Improving Effective Coverage in *Health*

Do Financial Incentives Work?

World Bank Policy Research Report

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The Big Picture

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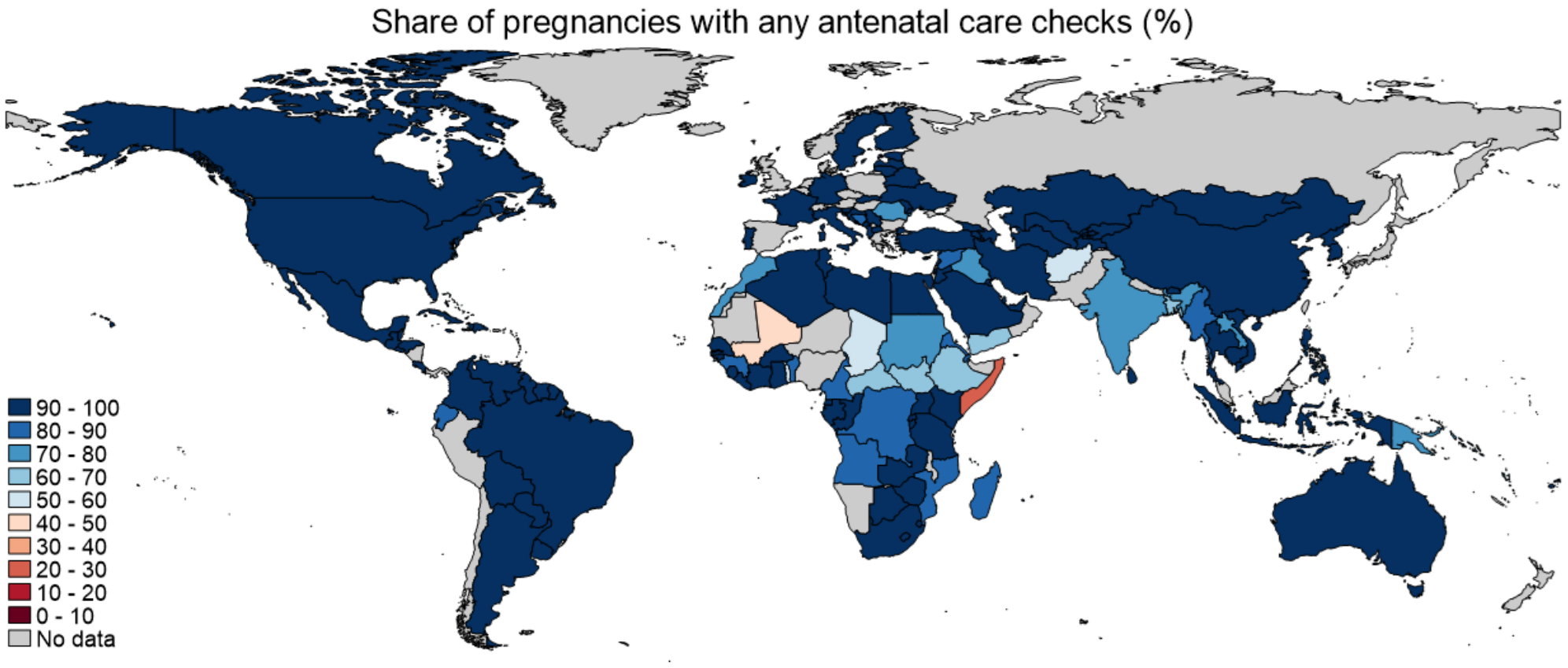
A FRUSTRATING STATUS QUO: HIGH RATES OF ANTENATAL CARE VISITS AROUND THE WORLD (2017)…



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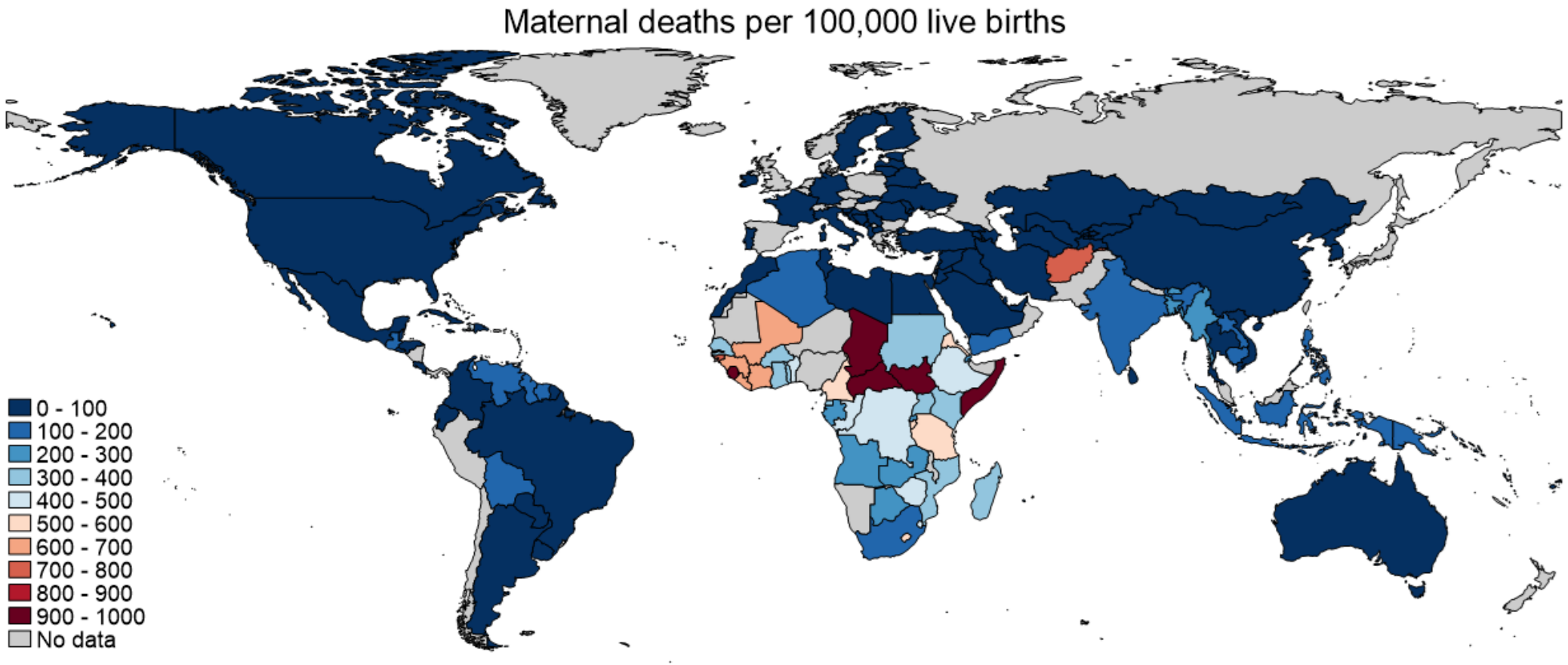
ALONGSIDE HIGH MATERNAL MORTALITY RATES IN MANY LOW-INCOME COUNTRIES (2017)



