



# *Countdown to 2015*

*Maternal, Newborn & Child Survival*

## DETAILED EQUITY PROFILES FOR CD COUNTRIES

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# Overview of the full profile



Countdown to 2015  
Maternal, Newborn & Child Survival

Azerbaijan (DHS 2006)

Table - Coverage of Countdown indicators at national level and by key equity stratifiers.

Indicator	2007	2012	2017	2022	2027	2032	2037	2042	2047	2052	2057	2062	2067	2072	2077	2082	2087	2092	2097	2102	2107	2112	2117	2122	2127	2132	2137	2142	2147	2152	2157	2162	2167	2172	2177	2182	2187	2192	2197	2202	2207	2212	2217	2222	2227	2232	2237	2242	2247	2252	2257	2262	2267	2272	2277	2282	2287	2292	2297	2302	2307	2312	2317	2322	2327	2332	2337	2342	2347	2352	2357	2362	2367	2372	2377	2382	2387	2392	2397	2402	2407	2412	2417	2422	2427	2432	2437	2442	2447	2452	2457	2462	2467	2472	2477	2482	2487	2492	2497	2502	2507	2512	2517	2522	2527	2532	2537	2542	2547	2552	2557	2562	2567	2572	2577	2582	2587	2592	2597	2602	2607	2612	2617	2622	2627	2632	2637	2642	2647	2652	2657	2662	2667	2672	2677	2682	2687	2692	2697	2702	2707	2712	2717	2722	2727	2732	2737	2742	2747	2752	2757	2762	2767	2772	2777	2782	2787	2792	2797	2802	2807	2812	2817	2822	2827	2832	2837	2842	2847	2852	2857	2862	2867	2872	2877	2882	2887	2892	2897	2902	2907	2912	2917	2922	2927	2932	2937	2942	2947	2952	2957	2962	2967	2972	2977	2982	2987	2992	2997	3002	3007	3012	3017	3022	3027	3032	3037	3042	3047	3052	3057	3062	3067	3072	3077	3082	3087	3092	3097	3102	3107	3112	3117	3122	3127	3132	3137	3142	3147	3152	3157	3162	3167	3172	3177	3182	3187	3192	3197	3202	3207	3212	3217	3222	3227	3232	3237	3242	3247	3252	3257	3262	3267	3272	3277	3282	3287	3292	3297	3302	3307	3312	3317	3322	3327	3332	3337	3342	3347	3352	3357	3362	3367	3372	3377	3382	3387	3392	3397	3402	3407	3412	3417	3422	3427	3432	3437	3442	3447	3452	3457	3462	3467	3472	3477	3482	3487	3492	3497	3502	3507	3512	3517	3522	3527	3532	3537	3542	3547	3552	3557	3562	3567	3572	3577	3582	3587	3592	3597	3602	3607	3612	3617	3622	3627	3632	3637	3642	3647	3652	3657	3662	3667	3672	3677	3682	3687	3692	3697	3702	3707	3712	3717	3722	3727	3732	3737	3742	3747	3752	3757	3762	3767	3772	3777	3782	3787	3792	3797	3802	3807	3812	3817	3822	3827	3832	3837	3842	3847	3852	3857	3862	3867	3872	3877	3882	3887	3892	3897	3902	3907	3912	3917	3922	3927	3932	3937	3942	3947	3952	3957	3962	3967	3972	3977	3982	3987	3992	3997	4002	4007	4012	4017	4022	4027	4032	4037	4042	4047	4052	4057	4062	4067	4072	4077	4082	4087	4092	4097	4102	4107	4112	4117	4122	4127	4132	4137	4142	4147	4152	4157	4162	4167	4172	4177	4182	4187	4192	4197	4202	4207	4212	4217	4222	4227	4232	4237	4242	4247	4252	4257	4262	4267	4272	4277	4282	4287	4292	4297	4302	4307	4312	4317	4322	4327	4332	4337	4342	4347	4352	4357	4362	