

The challenge of delivering healthcare to the poor: Udaipur Example.

Esther Duflo , 14.73, October 28, 2009

povertyactionlab.org

Improving Health Status

- Seva Mandir was keen to find new interventions for its health unit
- We had no idea what the outstanding issues and concerns were
- We started with a descriptive survey
- With the view of using survey results plus available knowledge to shed light on the challenges of health care delivery and develop interventions that have a chance to work

Udaipur rural health survey (Banerjee-Deaton-Duflo)

- Data collection in rural Udaipur district, Rajasthan
 - 100 hamlets from 362 villages where Seva Mandir operates (poorer than average)
 - Stratified by distance to road: 50 at least 500 m from a road
-

Survey structure

- Four components
 - 1. Village census
 - listing, facilities, maps, infrastructure
 - 2. Facility survey
 - 143 public facilities
 - Several hundreds “modern” private facilities
 - 225 bhopas
-

Survey structure

- 3. Weekly facility visits
 - 49 per facility on average
 - Are they open?
 - Who is there?
- 4. Household survey
 - 1,024 households, 5,759 individuals
 - All members interviewed

Household survey

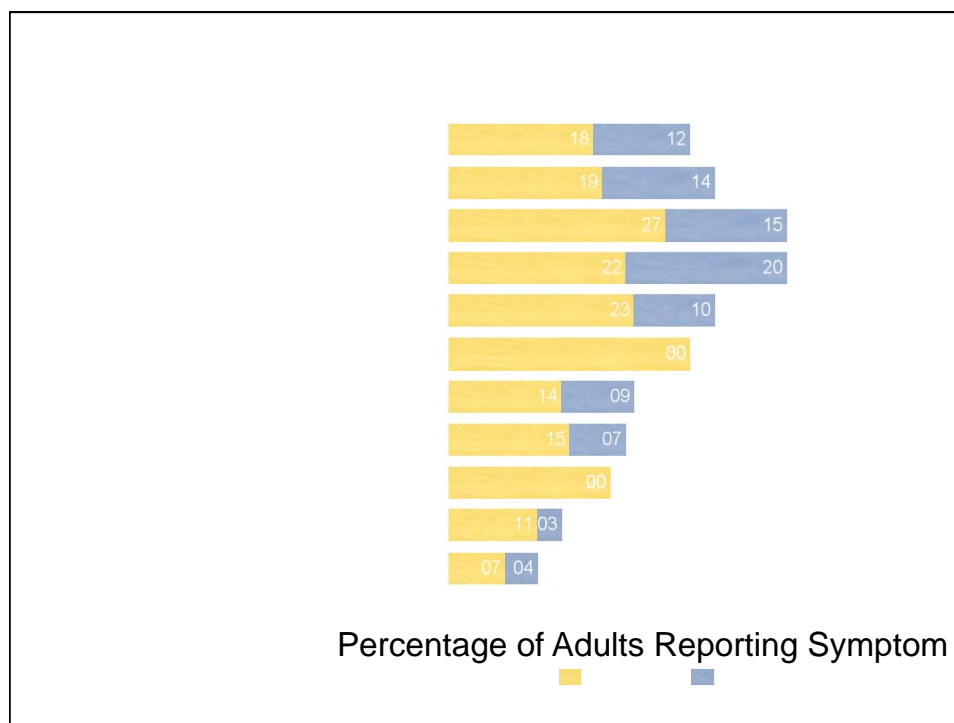
- Economic status
 - Income, consumption, etc.
 - Education
 - Work
- Happiness and health measures
 - Depression, symptoms
 - ADLS & IADLS
 - Fertility histories
- Experience with health care system
- Direct measures
 - Peak flow, weight and height, hemoglobin, blood pressure

Poverty

- This is a very poor, largely tribal population
 - More than 40 percent below official PL, cf 13 percent in rural Rajasthan
 - 46 percent males and 11 percent females are literate
 - 21 percent households have electricity