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Principal-agent problems are common in many markets, especially in the public sector

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Performance pay

- **Paying for performance is a common contracting approach to deal with the principal agent problem: tie prices to actions**
  - Used across public sector bureaucracies
  - Applications in education, infrastructure, agriculture, public-private partnerships, contracting with non-profits, and health.
  - Goal is to improve the efficiency of public expenditure.
  - Performance pay is based on the quantity and quality of services delivered
  - Paradigmatic shift from input-based financing towards transparency/accountability
  - Health is one example, but there is a big push across sectors for donor and domestic resources in performance pay

Performance pay and performance-based financing (PBF) projects in health

- **PBF projects deploy a package intervention that includes:**
  1. **Performance pay:** one (crucial) component of PBF packages, but not one and the same.
  2. **Frontline autonomy**
  3. **Transparency/accountability**
  4. **Community engagement**

  And, there are related, often substantial effects on public financial management systems.

- **Large $2.5 billion Health Results Innovation Trust Fund portfolio managed by the World Bank**
  - Mainly invested in PBF approaches for maternal and child healthcare in low-income countries
  - Spans fifteen years and forty countries– projects and impact evaluations
  - Sustained collaboration between World Bank research department and Health sector teams

→ What have learned from these pilots?

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In this report, we go beyond the glass half full and half empty cliché

1. **What does the evidence say about performance pay in low-income country health systems?**
   - Assess impacts on coverage and effective coverage (health coverage with minimum content and quality) of maternal and child health services
2. **What are the key constraints to quality?**
   - Which constraints to quality can be addressed by performance pay?
   - Can we realistically expect it to improve quality? By how much?
3. **Can demand-side approaches improve coverage and effective coverage of maternal and child health services?**
4. **How do PBF projects compare to direct facility financing (DFF)?**
5. **What are the key lessons for the design of health financing reform?**

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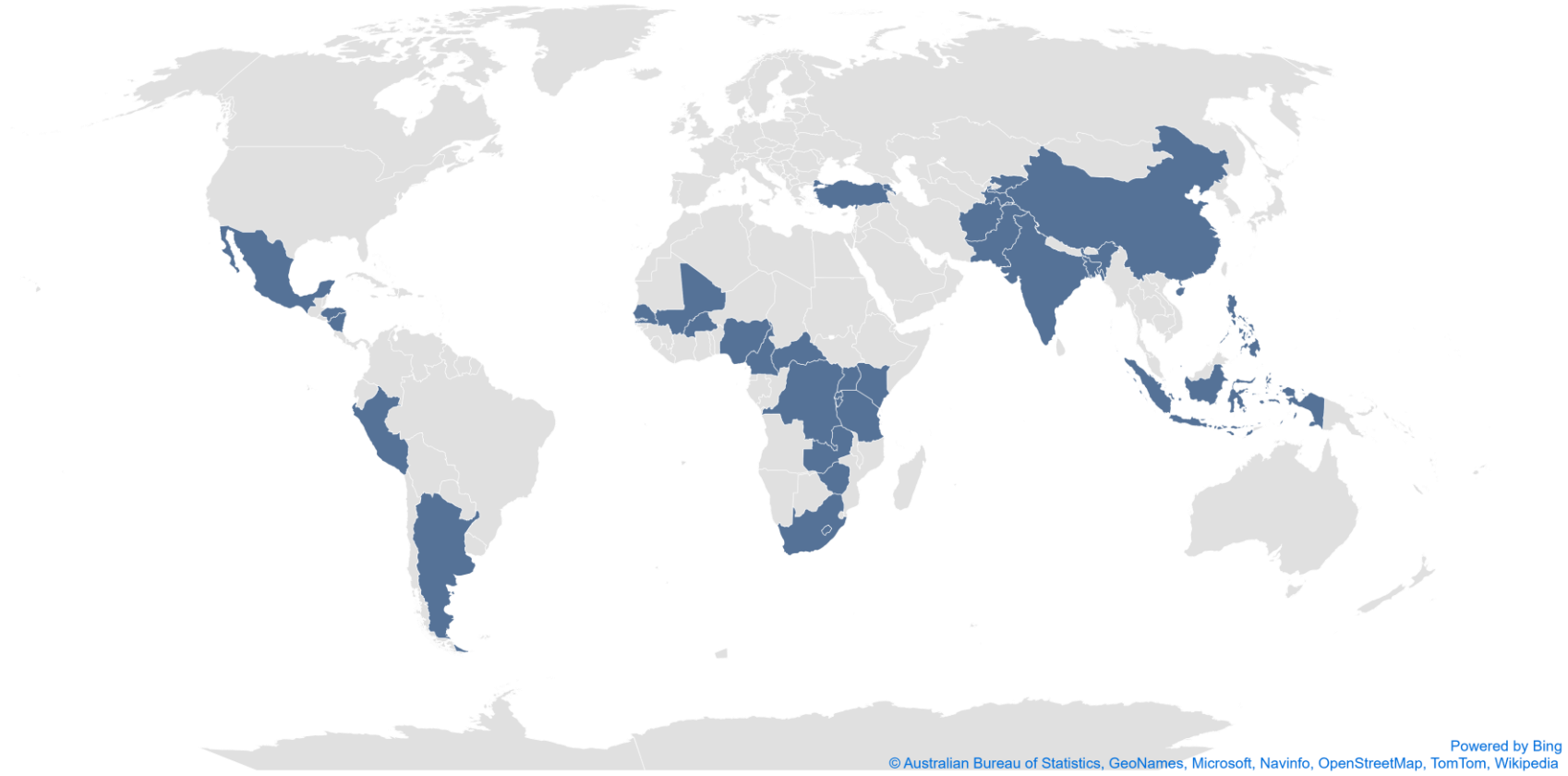
Geographic scope of the report



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Performance Based Financing (PBF) and Direct Facility Financing (DFF) projects

PBF projects

1. Performance pay
2. Operating budgets/autonomy
3. Transparency/accountability
4. Community engagement

DFF projects

1. ~~Performance pay~~
2. Operating budgets/autonomy
3. Transparency/accountability
4. Community engagement

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A sneak peek at our key takeaways

1. **Little evidence for impacts for across-the-board performance pay in under-resourced, unfinanced health systems**

2. **Direct facility financing with autonomy and accountability can deliver many gains** at lower cost and with relatively easier implementation.

