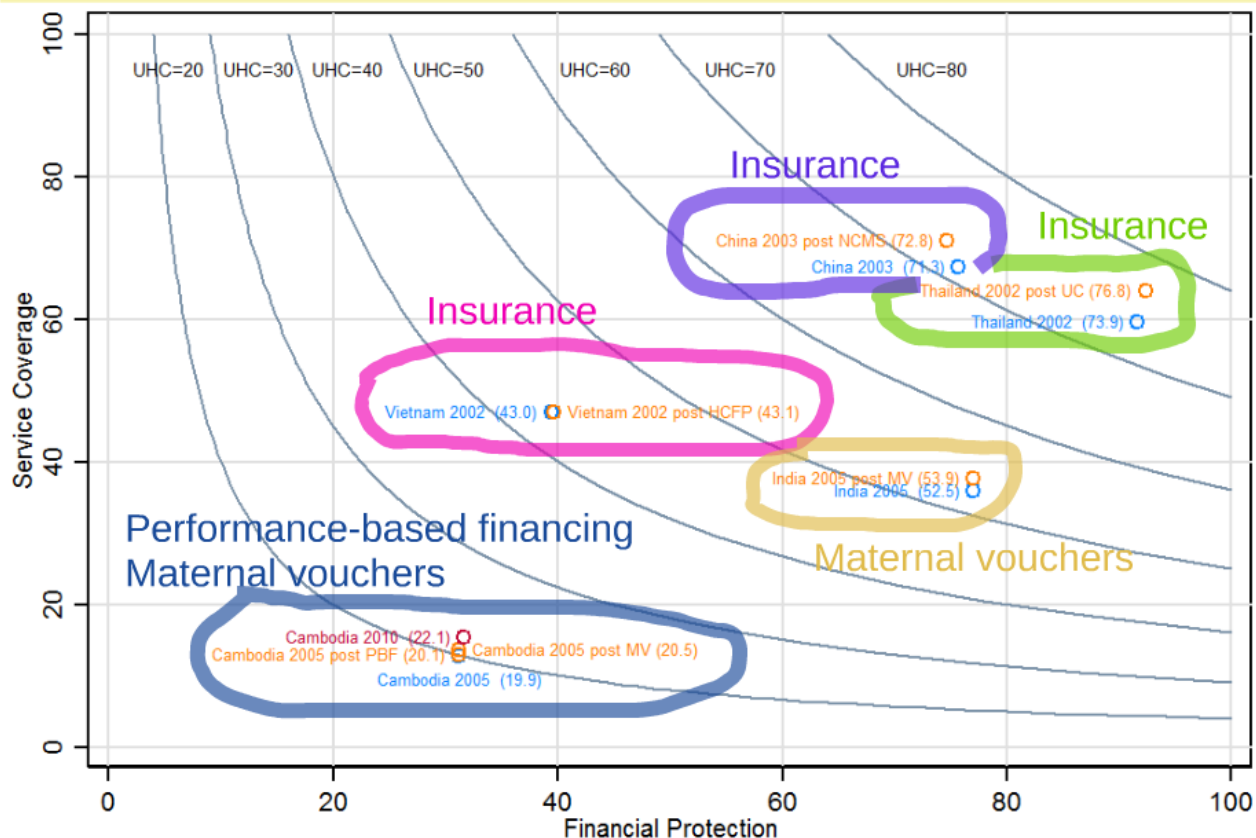
Cambodia 2005 (19.9)

Maternal vouchers

Performance-based financing Maternal vouchers



How far have reforms pushed a country toward UHC?



Note: MV = maternal voucher scheme, PBF = performance-based financing, NCMS = new cooperative medical scheme, UC = universal coverage scheme, HCFP = health care fund for the poor

- Some reforms impact on some indicators, others on others
- Not all indicators are weighted equally
- Impacts are often quite small, even if statistically significant
- Some reforms affect only a sub-population
- Some shift use from private to public sector, e.g. MV schemes
- Some have pro-rich impacts which reduces increase in UHC index
- *Numbers underestimate FP impacts because insufficient data to estimate effects on impoverishment*