Health status

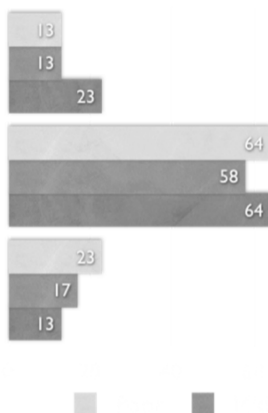
- 80 percent adult females, 27 percent adult males hemoglobin < 12 gm/dl
- Standard cutoffs, men as likely as women to be anemic, older women as anemic as younger women: diet?
- BMI 17.8 (men) 18.1 (women), 93% (men) 88% (women) BMI < 21
- Many self-reported symptoms, substantial fraction “serious”
 - Fever, colds, “body ache,” back ache, chest pains, vision problems, etc.
 - Personal care ADLS are good
 - Work functioning often poor: >30% cannot walk 5k, draw water, or work unaided in the fields, 20% difficulty squatting



Demand for healthcare

- People are worried about health: 0.5 visits per month to a health provider per adult.
- They spend about 7% of the PCE of their family on expenditure.
- Most of this expenditure appears to be on adults.
- 60% of all visits are to private providers, 20% to government facilities, 20% to bhopas.
- The poorest third are slightly less likely to see a private provider and slightly more likely to see a bhopa
- The richest third are substantially more likely to see a government doctor and less likely to see a bhopa.

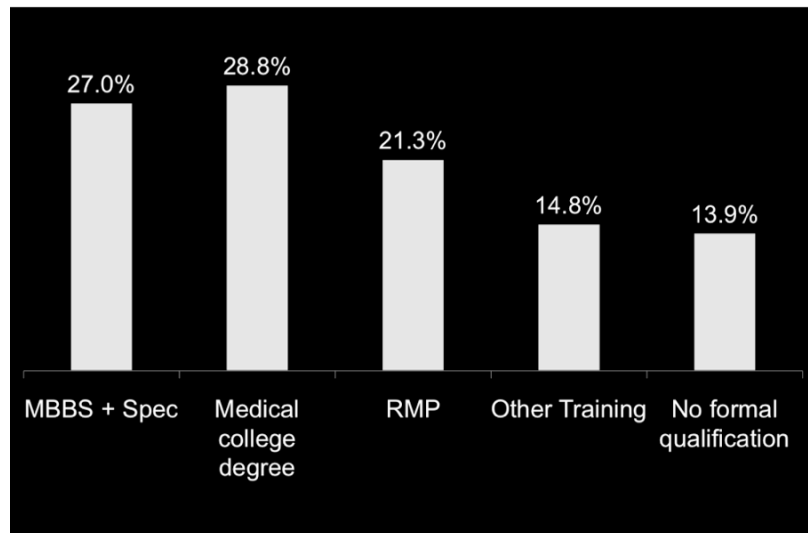
Percent of Health Spending by Type of Provider,
by Poverty



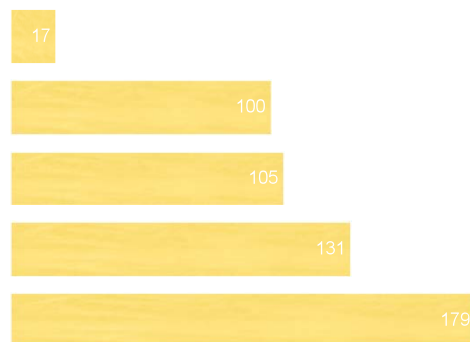
Why is there is so little demand for public sector doctors?

- Public facilities are closer:
 - In rural Udaipur district the closest modern provider is the ANM (1.6Km). The closest private provider is 2.8 Km away.
 - The closest MBBS (MD) provider is the Govt. doctor at the PHC (6.8 Km). The closest self-described private MBBS is (8.2 Km).
- And more qualified
 - Government ANMs must have 12 years of schooling plus 1.5 years of training.
 - PHC have real doctors
 - Private doctors are often not qualified
- And cheaper