3. ***Before* designing health financing reform:**
    1. Assess coverage versus effective coverage to identify "low-hanging fruit" for performance pay
    2. Assess constraints to quality of care to ensure they are in locus of control of the frontline worker
    3. Baseline utilization should have room for improvement but not be so low as indicate demand-side barriers.

4. **Combine demand-and-supply side approaches**

5. **Sequence interventions and use performance pay strategically**

Why Effective Coverage?

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What is effective coverage?

- **It is coverage that includes a minimum content and quality of care.**

- We operationalize effective coverage by investigating how to measure it using existing data
- Using household survey data for 93 countries, show effective coverage by country, wealth and medical conditions.
- We measure both insufficient care and overuse.

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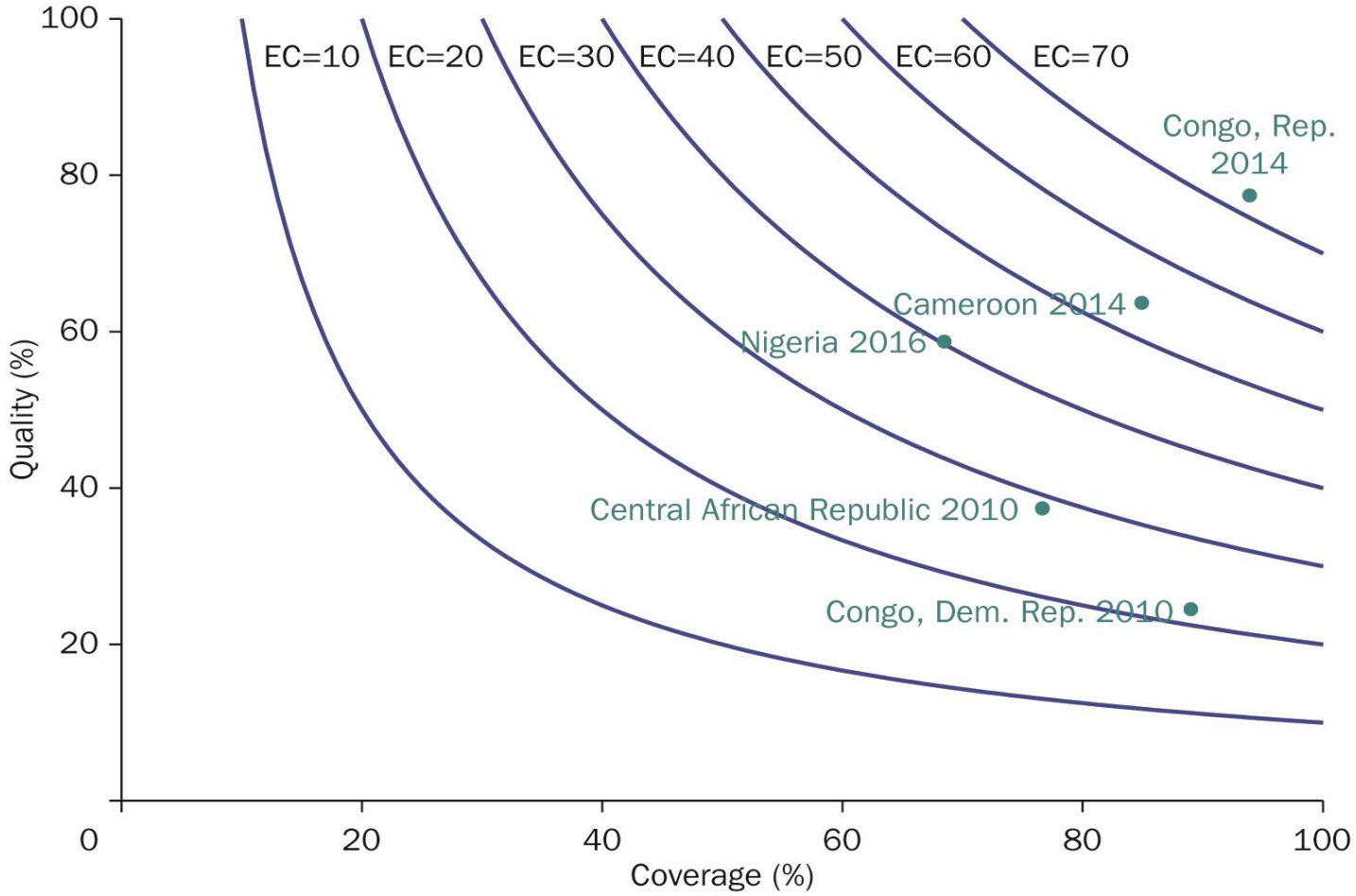
Coverage versus quality of antenatal care: an illustrative example



Coverage: Percent of women giving birth who had 1+ ANC visits
Quality: Of these, percent who had: 4+ visits, 1+ visits with skilled provider, blood pressure taken, and blood and urine samples taken (i.e. correct treatment). Data source: MICS

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Quality of Maternal and Child Health

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Why is the rate of relevant treatment not 100%?

- **Health worker effort is often thought to be the binding constraint to quality (Das, Hammer, Leonard 2008)**
  - If true, and if effort is observable and contractable, performance pay makes sense.

- **In fact, constraints to quality may lie at several levels:**
  1. **The health facility or higher level:** equipment, drugs, supplies
  2. **Upstream:** medical training, public expenditure tracking system
  3. **Health worker effort**
  4. **Patient-driven demand:** may depend on patient socioeconomic status

- **So, not all constraints controlled by frontline facilities or workers**
  → There may be limits to what performance pay can achieve.