4367	4372	4377	4382	4387	4392	4397	4402	4407	4412	4417	4422	4427	4432	4437	4442	4447	4452	4457	4462	4467	4472	4477	4482	4487	4492	4497	4502	4507	4512	4517	4522	4527	4532	4537	4542	4547	4552	4557	4562	4567	4572	4577	4582	4587	4592	4597	4602	4607	4612	4617	4622	4627	4632	4637	4642	4647	4652	4657	4662	4667	4672	4677	4682	4687	4692	4697	4702	4707	4712	4717	4722	4727	4732	4737	4742	4747	4752	4757	4762	4767	4772	4777	4782	4787	4792	4797	4802	4807	4812	4817	4822	4827	4832	4837	4842	4847	4852	4857	4862	4867	4872	4877	4882	4887	4892	4897	4902	4907	4912	4917	4922	4927	4932	4937	4942	4947	4952	4957	4962	4967	4972	4977	4982	4987	4992	4997	5002	5007	5012	5017	5022	5027	5032	5037	5042	5047	5052	5057	5062	5067	5072	5077	5082	5087	5092	5097	5102	5107	5112	5117	5122	5127	5132	5137	5142	5147	5152	5157	5162	5167	5172	5177	5182	5187	5192	5197	5202	5207	5212	5217	5222	5227	5232	5237	5242	5247	5252	5257	5262	5267	5272	5277	5282	5287	5292	5297	5302	5307	5312	5317	5322	5327	5332	5337	5342	5347	5352	5357	5362	5367	5372	5377	5382	5387	5392	5397	5402	5407	5412	5417	5422	5427	5432	5437	5442	5447	5452	5457	5462	5467	5472	5477	5482	5487	5492	5497	5502	5507	5512	5517	5522	5527	5532	5537	5542	5547	5552	5557	5562	5567	5572	5577	5582	5587	5592	5597	5602	5607	5612	5617	5622	5627	5632	5637	5642	5647	5652	5657	5662	5667	5672	5677	5682	5687	5692	5697	5702	5707	5712	5717	5722	5727	5732	5737	5742	5747	5752	5757	5762	5767	5772	5777	5782	5787	5792	5797	5802	5807	5812	5817	5822	5827	5832	5837	5842	5847	5852	5857	5862	5867	5872	5877	5882	5887	5892	5897	5902	5907	5912	5917	5922	5927	5932	5937	5942	5947	5952	5957	5962	5967	5972	5977	5982	5987	5992	5997	6002	6007	6012	6017	6022	6027	6032	6037	6042	6047	6052	6057	6062	6067	6072	6077	6082	6087	6092	6097	6102	6107	6112	6117	6122	6127	6132	6137	6142	6147	6152	6157	6162	6167	6172	6177	6182	6187	6192	6197	6202	6207	6212	6217	6222	6227	6232	6237	6242	6247	6252	6257	6262	6267	6272	6277	6282	6287	6292	6297	6302	6307	6312	6317	6322	6327	6332	6337	6342	6347	6352	6357	6362	6367	6372	6377	6382	6387	6392	6397	6402	6407	6412	6417	6422	6427	6432	6437	6442	6447	6452	6457	6462	6467	6472	6477	6482	6487	6492	6497	6502	6507	6512	6517	6522	6527	6532	6537	6542	6547	6552	6557	6562	6567	6572	6577	6582	6587	6592	6597	6602	6607	6612	6617	6622	6627	6632	6637	6642	6647	6652	6657	6662	6667	6672	6677	6682	6687	6692	6697	6702	6707	6712	6717	6722	6727	6732	6737	6742	6747	6752	6757	6762	6767	6772	6777	6782	6787	6792	6797	6802	6807	6812	6817	6822	6827	6832	6837	6842	6847	6852	6857	6862	6867	6872	6877	6882	6887	6892	6897	6902	6907	6912	6917	6922	6927	6932	6937	6942	6947	6952	6957	6962	6967	6972	6977	6982	6987	6992	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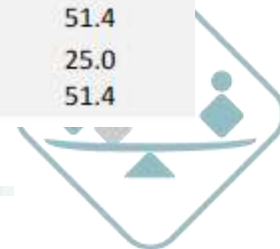
# The table rows