Calculations based on data from: Bredenkamp, C., et al. (2012). Health equity and financial protection datasheet: East Asia & Pacific. Washington DC, The World Bank. Van de Poel, E., et al. (2015). "Impact of Performance-Based Financing in a Low-Resource Setting: A Decade of Experience in Cambodia." Health Economics. Van de Poel, E., et al. (2014). "Can vouchers deliver? An evaluation of subsidies for maternal health care in Cambodia." Bull World Health Organ 92(5): 331-339. Limwattananon, S., et al. (2015). "Universal coverage with supply-side reform: The impact on medical expenditure risk and utilization in Thailand." Journal of Public Economics 121(0): 79-94. Wagstaff, A., et al. (2009). "Extending Health Insurance to the Rural Population: An Impact Evaluation of China's New Cooperative Medical Scheme." Journal of Health Economics 28 1: 1-19. Wagstaff, A. (2010). "Estimating Health Insurance Impacts under Unobserved Heterogeneity: The Case of Vietnam's Health Care Fund for the Poor." Health Economics 19(2): 189-208. Axelson, H., et al. (2009). "Health financing for the poor produces promising short-term effects on utilization and out-of-pocket expenditure: evidence from Vietnam." Int J Equity Health 8: 20. Powell-Jackson, T., et al. (2015). "Financial incentives in health: New evidence from India's Janani Suraksha Yojana." Journal of Health Economics.

6) Looking backwards and forwards

We now have clarity on what UHC is and how to measure it

- UHC definition requires a **shift in language**, away from rights and schemes to service coverage, financial protection and equity
- UHC index combines the benefits of a **mashup index and a dashboard**, allowing us to see performance on SC and FP separately as well as their contribution to UHC overall
- Approach explicitly recognizes **tradeoffs** across dimension and domain indicators
- **Inequality** is *integrated* into the UHC index, not as an add-on



What have we learned from use of UHC index? What's left still to do?

See how far countries are from attaining UHC. *All countries are still working towards UHC—top performing countries in Latin America have scores of ~80*

Track countries' progress towards UHC over time. *Most countries seem to be making progress, but progress has been bigger on SC*

Compare UHC performance across different types of health system. *Latin America study suggests fully-integrated or advanced semi-integrated systems do better*

Evaluate (actual and likely) effects on UHC of gov't, programs and reforms. *Reforms (including some "non-UHC" reforms) have mostly helped, but often not by much, leaving countries a long way from UHC*

Evaluate (actual and likely) effects on UHC of WBG projects

WBG could use for:

- Monitor performance of lending portfolio
- Inform choices between alternative operations

Nothing yet (but index could help WBG track its performance and guide its project choices)

What are the things we'd like to see in UHC Index 2.0?

Better and more SC indicators

- Move to **effective coverage**, i.e. properly capture 'need', and (likely) effectiveness of interventions (i.e. quality) received
- More **treatment indicators** especially for non-communicable diseases (NCDs), e.g. hypertension and diabetes treatment



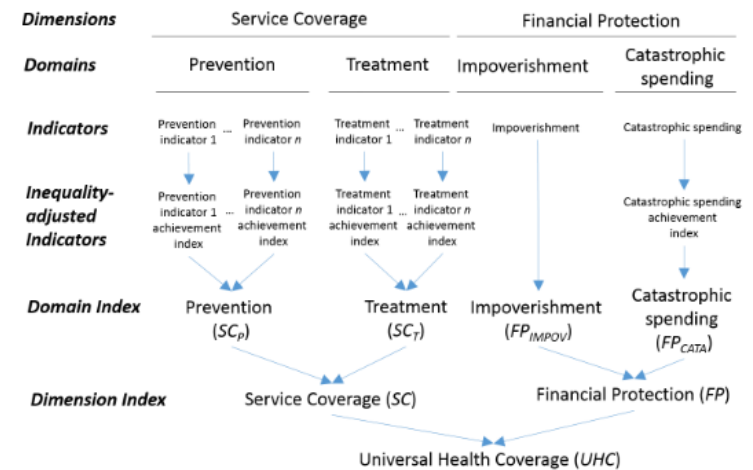
Better and more data

- WHO has conducted a "STEPS" survey capturing NCDs in 95 countries. But even WHO staff don't have **access to the microdata!**
- On October 15 2015, President Kim launched a **\$100m p.a. data initiative** to increase the quantity and quality of household surveys. A big opportunity to collect more and better health data at household level
- Use **new technology** to collect better health data
- Need better indicator for **hospitalization**—one that captures better 'need' and captures likely effectiveness of inpatient care
- Move **beyond HH surveys**? Merge admin. data with e.g. facility exit surveys, social assistance entitlement data, etc.?