Know-can-do gap framework to decompose constraints to quality (Ibnat et al. 2019):

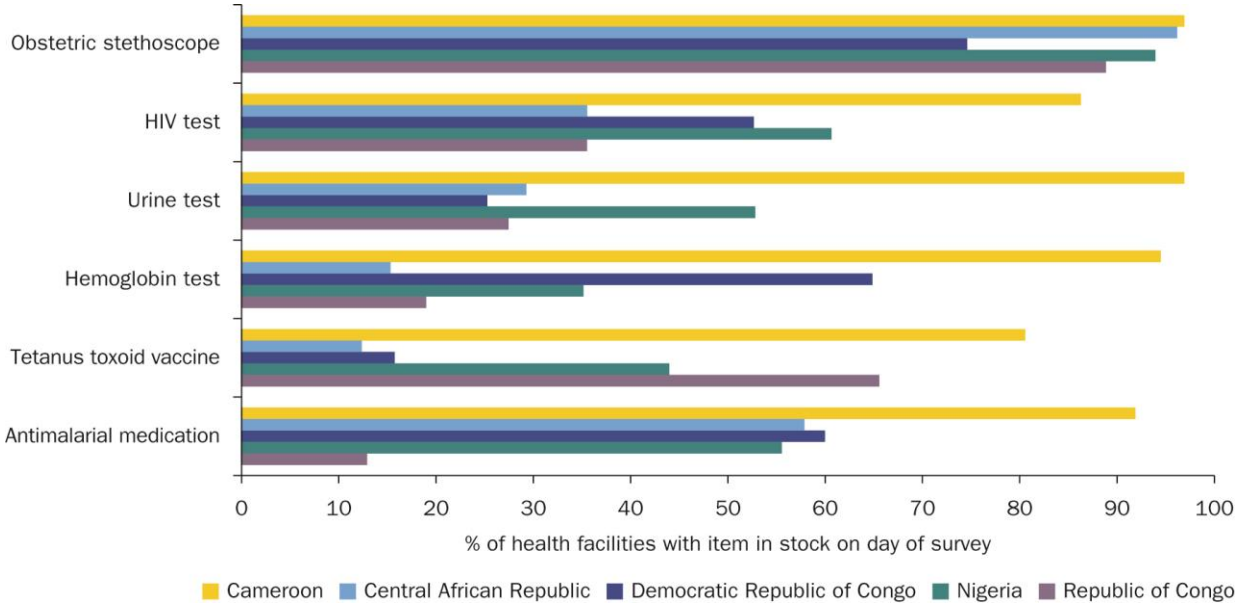
- **Three gaps reflecting different constraints:**
  1. **Structural capacity gaps** → health facility infrastructure
  2. **Knowledge gaps** → vignettes with health workers
  3. **Underused capacity/know-can-do gap:** care that could have been provided but is not.
     → direct observations of patient-provider interactions

- **Quantify these gaps in antenatal care consultations in 5 sub-Saharan African countries.**
  - Cameroon, Central African Republic, Democratic Republic of Congo, Nigeria, Republic of Congo
  - Rich data on patient, provider, facility characteristics and performance from HRITF IE portfolio.
  - Benchmark: WHO protocol for antenatal care.

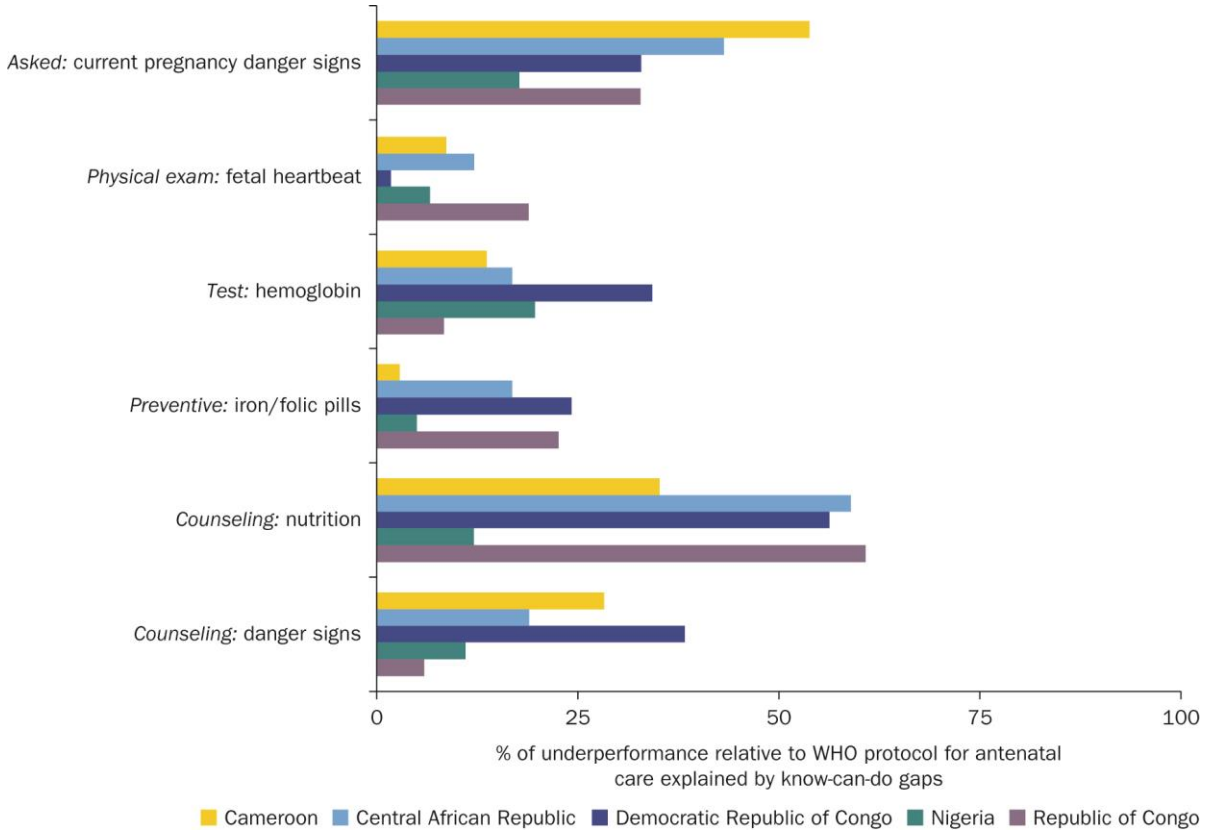
- **Assess two manifestations of poor quality: underperformance and overuse**

Structural capacity gaps, knowledge gaps, and underused capacity in all 5 countries

STRUCTURAL CAPACITY GAPS



UNDERUSED CAPACITY



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Key findings on antenatal care quality

- **2/3rd of poor quality not attributed to poor worker effort**
  - Many competing constraints

  → Performance pay is unlikely to be a silver bullet

- **Wealthier women 3x as likely to receive high quality care than poorer women**
  - Lots of within-country variation in facility quality
  - But also some within-facility inequality: user fees; patient information