- Stratifiers in the rows
- 5 in total
  - Wealth quintiles
    - 1 to 5
  - Maternal education
    - No education
    - Primary
    - Secondary +
  - Child's sex
  - Urban/rural
  - Geographic region
    - Variable by country

## Azerbaijan (DHS 2006)

Table - Coverage of Countdown indicators at 1

	Family planning needs satisfied	Contraceptive prevalence rate
<b>National</b>	69.4	51.1
<b>Wealth quintiles</b>		
Q1	71.3	55.2
Q2	65.5	48.0
Q3	65.9	47.0
Q4	65.6	48.4
Q5	78.4	57.2
<b>Equity indicators</b>		
Q5/Q1 ratio	1.1	1.0
Q5-Q1 difference	7.1	2.0
Concentration index	2.1	1.3
SII	7.5	2.8
<b>Maternal education</b>		
none	67.6	51.4
primary	39.8	25.0
secondary +	69.6	51.4



# The table columns

Table - Coverage of Countdown indicators at national level and by key equity stratifiers.

	Family planning needs satisfied	Contraceptive prevalence rate	Antenatal care (1+ visits, skilled provider)	Antenatal care (4+ visits, any provider)	Skilled attendant at delivery	C-section rate	Early initiation of breastfeeding	Postnatal care for babies born at home
National	69.4	51.1	76.9	45.2	88.6	4.7	31.9	10.8
Wealth quintiles								

- Indicators in the columns

- FPS – family planning need satisfied
- Contraceptive prevalence
- ANC1s, ANC4
- SBA
- C-section
- Early BF
- Postnatal care for babies (born @ home & all)

- BCG, DTP3, Measles
- Vitamin A
- ORT
- Careseek for diarrhea
- ITN by children
- Improved drink water
- Cocoverage
- CCI – composite coverage index



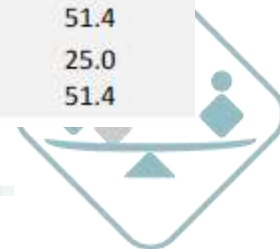
# Reading the table

- Each cell shows coverage
- For the whole country
- For wealth quintiles
- And so on...
  - Not getting into the definition of each one
- Oops
  - Not all rows are stratifiers!

## Azerbaijan (DHS 2006)

Table - Coverage of Countdown indicators at a

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# Equity indicators

- Just after the coverage by wealth quintiles
  - Some equity indicators:
    - Richest / poorest ratio
    - Richest – poorest difference
    - Concentration index (CIX)
    - Slope index of inequality (SII)

	FPS	CPR	ANC1s
<b>Equity indicators</b>			
Q5/Q1 ratio	1.1	1.0	1.8
Q5-Q1 difference	7.1	2.0	42.1
Concentration index	2.1	1.3	11.4
SII	7.5	2.8	53.0



# Measures of inequality

- Dozens of measures available
  - Indicates that no one is a clear winner!
- Simplest measures – ratio and difference
  - Do not take into account intermediate groups, only the extremes of distribution, thus insensitive to changes in part of the population
  - Not always the extremes will present lowest/highest coverage
- More complex measures
  - Deal with the whole population
  - Based on several ideas
    - Concentration, variance, statistical models





# Flavors of inequalities

- Absolute and relative
  - When comparing two groups one can measure
    - Distance = absolute, by difference
    - Ratio = relative, by division
- Absolute inequality
  - How far one group from the other
  - Tends to decrease when the one group achieved the limit
- Relative inequality
  - How many times one group better than another
  - Behaves strangely when one group close to the limit
    - Especially approaching zero (mortality, for instance)

