

The Anemia Project

Bhagyashree Barlingay, MD

Mesa, AZ USA

The demon of daily routine guards the gates of my consciousness, not letting the past memories float in. Yet images of India still filter through: images of women smiling, hardworking, and non-complaining! An immigrant's heart carries the burden of nostalgia but these images bring an extra dimension to my life as an American-Asian Indian, as an Indian doctor working in America, and as an Indian woman living in America. They keep reminding me that I have left so much of myself in India.

Here I am discharging a middle aged white woman from Banner Baywood Hospital in Mesa, Arizona, USA. She and her husband are good, hardworking Americans who run a small flower shop. She will follow up with her primary care physician after discharge not only for her acute problems, but for her yearly health checkup as well. This checkup will include a physical exam (including breast exam), pap smear, basic labs including complete blood count, and liver/kidney/thyroid function tests. She will be checked for diabetes and hypertension. In my mind, the women of India ask me, "What about us? Are we not good, hardworking Indian citizens? Are we not entitled to basic health care?"

When I visit India it is usually for two or three weeks at a time. There are a lot of unanswered questions in my mind. Is the health care that is being offered in government clinics and hospitals free or almost free? Do women see a doctor for "basic health care"? Is there any guidance given to a woman for achieving and maintaining good health all her life?

My impression about Indian health care could be based upon inadequate information but I think there is no basic framework for health care unless a physical exam and blood work are done for life insurance purposes (which is a middle class privilege!). In USA, the doctors follow the guidelines from American

College of Physicians (ACP) or from American Medical Association (AMA) for preventive health care. I have seen so many of my patients having a past medical history of breast/cervical cancer or have diabetes and hypertension, diagnosed early and treated well.

Have we studied our own population scientifically and have we used that information for the masses? Ignorance is not bliss when it comes to health care. Disparity between the health care systems between these two nations (USA and India) will always exist for obvious reasons, but Indian women like me need to start mending the gap.

Do you see the gap, the hole in Indian fabric of thinking? It is mostly due to our cultural attitude! Indian health care seems to be mostly concentrated around pregnant women. Every Indian woman, like any other woman in the world, is entitled to basic preventive health care, whether pregnant or not!

Whenever I visit India, I feel that the Indian society is becoming more and more westernized in food choices, clothing, festivities, etc. What we truly need to learn from the West is how to translate scientific information into daily living and how to live healthier lives. Affluence in India is rising. This is the right time to imbibe a fundamental thought process that will affect women favorably not only today but for generations to come.

India will always be my home no matter how long I live in USA or whether I visit India every year or not. I can clearly see the path of my duty – to help Indian women live healthier lives!

How can I achieve this goal? Can I use the existing frame work of the government medical system? For some reason, there seems to be a disconnect between the general public and government hospitals and clinics. Also, I was cautioned regarding ever-present corruption. With this background, how can I then entice Indian women to come to a place for a medical checkup that is free, non-intimidating, and culturally right?

Finally, my Indian mind gave me the right answer. I took certain facts into consideration, such as: India is a country of festivals, an Indian woman will open

up more to another woman regarding her health problems, and instead of a government clinic, a local well respected hospital or clinic is more desirable.

On the auspicious day of Makarsankranti in 2006, in my home town of Hinganghat, district Wardha, Maharashtra, 400 women were invited for Haldi-Kunku held at Matru Sewa Sangh. A new meaning of this age old tradition was revealed to them – when a woman is putting Kunku, as red as blood, over her friend's forehead, she is inquiring about her friend's health. She is telling her that she cares by putting the antiseptic Haldi. To me, that is the basic meaning of this festival: women should take care of each other. The gift given was that of iron tablets after checking hemoglobin then and there. A captive audience was automatically created for teaching hygiene, diet (especially the iron-rich diet), kitchen gardening, and the self-breast exam.

In this small town, people always had reverence and a soft corner for the Matru Sewa Sangh, a charity organization started for women by the most honorable Kamalatai Hospet in Nagpur in 1944 and developed further by the well-respected Tarabai Paranjape in Hinganghat . The women had no hesitation coming to this place. But if they could not come due to distance, the anemia project was taken to them by the compassionate staff of Matru Sewa Sangh (MSS) presided by Mrs Vishakha Kawley. The team of the anemia project (comprised of the medical director Dr. Malhar Kawley, a nurse, data collecting clerks and other dedicated staff) went to schools, to colleges, to the muslimpura, the Boudhhawada, and to the slum areas. Women of all ages were encouraged to get their hemoglobin tested. In the beginning, advertisement was done by the healthcare workers at MSS and by volunteers. Now, the women bring their friends and families to the camp, remembering the well-being they had felt after their own anemia camp visit. When the camp was not held in the MSS building, it was held at a volunteer's house. To our pleasant surprise, people opened their doors irrespective of their religion, cast etc. I feel that every Indian person has a little Gandhiji in him or her.