- **Health system financing remains a challenge but must address structural capacity, medical training, and worker effort**
  - Coverage versus effective coverage from available household surveys
  - Assess constraints to quality before designing interventions aimed at improving quality

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Health financing to improve effective coverage

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The literature on performance pay

- **Established literature on performance pay in health in high income countries**
    - Focused on clinical quality; few competing constraints other than worker effort
    - Decentralized, well-resourced systems
    - Even so, mixed record of success for performance pay

- **Most applications in low-income settings are in a different type of health system:**
    - Centralized
    - No operating budget to facilities
    - No autonomy over facility management, staffing, etc.
    - Incentives for both facility-level improvements in structural quality *and* worker performance

- **Promising early evidence of PBF projects in low-income countries-- Rwanda (Basinga et al. 2008), Burundi (Bonfrer et al. 2013; Falisse et al. 2015)**

Key features of PBF projects

- **Performance pay**: $12 for institutional delivery, $1.20 for ANC visit, $0.80 for child immunization (example from Nigeria).

- **Operating budgets/autonomy**: unconditional financing for everything but staff remuneration.

- **Transparency/accountability**:
  - Facilities report performance on the purchased services– typically every month.
  - Payments based on these reports.
  - Third party audit of the reports, often every quarter.

- **Community engagement**: ward or village development committees attend facility management committee meetings

Scope of the evidence on PBF projects from HRITF IE portfolio

- Most evidence from sub-Saharan Africa
- “First generation" of PBF projects that primarily used prices to improve quality
- Spotlight high-and-middle income countries and later stage PBF designs that used multiple approaches to improve quality
  - E.g., Argentina, Armenia, Kyrgyz Republic
- Mostly antenatal care but touch upon curative care and non-communicable diseases

- What do we learn from these donor-financed pilots about at-scale health financing reform using domestic resources?

Comparison 1: PBF projects versus business-as-usual

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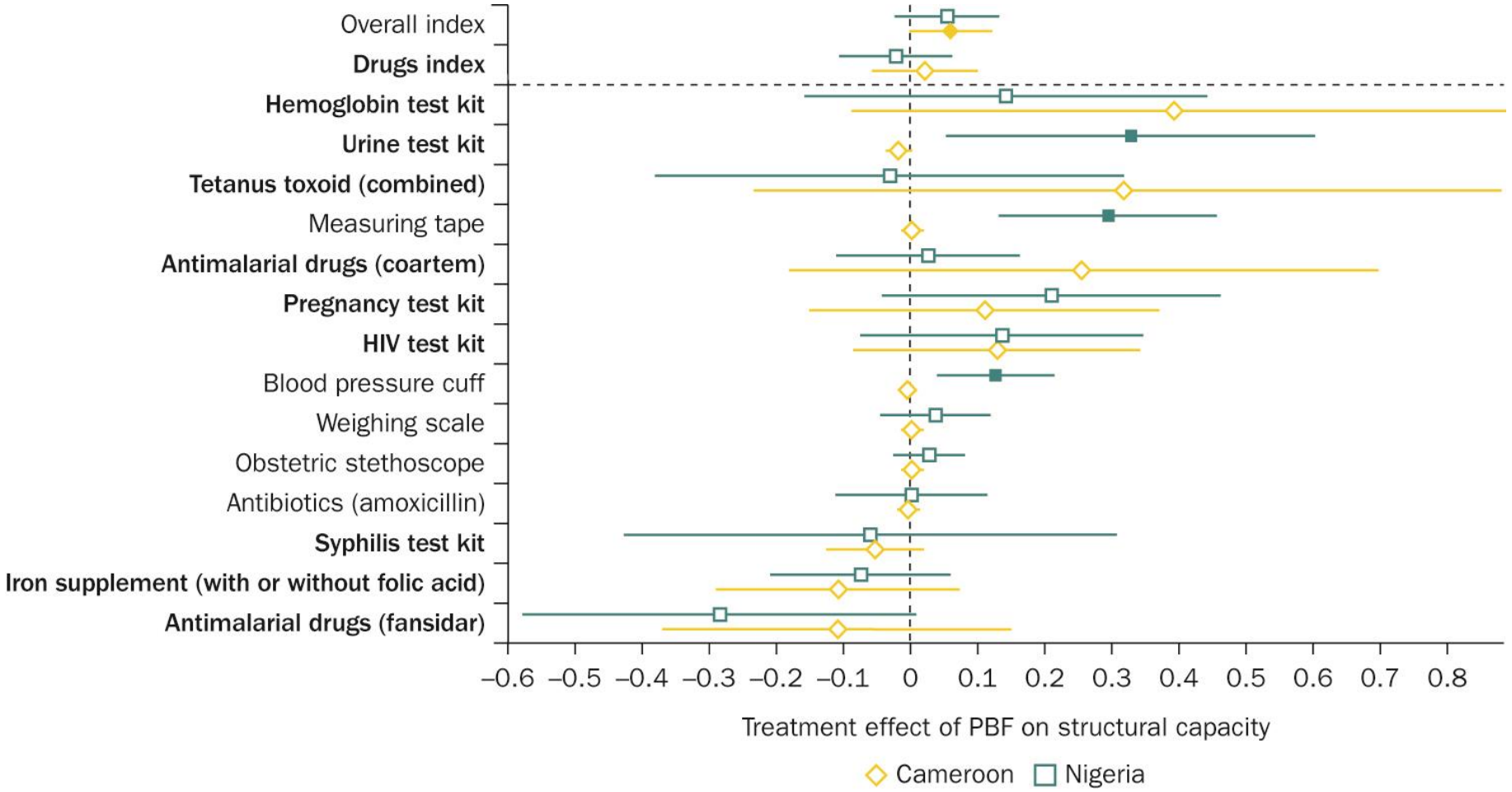
PBF projects versus business-as-usual

1. **Coverage**
   - In most contexts, some improvements (Diaconu et al. 2021)

2. **Quality**
   - Assess impacts on structural capacity and underused capacity

Structural quality: often at least some positive impacts (example from Cameroon and Nigeria)