Doctor's qualifications



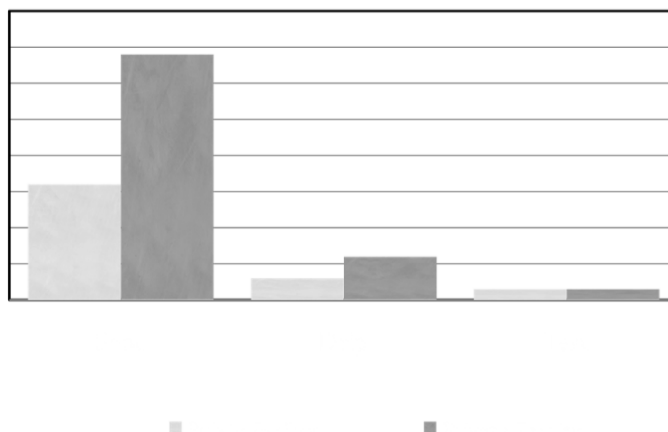
Price per Visit in Rupees (Excluding Tests and Operations)



Two competing explanations

- Supply side: The govt. facilities are worse than they look:
 - The sub-center is closed 56% of the time during regular hours and in 44% cases the ANM is nowhere to be found.
 - The absence cannot be predicted based on day of week, time of day—so you cannot plan to find her.
 - Das and Hammer (2005) find that in Delhi public doctors put in much less effort: They examine the patient less than 40% of the time, as against more than 70% of the time for private doctors.
- Demand side: The private doctors pander to what people want (shots and drips):
 - Govt doctors are less likely to give shots (32% as against 68%) and drips (6% as against 12%).

Percent of Receiving Treatment Per Visit



Some evidence against government doctors

- There is a strong positive correlation between the probability that the health center is open and the number of clients present when they are open.
- People who live in villages where the public facilities are open more often tend to use public facilities more, though no reason to assume this is causal.
- In addition, Das and Hammer find in Delhi that in poor neighborhoods treatment is better with private doctors.
- And people say that they do not go to public facilities because of absence and poor treatment.
- But among the symptoms of poor treatment they mention lack of injectables.

How good is people's judgment?

- Adults are significantly more likely to see someone than the omitted category if they have fever, diarrhea, vomiting, upper abdominal pain.
- They are significantly less likely to see anyone if they have weakness, backache, pain during urination, hearing loss, chest pains, memory loss, weight loss.
- They are much more likely to see someone for acute conditions that are likely to be self-limiting than for chronic (and often potentially life-threatening) conditions
- Perhaps they do not believe that there is much you can do about these conditions, whereas the acute conditions get better quickly when treated (and probably when not treated).

The decision to see a bhopa

- Conditional on seeing someone an adult is significantly more likely to see a bhopa for
 - spitting blood, weakness, headache, backache, shortness of breath, abdominal pains, genital ulcers, painful urine, chest pains, hearing losses, partial paralysis
 - Than for colds, dry cough, fever, diarrhea, skin diseases
- Once again note the fact that chronic potentially life-threatening conditions favor the bhopa.
- One possible explanation is that the Bhopa provides some emotional comfort in a context where they do not expect to get well.

On balance

- There is reason to worry that people are spending money on all the wrong conditions
- This is compounded by the fact that the treatment they are getting may be bad for them: lots of injectables, lots of antibiotics, steroids etc.
- On the other hand they may not have the resources to really do anything about chronic diseases.
- They might get some comfort in doing something about the acute ones.