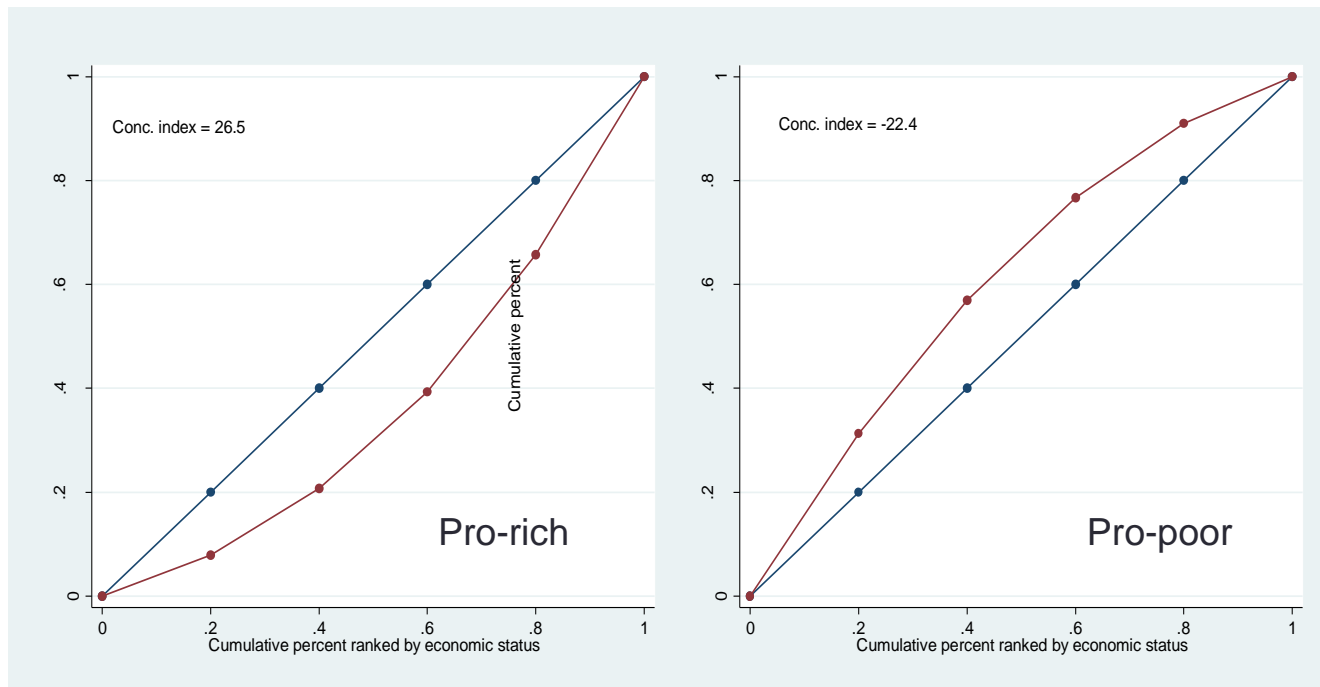






# Concentration index (relative) *Countdown to 2015* Maternal, Newborn & Child Survival

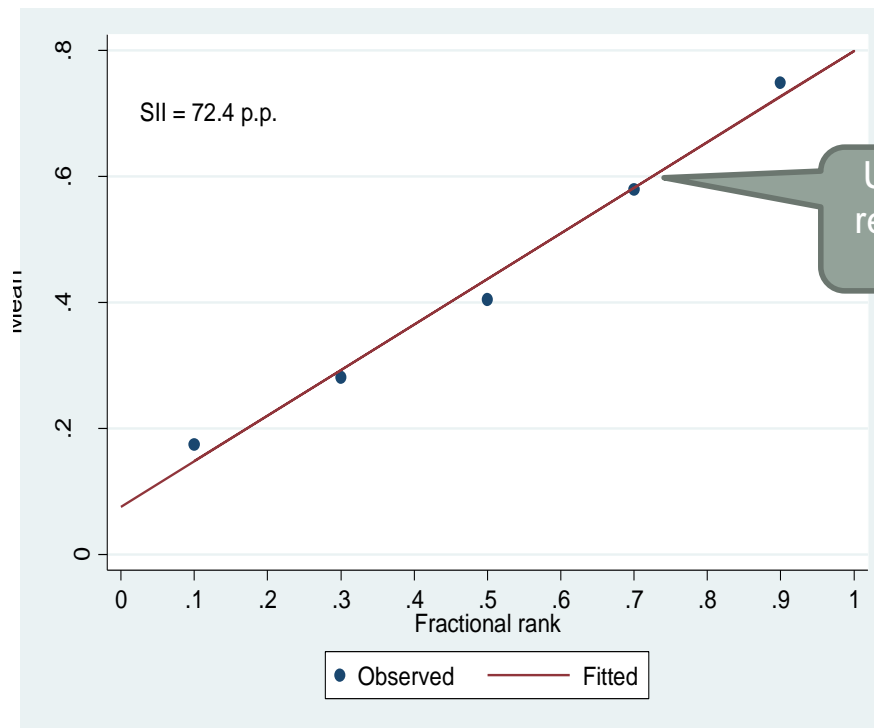
- CIX: twice the area of the concentration curve that shows cumulative distribution of outcome for increasing wealth.
  - Positive: pro-rich
  - Negative: pro-poor