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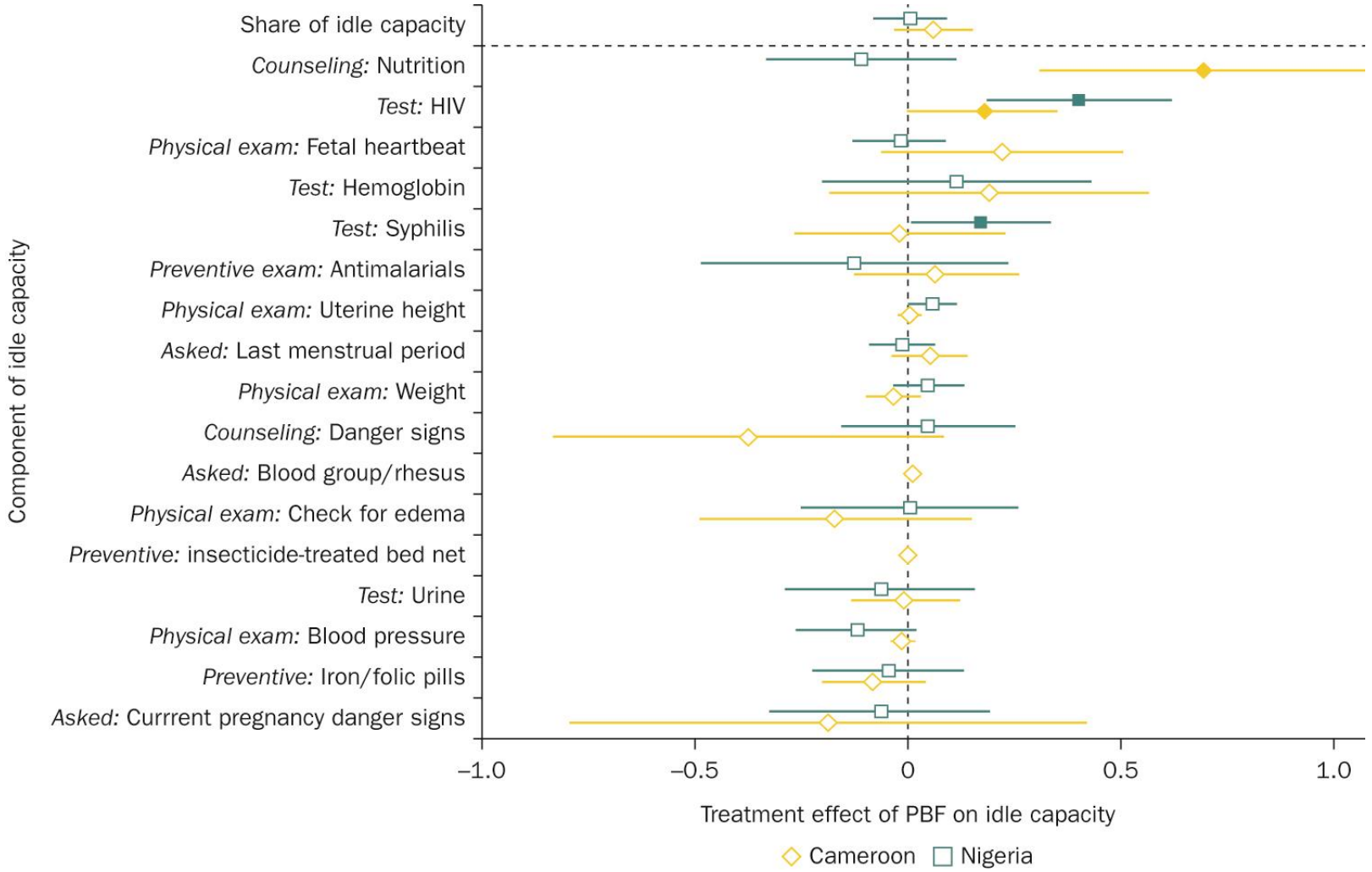
Underused capacity: limited impacts, even some increases



- Can only estimate impacts on underused capacity for Cameroon and Nigeria
- But, often viewed as two of successful instances of early PBF designs
- No overall reduction in underused capacity; even some increases (likely tied to role of user fees).

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The bottom line: PBF projects versus business-as-usual

- **Coverage**
  - **In most contexts, some improvements (Diaconu et al. 2021)**

- **Quality**
  1. **Performance pay is not a silver bullet for worker effort in primary health care in low-income settings**
     - Limited impacts of performance pay on clinical quality even with fewer competing constraints– US, UK (Glickman et al. 2007; Petersen et al. 2006)

  2. **Largest impacts on quality of care are observed for structural quality**
     - Not entirely surprising given large gaps in facility infrastructure and that only 1/3rd of underperformance is due to underused capacity

  → Are there more cost-effective ways of financing structural improvements?

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Other ways to leverage financial incentives for effective coverage

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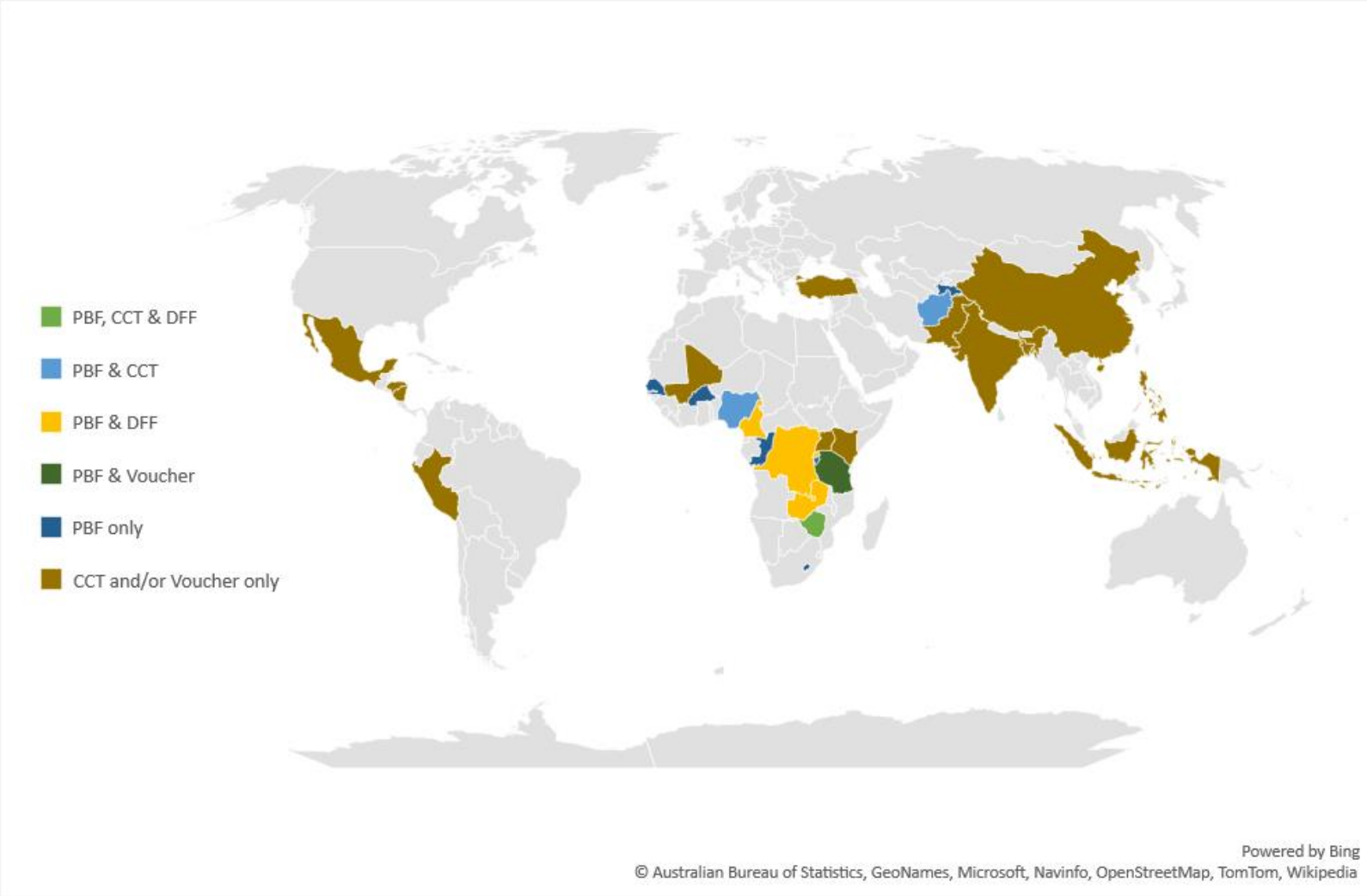
How do PBF project impacts stack up against other means of leveraging financial incentives?