The key policy research questions

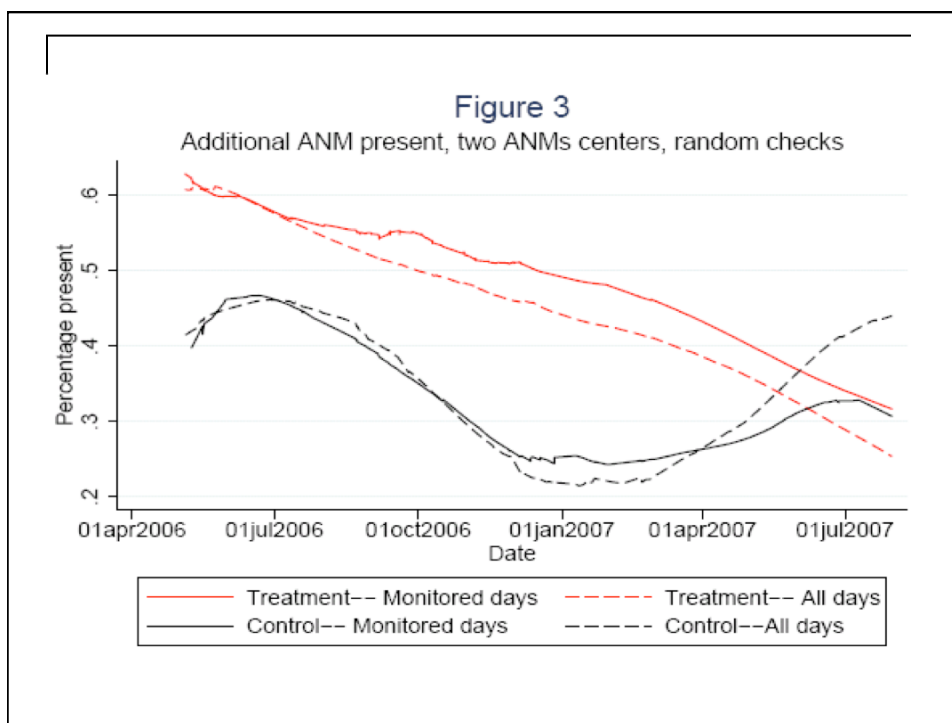
- What can we achieve by intervening on the supply side?
 - Can we influence supply without affecting demand?
 - Discouragement of government officials
 - Lack of popular pressure
 - Will people take up if they are offered better health care?
- What can we achieve by intervening on the demand side?
 - Is pandering to what they want the only option or can we affect demand.

A pure supply side intervention: Getting nurses to come to work

- Problem of non-attendance of government nurses (44% attendance rate)
- No incentives to come to work:
 - No one monitors them
 - The people on the ground are not interested
- Long (2 years) negotiation with the government to get it to agree to Seva Mandir monitoring nurse absence and *reporting the results back to them to take action of **their** choice.*

The ANM intervention

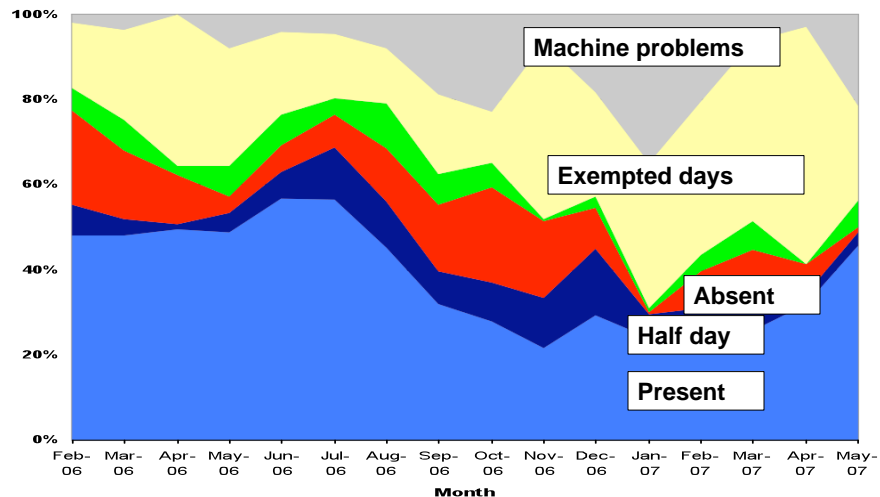
- Government appointed extra-nurse in some subcenters.
- Seva Mandir proposed to monitor the extra nurse
- Jan 2006 it was approved, and Seva Mandir was asked to monitor the extra nurse 3 days a week and the regular nurse 1 day a week in the treatment centers which had only one nurse
- Punishment for absence ruled by the district administration: for more than 50% absence on monitored days, deduction in proportion of the absence the first month, suspension the second month.
- The nurses were very upset: they considered it a breach of the implicit contract.
- Monitoring using date-time-stamp on a sheet fixed to the wall: stamp-sign-stamp 3 times a day.



What happened??

