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Greetings Friends of VSO,

Let me first thank you for allowing me the opportunity to visit your supported works in Kontum, Vietnam. The trip was indeed worthwhile. I had hoped to get this summary report to you much sooner than now, but time and energy just did not allow. Nevertheless, I hope you find my observations and suggestions valuable.

By far the two most common and I believe most critical medical needs of the children in VSO are anemia (low oxygen carrying capacity in the blood) and dental carries (cavities). First I will provide you with some hard numbers on these conditions. Secondly, I will detail my impressions for why and how these conditions predominate. Thirdly, I will explain why I believe that improvement in these two critical health areas will raise the physical well being of the children at VSO exponentially over a short time. Finally, I will provide some strategy to see the improvements realized.

The rates of each health problem are given by orphanage in percentages. Although not every orphan was evaluated (many were on leave from school and had returned to their respective villages), the trends should be similar across each population of children. In other words, I feel that it is safe to say that the percentages of children at each site with a given health deficiency would mirror the sample of those who were able to undergo evaluation.

	VSO 1	VSO 2	VSO 3	VSO 4
Anemia	35%	57%	20%	29%
Cavities	9%	30%	20%	38%

In the case of anemia, let me explain what it is medically and how that condition translates into a poorer state of health. The red blood cells in our body carry oxygen to all the organs and tissues of our bodies. Without a steady supply of oxygen, tissues and parts of vital organs die. As one can well imagine, a growing and developing body needs as much oxygen and delivery of that oxygen as possible; without it, every body system fails on some level. If a child is chronically anemic, they will develop more slowly, have reduced physical strength and mental capacity, be more susceptible to infections and have less immune system ability to ward off such infections. Therefore, a healthy red blood cell count is paramount.

Why are so many of these children anemic? It is multi-factorial. The predominate reasons are dietary deficiencies, parasitic infections, overcrowding (which I will address more in depth in the strategy section of this report), and finally an interconnection to the second prevailing medical issue: the poor dental health.

The problem of dental carries is also a multi-faceted issue. As we well know, the addition of fluoride to public water supply here in the United States has greatly reduced the incidence of dental carries significantly (estimates are 17-45%) and therefore the reduction in tooth loss. Thankfully, the children at VSO are provided filtered water, but it is without tooth protecting fluoride. Dental hygiene and cleaning are the two other facets affecting the dental health of the children at VSO. And as previously stated, I believe the dental health of the kids is closely tied to the overall health status.

Improving these two areas in tandem will better the lives of the children at VSO for today and for generations to come. Kids with strong healthy teeth and clean oral health eat better and have fewer challenges to their immune system because fewer bacteria live in their mouths. A healthier appetite if supplemented with the proper balance of nutrition will produce a child who develops physically stronger and mentally sharper. Intuitively, linking these two aspects of health will improve each child's immune defenses and the rates of sickness in general will fall.

So, how do you go about improving the health status of the kids at VSO? The approach is simple yet not without some investment. Let me turn to the dental health issue. While filling cavities would be a task of monumentous proportion, cleaning the teeth twice per year and giving a fluoride treatment would not. Educating the kids on proper brushing, and flossing is critical as is providing the tools and replacing them at regular intervals. Finally, I noticed many children at the VSO site 1 brushing teeth from the bathroom tap. It is likely that they are ingesting some of that water which is of course unfiltered and likely filled with heavy metals and parasites. So to address the lack of fluoridation and the dirty water which with they are brushing, I suggest developing a tooth brushing area in the bath that provides a dispensary for a solution made from filtered water and locally available ingredients so that the children will have an antiseptic means of brushing and rinsing their teeth.