- **We compare coverage and effective coverage impacts of PBF projects to:**
  - **Conditional cash transfer and voucher programs (demand side)**
  - **Direct facility financing projects (supply side)**

- **Note that these are not necessarily "alternatives" and can be used in combination**

Geographic scope of the evidence



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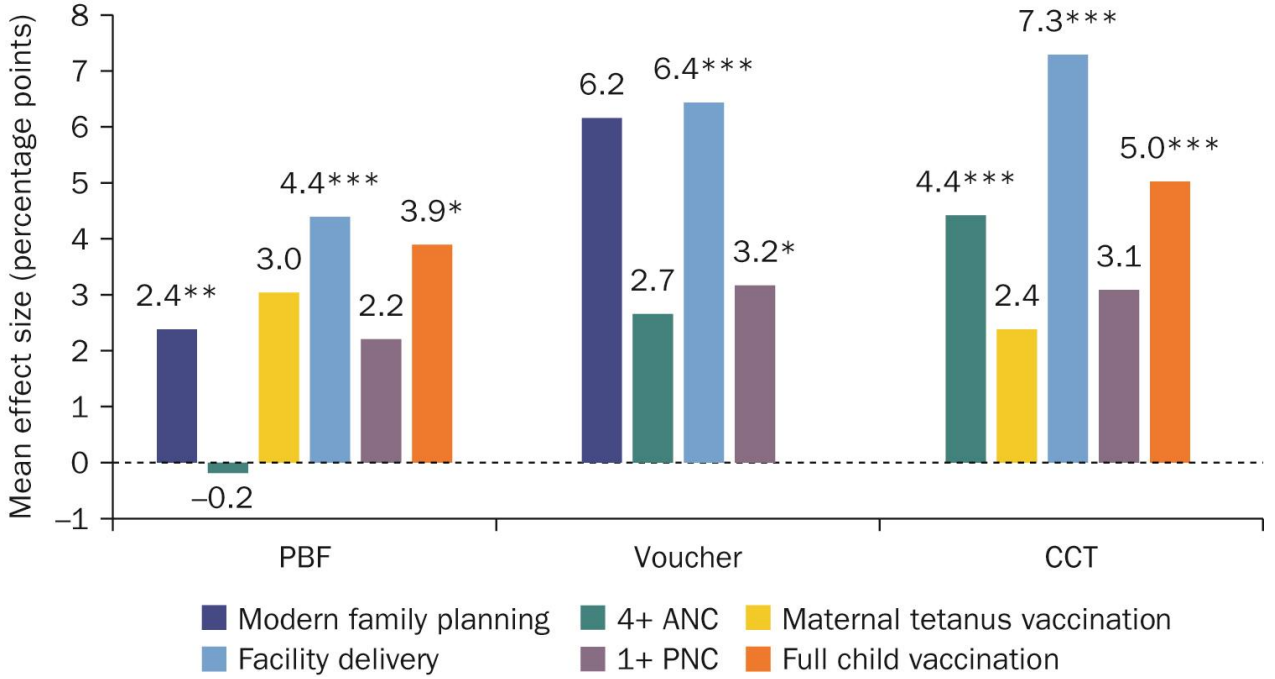
Comparison 2: PBF and demand-side alternatives: results from a meta-analysis (Neelsen et al. 2022)

- **Evidence from 52 programs from 30 countries:**

1. **Financial incentives, on average, improve service coverage**

2. **Modest mean effect sizes**
   - CCTs and vouchers might be more effective.



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Comparison 3: PBF and Direct Facility Financing (DFF) projects

PBF projects

1. **Performance pay**
2. **Operating budgets/autonomy**
3. **Transparency/accountability**:
   a) Facilities report performance on the purchased services– typically every month.
   b) Payments based on these reports.
   c) Third party audit of the reports, often every quarter.
4. **Community engagement**

DFF projects

1. ~~**Performance pay**~~
2. **Operating budgets/autonomy**
3. **Transparency/accountability**:
   a) business plans, dashboards
4. **Community engagement**

- **In WB (HRITF) PBF portfolio, 5 projects directly compare PBF and DFF approaches. We look at all of them.**
  - Cameroon, Nigeria, Rwanda, Zambia, and Zimbabwe
  - Three also included a business-as-usual arm: Cameroon, Nigeria, Zambia
  - In two, PBF disbursed twice as much as DFF: Nigeria and Zambia