The expenses for these camps are kept to a minimum by the astute medical director and the president of MSS. Sahli's hemoglobinometer is used to check the

hemoglobin. It costs around Indian Rs. 1,000-1200, along with the hydrochloric acid, pipettes, lancets and the alcohol swabs.



The nurse trained to check hemoglobin, is paid Rs. 3 per patient. The iron tablets cost Rs.6 per 100 iron tablets. The clerks, other helping staff, and the advertising nurses are also paid. Food is provided at every camp such as sprouted mung bean salad. The total cost of one day camp for 60 patients is around Rs.550, excluding the cost of the hemoglobinometer. Only at this location, this camp could be run at such a low cost because most of the medical team including the president of MSS, the medical director and the nurses who did the advertising, all worked for free, in the spirit of service. Their contribution is invaluable.

The following protocol is followed for treating the anemia, taking into reference the WHO definition of anemia and the normal hemoglobin range of 12.0 to 16.0 gms.

- For hemoglobin values 11 and above: follow-up in 6 months.
- For hemoglobin values between 8 and 10: follow-up in 3 months after taking the provided iron tablets.
- For hemoglobin 7 and below: follow-up once a month, while taking the provided iron tablets.

- For severe and refractory anemia: appropriate referrals to hospitals or specialists.

Out of 400 women studied over a three month period, it was found that 81% had moderate anemia (Hb between 7 - 9.9 gm%)! It has been assumed that the anemia in these women was mainly from nutritional deficiencies, menstrual losses and possibly due to worm infestations. Those women with severe anemia (Hb less than 7 gm%) were also given injections of Vitamin B12 and folic acid.

The popularity of this camp did not go unnoticed; one fine morning, a rikshaw was going through the town announcing an anemia camp that was being held by the local politician. Our census dropped for one month. Later, it was found out that no follow-ups were done since the election was over! The women realized the honesty, compassion and care at the MSS anemia camp. This short-lasting competition seem to have helped the medical team and rest of the MSS staff to boost their morale and zeal. MSS itself was helped by this activity considerably. In this day and age of commercialism, patients were being lured away from this age-old institution; but the anemia project rekindled the interest of the local public and the number of deliveries at the maternity section of MSS have risen.

It was very interesting to see the variety of women attending this camp—a teacher, a banker, a labourer, maidservants, a merchant's wife, women wearing expensive sarees, women wearing worn out sarees, muslim women in Goshas! I hope they all have realized that irrespective of their caste, religion and socioeconomic status, they all had anemia.

The anemia project protocol has also been adopted by two other organizations – Gyanprabodhini, Harali, and Keshav Smruti Pratishtan, Jalgaon.

Jalgaon Anemia Project



Harali Anemia Project



Women from different socioeconomic strata
sharing their thoughts about Hinganghat
Anemia Project



Gyanprabodhini , Harali, an organization run by Dr. Anna Tamhankar and Swarnalata Bhishikar, has taken a very focused approach to the women in their town with hemoglobin values below 7gms. After initial checkups of more than 100 women each time for several months, twenty women were found to be severely anemic and showed willingness for close follow up. A healthcare worker went to their houses twice a month and made sure they were taking the iron tablets. The workers also reinforced the importance of eating iron rich foods. These women came to the monthly anemia camp held at the Gyanprabodhini school and received ragi and jaggery along with the iron tablets. Now all of the 20 women have hemoglobin above 11 with great symptomatic relief.

Keshav Smruti Pratishtan , Jalgaon took a different approach. In their own words-

As per 2011 census, the population of Jalgaon city is 4,67,000, which also includes around 80,000 people from 31 slum areas of the city. However there are only five

corporation hospitals available for such dense population. Except one (i.e. Civil Hospital) other four hospitals are known for their worst condition in all aspects. Many of the Medical posts of Jalgaon Municipal Corporation, are vacant, which is an indication of administrative neglect towards public health.

On this background, we decided to take some initiative to improve the public health. With the help of USA based charity organization Akshaybhasha, we planned to start with Hemoglobin Level Test camp in slum localities of the city to improve total physical health of the underprivileged women and make them aware of the health issues.

Till date, we have conducted five hemoglobin testing programs at three locations in Jalgaon city of which, two at Kanchan Nagar and two in Rameshwar colony, which are lower middleclass residential areas. The camps were conducted at the interval of one month at both the places. The remaining one was conducted at Paladhi village which is on outskirts of Jalgaon city.

Through this project, for the first time, we approached women from economically weakened families of Jalgaon city.

This small initiative of Hemoglobin test has made these women aware of their health.

Now we are trying to encourage these women to take advantage of other projects of Keshav Smruti Pratishthan, to achieve our target of social and financial upliftment of underprivileged people.

While conducting the Hemoglobin Level Test camps, we realized that many of these women are suffering from various diseases due to lack of awareness, poor economic condition and the burden of responsibilities towards family.