We now have clarity on what UHC is and how to measure it

- UHC definition requires a **shift in language**, away from rights and schemes to service coverage, financial protection and equity
- UHC index combines the benefits of a **mashup index and a dashboard**, allowing us to see performance on SC and FP separately as well as their contribution to UHC overall
- Approach explicitly recognizes **tradeoffs** across dimension and domain indicators
- **Inequality** is *integrated* into the UHC index, not as an add-on



What are the things we'd like to see in UHC Index 2.0?

Better and more SC indicators

- Move to **effective coverage**, i.e. properly capture 'need', and (likely) effectiveness of interventions (i.e. quality) received
- More **treatment indicators** especially for non-communicable diseases (NCDs), e.g. hypertension and diabetes treatment



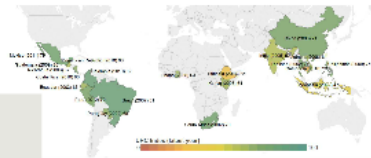
Better and more data

- WHO has conducted a "STEPS" survey capturing NCDs in 95 countries. But even WHO staff don't have **access to the microdata!**
- On October 15 2015, President Kim launched a **\$100m p.a. data initiative** to increase the quantity and quality of household surveys. A big opportunity to collect more and better health data at household level
- Use **new technology** to collect better health data
- Need better indicator for **hospitalization**—one that captures better 'need' and captures likely effectiveness of inpatient care
- Move **beyond HH surveys?** Merge admin. data with e.g. facility exit surveys, social assistance entitlement data, etc.?

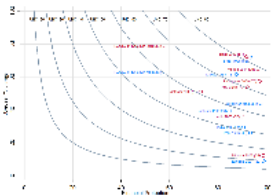


What have we learned from use of UHC index? What's left still to do?

See how far countries are from attaining UHC. *All countries are still working towards UHC*—top-performing countries in Latin America have scores of ~80

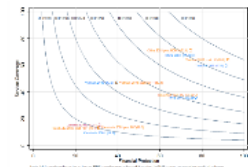


Track countries' progress towards UHC over time. *Most countries seem to be making progress, but progress has been bigger on SC*



Compare UHC performance across different types of health system. *Latin America study suggests fully-integrated or advanced semi-integrated systems do better*

Evaluate (actual and likely) effects on UHC of gov. programs and reforms. *Reforms (including some "non-UHC" reforms) have mostly helped, but often not by much, leaving countries a long way from UHC*



Evaluate (actual and likely) effects on UHC of WBG projects

WBG could use to:

- Monitor performance of lending portfolio
- Inform choices between alternative operations

Nothing yet but index could help WBG track its performance and guide its project choices

The Big Push toward Universal Health Coverage: Metrics, Data, and Impact

Adam Wagstaff

Senior Manager, Development Research Group, The World Bank



2) UHC index: principles

Download for UHC index 1.0

Download for UHC index 2.0

Download for UHC index 3.0

Download for UHC index 4.0

Download for UHC index 5.0

Download for UHC index 6.0

6) Looking backwards and forwards

Download for UHC index 1.0

Download for UHC index 2.0

Download for UHC index 3.0

Download for UHC index 4.0

Download for UHC index 5.0

Download for UHC index 6.0

3) UHC Index: operationalization

Download for UHC index 1.0

Download for UHC index 2.0

Download for UHC index 3.0

Download for UHC index 4.0

Download for UHC index 5.0

Download for UHC index 6.0

5) UHC Index + IE evidence: What did reforms really achieve?

Download for UHC index 1.0

Download for UHC index 2.0

Download for UHC index 3.0

Download for UHC index 4.0

Download for UHC index 5.0

Download for UHC index 6.0

1) What exactly is UHC?

Download for UHC index 1.0

Download for UHC index 2.0

Download for UHC index 3.0

Download for UHC index 4.0

Download for UHC index 5.0

Download for UHC index 6.0

4) UHC Index in action

Download for UHC index 1.0

Download for UHC index 2.0

Download for UHC index 3.0

Download for UHC index 4.0

Download for UHC index 5.0

Download for UHC index 6.0

Introduction

Download for UHC index 1.0

Download for UHC index 2.0

Download for UHC index 3.0

Download for UHC index 4.0

Download for UHC index 5.0

Download for UHC index 6.0