Turning to the problem of anemia. Children require increasing amounts of iron as they grow and mature. Addressing dietary needs would require some tailoring to each population to a degree. Case in point: infants to 6 months of age require 10 mg of iron daily, 6 months to 10 years 15 mg and 11 years and older 18mg. Iron comes in 2 categories: hemo iron (red meat, seafood, poultry) and non-hemo iron(whole grains, green leafy vegetables, beans, eggs, nuts). The hemo category is more readily absorbed by the body and red meat in particular increases the absorption of non-hemo iron when those sources are consumed together. Vitamin C also increases iron absorption which is why many who take iron supplements do so with orange juice. On the contrary, tea contains a substance called tannin which inhibits the absorption of iron. Keeping those facts in mind, I propose that the infants receive iron fortified formula through 2 years of age. The diets of the toddlers to preteens should be rich in both hemo and no-hemo iron sources and should be in balanced combination at every meal with milk being the beverage of choice. At the moment the breakfast meal is devoid of iron and protein and it should be the meal richest in both dietary requirements. The teenagers will also need increasing protein and iron sources with some of the girls who menstruate heavily needing iron supplements. All children should be drinking purified water only and educated on the importance of avoiding water that isn't boiled when they return to their villages periodically. Recognizing that they may not always be able to comply with that directive, routine administration of de-worming medications should take place at the beginning of the school year and perhaps for any child who has recently returned from the village.

As promised, I wanted to give some input on what I see as an overarching obstacle to raising healthy kids at VSO. Except for VSO site 3 (where the orphans are healthier) the orphanages are overcrowded. Overcrowding in and of itself leads to increasing sickness, disorganization, breakdown in communication, reduced capacity to recognize problems and be sensitive to correcting problems because of care-giver fatigue. Let me give you a couple examples to illustrate my point.

In the Mennonite communities they have long put into practice this principle: when the community of people who work and worship together reaches 150, they split the group in half. Because their culture is

based upon caring for one another's needs across the community they have discovered that there is great inefficiency in doing so when the numbers get beyond 150. The labor and fellowship breaks-down and soon it leads to divisions in the community. Such a phenomenon is also a part of the corporate world. Gore-Tex, a multi-billion dollar enterprise that manufactures weather proof clothes among hundreds of other products employs thousands. In fact they are a top US employer, yet they don't have more than 150 employees in any location. By this principle they have no need for middle management, everyone at each site knows everyone else, problems are recognized many times before they happen and solutions come from all levels of the workforce because there's a built-in trust and each person is valued in the operation. Running on this principle, Gore-Tex has become one of the most successful businesses in the world.

In my opinion, the care-givers are doing an amazing job caring for so many children and are to be applauded for their dedication and sacrifice. However, the "150 Principle" as I will call it is quite valid. At VSO 1&2 in particular where they are running 190-220 kids, the health is suffering because of issues related to overcrowding, but also because the children are less connected to the caregivers and less connected to one another. In a situation where the staff depend upon the children to care for on another's needs like an orphanage, strong interpersonal relationships are vital. When you have another 60-70 relationships to maintain, almost all relationships suffer. And in the case of VSO, child health needs suffer. Just think about this in your own life. Most of us have a circle of family, friends, co-workers of 20-25 people we are most intimately involved with and because of those associations our sphere of influence stretches by in large to that "magic" 150. Beyond 150, we can't keep pace mentally, physically, and certainly- emotionally. I am simply suggesting that the caregivers and children of VSO are indeed the same.

Just a few general observations and then I will conclude. I thought the level of general sickness (colds, rashes, etc) was highest at VSO 1 and the kids seemed most unsettled there. There is a predominance of infants and preschool children at VSO 1 which probably accounts for the level of general sickness and the chaos I perceived there. VSO 2 looks to have the higher rates of cavities and anemia which I believe to be a reflection of the greater numbers of school age children and teenage girls; although, the site was far more orderly.

Again, thank you for the opportunity to evaluate the children at VSO. Your investment in those lives is well worth everything you have done and will be doing. I hope my impressions and suggestions are helpful to you and especially to the children. If we can through our resources at Bridge of Grace be used to advance the health and well-being of the children at VSO, we would be delighted to provide that ministry.

By Grace,

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