- Were sanctions not applied?
 - Initially they were applied. Some ANMs were given deduction. In one zone, deductions are more severe than what is imposed by center
- ANMs not sensitive to deductions?
 - Possibly
- System undermined from inside

Register Records



Explanations

- Machine problems and exempt days increase at the detriment of presence and absence
- Machine problems
 - When machine malfunctions, ANM must warn Seva Mandir and monitors meets her as soon as possible to exchange it
 - But as soon as possible depends on her....
 - Machines have malfunctioned increasingly often (even new machines)
 - Some have evidently been mistreated
 - And finding ANM after machine problems has turned out to be increasingly difficult...

Exempt days

- Exempt days are reported by the ANM on the register
- These are days where she must do some other official duties (meetings, special field work, etc.)
- They are not checked by Seva Mandir (which does not have the data) beyond basic credibility (no more than one block meeting per month etc.)
- The PHC checks exempt days and implement deductions
- Exempt days have increased drastically, especially things like “team work” or “surveys” where it is hard to verify actual presence
- Either the ANM invents it or the PHC doctors give it to them.
- The CMHO is aware of the increase in exempt days over time, so he must condone the PHC doctors.

Conclusion: ANM programs

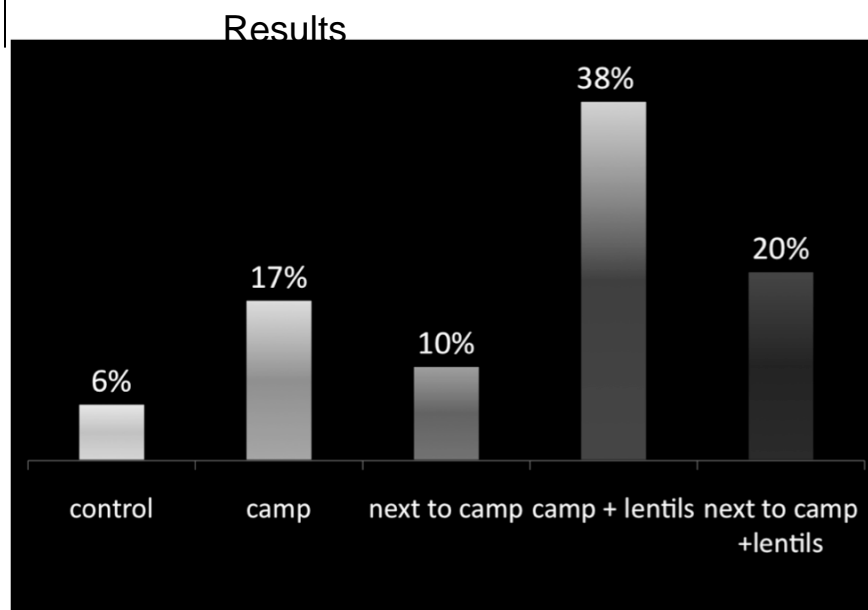
- The program was initially quite effective
 - In the first 6 months, the rate of presence of monitored nurses (in both types of center, and on all days), increased from 25% to 40%
 - However it had no effect on demand for ANM services conditional on being open?
 - Perhaps change is always slow
 - Perhaps people knew what is coming
- But it was quickly sabotaged, and has no effect by the end

Encouraging Immunization

- A survey conducted in 134 villages of Udaipur district found that in 2003 2.63% of children between 1 and 5 years were fully immunized.
- The same study found that 57.7% of children had received no vaccinations at all.
- Usual data sources (e.g. NFHS) overestimate rate of full immunization, because parents are just asked which immunizations the children got, without cross-checking

Interventions to improve immunization rates

- Improve reliability of supply:
 - In 60 villages, camps were organized monthly. Main feature is regular schedule. Over 20 months, 67 camps were cancelled, while 1269 were held.
 - Availability of camps and timing etc. were advertised by Seva Mandir Paraworkers, who also receives an honorarium for each immunization.
- Increase parents' demand:
 - In 30 of these villages, 1 kg of dal were given for each immunization, and a set of plates for complete immunization
- Everywhere the government system (willingly and efficiently) provided the necessary drugs.



Conclusions

- It is possible to make purely supply side interventions work but given the state of demand, it is not easy.
- Affecting demand, on the other hand is easier than it might seem.
- This might provide a basis for affecting supply.