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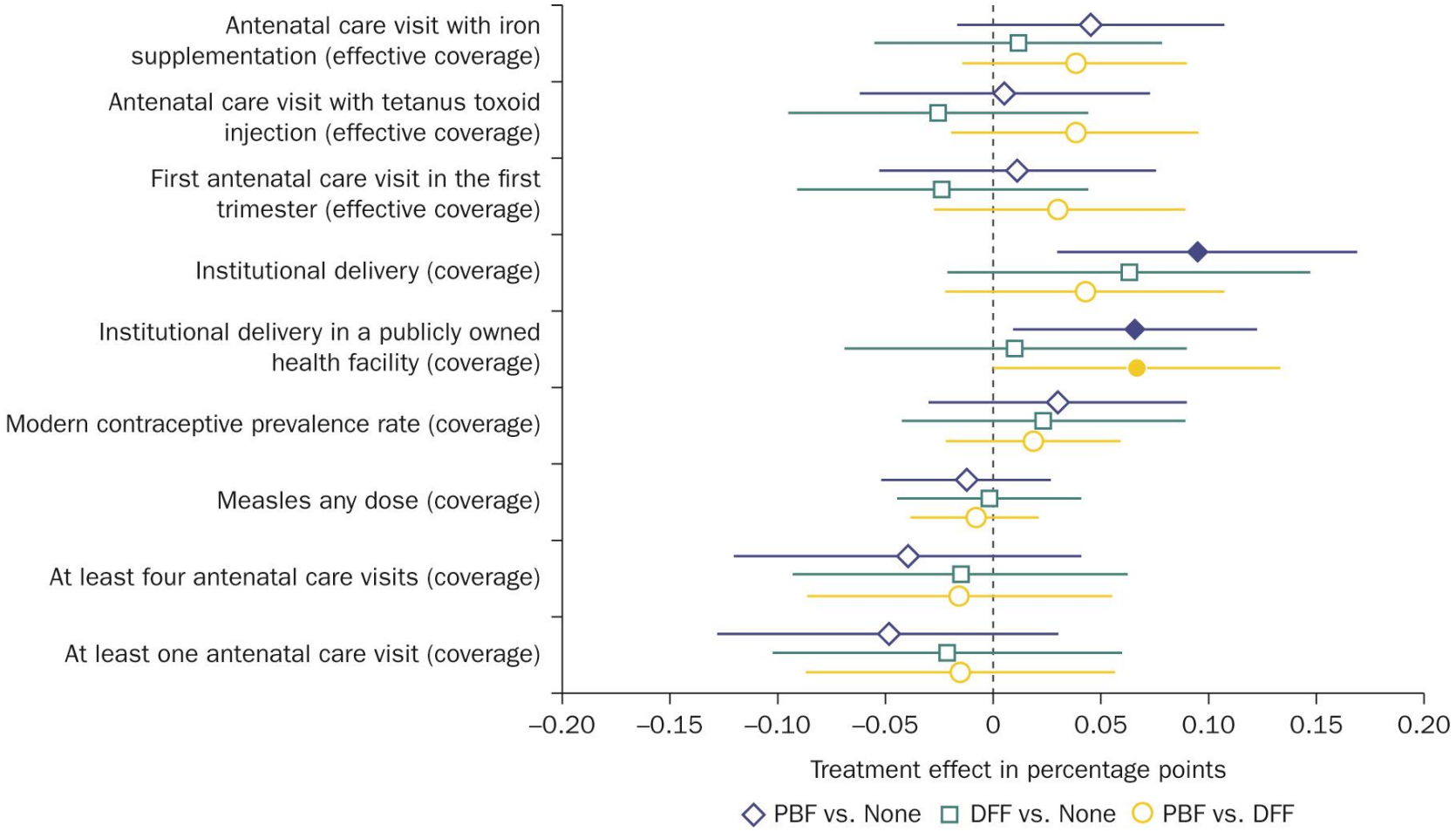
Comparing all HRITF PBF projects and DFF projects: results from pooled analysis



- **We consider many indicators of coverage and effective coverage**

➢ **PBF projects only outperform DFF for institutional delivery.**

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Other considerations and approaches in strengthening program impacts on quality

- Baseline coverage in catchment area **(meta-analysis and Nigeria)**
  - Very low: demand side constraints
  - Very high: room for improvement

- **Performance pay may work best in hospitals (Argentina, Kyrgyz Republic, Liberia)**

- Private sector contracting **can be fruitful grounds for PBF, as in Afghanistan.**

- Implications for cost-effectiveness
  1. Complementary tasks **may generate spillovers:** Cambodia, Rwanda, Nigeria, South Africa
  2. Prices signal importance: temporary spikes (Argentina); demand-side incentives for preventive care (Armenia)
  3. Pecuniary and non-pecuniary **tools:** pay only for quality w/ hands-on supervision (Kyrgyz Republic; Cambodia)

The bottom line for financial incentives

- **Financial incentives improve service utilization and some measures of quality**
  - But impacts are small and leave significant room for improvement
- **In under-resourced, centralized health systems, performance pay yields modest additional impacts**
- **Flexible operating budgets and associated accountability measures can deliver gains by themselves**
  - Can avoid the additional costs and complexity of design of performance pay

Wrapping up and operational implications

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Key takeaways from the evidence

- **Little evidence for impacts for across-the-board performance pay in under-resourced, unfinanced health systems**
  - **Direct facility financing with autonomy and accountability can deliver many gains** at lower cost and with relatively easier implementation.

  - Performance pay makes budgets unpredictable, both for the government and the health facility

  - Performance pay verification costs-- necessary to enforce conditionality-- can be substantial.
    - 2/3rds of project administrative costs in Nigeria attributed to verification (Zeng et al. 2021)
    - Risk-based verification can substantially reduce costs (Grover, Bauhoff, and Friedman 2018)

- **Performance pay is often a complex intervention which can be difficult to scale**

Action items-- informed what's been happening on the ground over the last fifteen years

- **Assess:**
  - Coverage versus effective coverage to identify "low-hanging fruit" for performance pay
  - Gaps in structural capacity, health worker knowledge
  - Know-can-do gap
  - "Sweet spot" for performance pay: baseline utilization has room for improvement but not so low as to be indicative of demand-side barriers, plus there is a high level of know-can-do gap.

- **Sequencing is key:**
    - 18-24 months of demand side interventions and DFF
    - Repeat diagnostics exercise and then introduce performance pay for select indicators.
    - Use emerging technologies to reduce implementation costs.
      - Mobile money, portals, dashboards for accountability

Key principles for sustainable health financing reform

1. Send funds to the frontline
2. Ensure transparency and accountability through good facility financial management.
3. Introduce routine supportive supervision if necessary
4. Introduce an output or performance orientation– this can be through dashboards or portals and not just performance pay
5. Unify the payment system


Thank You!