# Slope index of inequality (absolute)

- SII: the slope of the regression of outcome on midpoints of wealth groups. Interpreted as the difference between the adjusted coverage for the top and bottom of wealth scale.



Usually estimated by linear regression, best if done with logistic regression



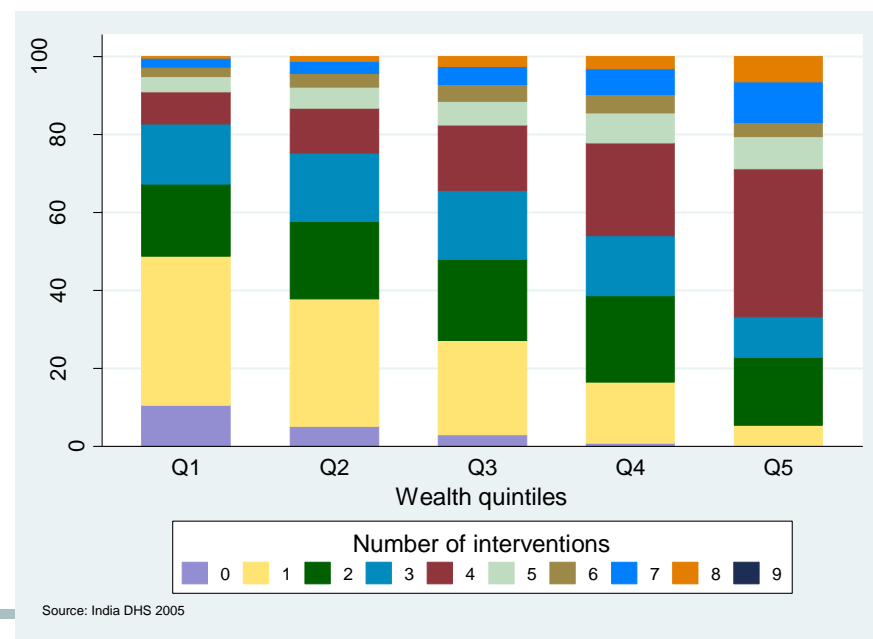
# Not only simple indicators in the columns

- Co-coverage indicator
- Composite coverage index



# Co-coverage

- A set of 9 coverage indicators were selected
  - ANC, vitamin A, tetanus vaccine, SBA (mother)
  - BCG, DTP3, measles immunization, ITN (child)
  - Safe water (household)
- The number of interventions received by each mother/child is added
- Proportions of each count presented by wealth quintiles
- In the table, % of children receiving 6+ interventions