LESSONS LEARNED-

Anemia is a social disorder. The attitude of the society, not only that of men but also that of women towards each other, is what matters the most. Symptoms of anemia are commonly dismissed as being part of womanhood. "A woman must suffer"- is a horrible notion that must be completely erased from the minds

of Indian women. Dietary education needs to be emphasized, especially when dealing with harmful customs, such as not eating sour foods like lemons due to religious beliefs. Lemon and other citrus foods contain vitamin C which helps with iron absorption. The food distributed by women in most households is not favorable to the women themselves. Good medical treatment is often equated with taking expensive medications. General wisdom prevalent in today's lower economic strata will tell you that if the medication is free (as it is in the government clinics), it must be useless! This led to the decision by the anemia project team to charge at least Rs.5 for the follow-up card given at the time of hemoglobin checking.

I realized that checking hemoglobin only is putting a band-aid on their medical problems. But most of the time this is all they could afford. At least, because of this activity they came to the medical attention.

The ultimate goal of the Anemia project is to give basic preventive health care free to the Indian women. We may not be able to include every little thing that is being done in USA for prevention of common, treatable and curable health problems but a yearly package may be offered to every woman aged 16 to 75 years, that will consist of complete physical exam including breast exam and pelvic exam and Pap smear, testing blood for hemoglobin, kidney function and liver functions, and urine for protein and infection, stools for worms (even in asymptomatic women) checking for diabetes and hypertension. Mammograms (for breast cancer) and DEXA scan (for osteoporosis) are expensive, need experts to read the results and may not serve our purpose.

One anecdotal story must be shared. A schoolgirl aged 17 years who was still in the 8th grade came with her friend because she came to know that blood is being tested for free. She had been having symptoms such as dizziness, shortness of breath, fatigue; she was not doing well in school because of her poor concentration. Her family did not heed any of these complaints. Her hemoglobin was 4gms! She refused going to the hospital for blood transfusion or to a specialist. She took iron tablets regularly for several months along with anti-worm medication, vitamin B1 and folic acid injections. After about 10 months of regular

treatment, her hemoglobin came up to 9 gm%. She had tremendous symptom relief. She graduated from her class easily. Better health has brought happiness to her young life. She has been encouraged to go to a specialist for further care. We need to help this hidden part of India.

I also come across a middle class woman, wife of a college professor who had good prenatal care during her pregnancy and few months after the childbirth. But later she was not sure if she should still go back to a doctor! She had never regained her stamina after her delivery; now her child is 6 years old. Her hemoglobin was 8 gm%. This is the confused section of Indian society ; well-to-do but unguided in simple medical matters due to the lack of basic health care.

The medical team running this project voiced that this activity (each camp) should be kept on a smaller scale, catering to smaller communities at a time so that the personal touch and warmth are not lost. The camps at MSS were held once a month at the facility and at other sites once a month on a different day. By doing this, women were getting more chances to come forth and get tested.

If, the seemingly trivial factors in a small town such as distance on foot, time when the municipal tap water runs, festivals, etc are not taken into account, then the compliance level of the women is affected tremendously; something governmental programs have been fighting against since inception. Nutritional anemia is a hidden epidemic going on for decades in India. Oral iron and folic acid tablets are being supplied free of cost to the rural population of India by the government for the past 40 years (1971), yet the prevalence of anemia in India has not significantly reduced. If we have found the problem (i.e. non-compliance) we need to work on this issue first to find out why the women are noncompliant, instead of pouring money into a bottomless pit. The education regarding nutrition, home gardening and the competitions held for the iron rich dishes generated a palpable interest and excitement among the women of this small town, Hinganghat and compliance increased accordingly. Now this camp is on auto-pilot. Advertisement is not needed any more. The face of compassion is always more inviting and comforting than the faceless hand dispensing free medications from a pharmacist's window in a government facility.

A lot needs to be done besides giving iron tablets. We know of the iron rich foods but iron content of the food may not be the same after cooking. The amount of iron rich foods that can be ingested may be very limited. Only the heme-iron found in meats is readily absorbed, but this is of no use as most of the Indian women are vegetarian. One woman told us that she used to eat meat at her parents' house, but after she got married her father-in-law told her that women are not supposed to eat meat. She cooked meat for him while taking care of her 5 children! Her hemoglobin at the age of 50 is only 6 gms%.

The best way to supplement iron will be to enrich common ethnic foods with iron. It has been tried in different parts of the world. The wheat flour and bread are regularly enriched in western countries so nutritional anemia is not a problem. The flour fortification programs have substantially improved iron deficiency in Chile and Venezuela but thought to be inadequate for pregnant women. Scientific experiments are being done to find out if iron can be added to Indian foods. Table salt has been fortified with iodine and iron as well. Experiments regarding fortification of rice are being done.

In any case, the hand that rocks the cradle also holds the spoon and ladle! Women who control the kitchen should take this challenge upon themselves to increase the iron value of each meal they cook for their families.

After all, healthy families means healthy nation!