# Composite coverage index

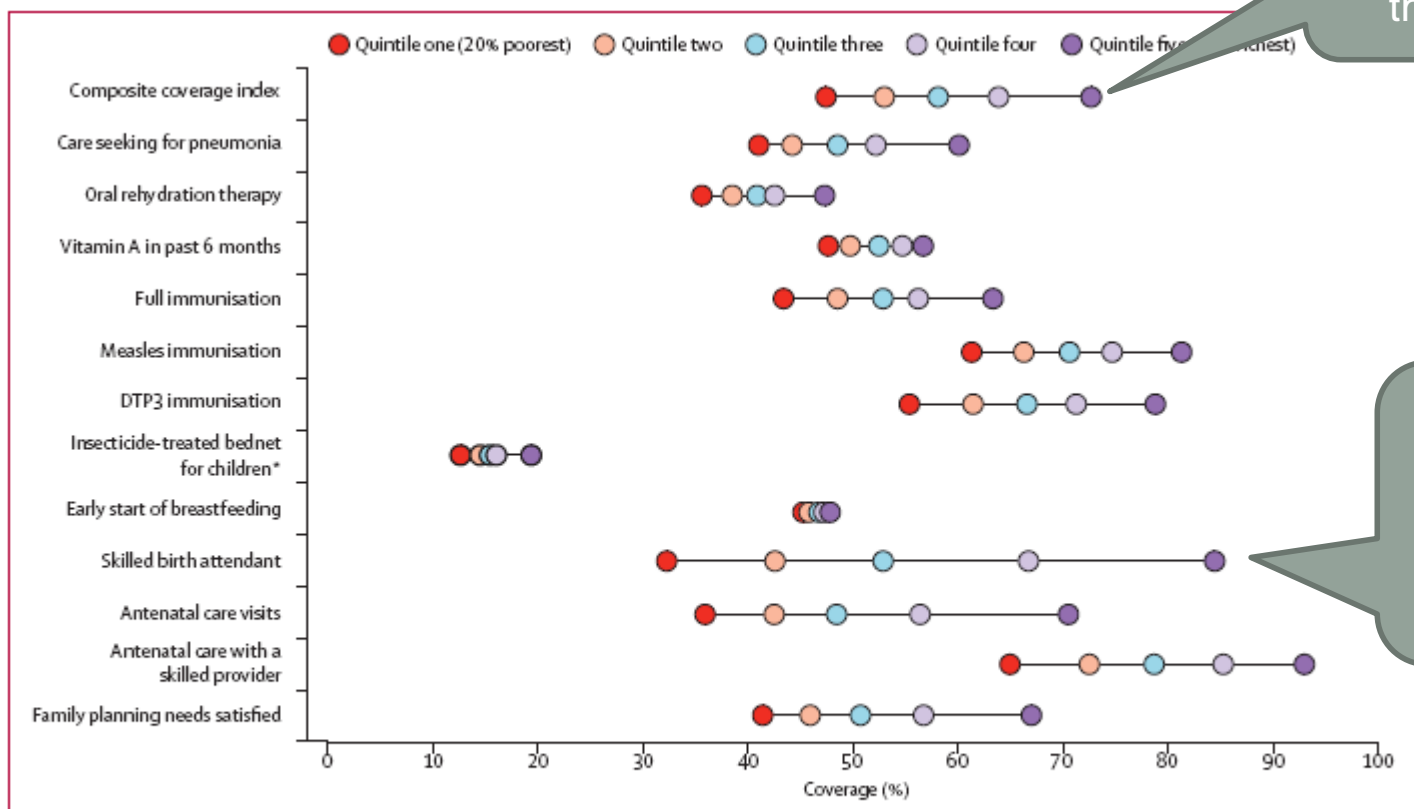
- Originally proposed as the coverage gap
  - Not well received/understood by policy makers
- Weighted average of 8 interventions
  - equal weights to 4 stages in the continuum of care
    - family planning
      - demand satisfied
    - maternal and newborn care
      - skilled birth attendant, 1+ antenatal care by skilled provider
    - Immunization
      - DPT3 x 2, measles, BCG
    - case management of sick children
      - ORT for diarrhea, care for pneumonia

$$\frac{1}{4} \left( \text{FPS} + \frac{\text{SBA} + \text{ANCS}}{2} + \frac{2\text{DPT3} + \text{MSL} + \text{BCG}}{4} + \frac{\text{ORT} + \text{CPNM}}{2} \right)$$



# The dot-plot (or equi-plot)

The five wealth quintiles shown at the same time



Possible to show distance, order, "shape" of inequality

Figure 1: Mean coverage in each wealth quintile for the studied interventions in 54 Countdown countries

Coloured dots show the average coverage in each wealth quintile. Q1 is the 20% poorest wealth quintile; Q5 is the 20% richest. The distance between quintiles 1 and 5 represents absolute inequality. \* Appendix p 1 specifies age ranges of children.



# Finally, CCI by quintile

