1890 – 1892
report of dr. A. Lutz to Dr. J. H. Kimball, president of the board of health

Adolpho Lutz
To Dr. J. H. Kimball,  
President of the Board of Health:  
Sir:  
I beg to submit to you the following report.

Although I began my work under the Board of Health on November 26th, 1889, I did not receive my official appointment until January 1st, 1890. I found at the Receiving Station at Kalihi seven patients, six of them pronounced suspects and one decided leper. On December 24th, five other suspects came under treatment; on December 27th, nine lepers, and on December 31st one more. So that I entered on the new year with twenty-two patients, eleven suspects and eleven lepers. Newly declared lepers were admitted on January 14th three, on January 20th two, on February 11th two, on February 13th one, 19th one, 25th one, March 1st one, total twenty-two.

The number of leper patients being limited to twenty by the Board of Health, the number was then full, not counting the case of Charles Kahalehile, number two, as being permanently employed by the Board of Health, and one case, number nineteen, transferred to the suspect side on January 2nd. New suspects were received, on February 26th two, on March 3rd two, on March 18th one, the total number thus increasing to nineteen. Three cases of suspects were discharged, as they presented only very slight and circumscribed symptoms; even those had diminished by the treatment in two cases, while in one they had completely vanished. The patients now attend the periodical examinations and policlinical treatment established at the Government Dispensary for the arrested and uncertain cases of the district.

Regarding the treatment, I must first state, that there existed several difficulties at the beginning. The place at Kalihi being only intended as a Receiving Station, no arrangements in the style of a hospital were made, the most felt want being a trained nurse. Fortunately we have been spared very grave cases of intercurrent diseases, which we were hardly prepared to meet, the place being so distant and the transferring of patients to other hospitals altogether impossible. I hope that by the recent establishment of Sister Rose Gertrude at the station, the difficulty will now be overcome.

Previously, the office of distributing medicines, applying dressings, taking temperatures, etc., has been fulfilled, as well as possible, under the circumstances, first, by the keeper of the station, Mr. Gibbs, and after his services had been dispensed with, by Mr. Carter. Both showed much good will and proved very useful.

The employment of certain drugs was necessarily restricted, as only a very limited quantity could be found at the Board of Health druggists. Fortunately I had brought with

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me a supply of the most important drugs, which lasted for some time; but the prolonged 
use of considerable daily doses by a large number of patients required such large quantities 
that those supplies soon proved insufficient. On the other hand, the slow, and often 
interrupted communication with Europe and New York prevented a speedy renewal of 
the stock.

This was the reason why the same treatment could not be started in the Leper 
Settlement at an earlier period.

As to the patients, I am happy to state that they generally behaved very well, being 
not only anxious to be treated, and taking their medicines fairly well, but exhibiting also, 
in all other respects, good will and peaceful disposition.

The selection of cases for treatment has been done in the following way, viz: At first 
the patients at the Receiving Station were all taken in charge, as I was anxious to start my 
work, and not to lose time in an inactive state. Therefore some cases were treated which 
were least favorable for good results. However, as they had been some time under 
treatment, I would not dismiss them without having exhausted all the resources in my 
power. Afterwards, when a large number of declared lepers were present, almost all 
anxious to be treated at Kalihi, the selection was made by choosing people of intelligence 
and good will, whose affections promised well for treatment, or were of peculiar 
therapeutical interest, or complicated with other curable diseases needing treatment. 
These principles will be maintained in case of new vacancies.

Concerning the effects of treatment, not one of the cases received shows any increased 
development in the main disease. The cases of tubercular leprosy, which, although severer, 
give more favorable results in treatment, have improved according to the time they have 
been under treatment. The first of them, number two, was in a period of very active 
development, promising, under ordinary circumstances, to become shortly a very severe 
case; but since it has been treated it shows a very marked improvement. The second, 
number four, is actually free from any leprous symptoms. Number nine, a mixed case, 
shows a very considerable diminution of the big tubercles of the ear-lobes. Numbers 
fifteen and sixteen, two mixed cases, with diffuse infiltrations in the face, show now an 
almost normal expression, the former still presenting a few tubercles on the body. The 
other tubercular cases are too extensive and advanced, and too short a time under 
treatment, to show such marked improvements; but they are all doing well, no fresh 
symptoms appearing and the old ones diminishing gradually.

A similar effect as on the tubercles has been obtained on those large and diffuse 
brownish pigmentations, scattered like clouds over the skin of the trunk. They are peculiar 
to the tuberous form in an active state, being subsequent to acute infiltrations of the cutis 
and subcutaneous tissues.

The eruptions of new tubercles is always threatening when the old ones fade rapidly 
by spontaneous involution, or are influenced by treatment. This fact would even make 
an energetic local treatment dangerous, if we did not institute appropriate internal 
treatment. Although the outbreak of fresh tubercles was not prevented in our cases, it 
ocurred but seldom, and then in a slow and limited form. I believe it may be attributed 
to my treatment of eruptive fever, already proved useful in several years' observation, 
that we had none of those large and painful infiltrations (as number two had before 
treatment), nor those high and continuous fevers rapidly leading to cachexia.

As to the non-tubercular forms of leprosy I have ascertained the following facts:
The red erythematous and the large red edged spots, so like (and so often confounded with) common psoriasis, may be quickly cured in many cases by external treatment. The same is the case with the chromatic and hyperchromatic spots (often associated), although they are more resistant. The least effect is obtained where there is marked atrophy and anesthesia combined. Swollen lymphatic glands, principally the jugular, cubital, inguinal and femoral, were often found. Often there was syphilis present, and a specific treatment would give a speedy improvement. When only leprosy was found to exist, the result was less quick and certain.

As to the anesthesia, the thickening of the nerves, the pemphigus ulcers, the mal-perforant, the diffuse elephantiasis-like hypertrophy of the connective tissue, the contractures and muscular atrophy, I have not yet come to definite results. It is probable that some of those symptoms (principally when of several years’ standing), may not be susceptible of a perfect cure, as certain anatomical changes will not allow a restitutio ad integrum. We must therefore be satisfied in such cases, with a cure with defects, the only one possible, when mutilation has taken place. In several of the cases in the hospital, even in very unpromising ones, a partial restitution of feeling and a diminution of contraction has been noticed. Although a spontaneous improvement may not be excluded with certainty, still, I am inclined to credit these results mostly to the treatment.

I propose now to speak of the remedies put to trial, and of their special action, considering in this part my present, as well as my earlier experiences.

For internal treatment, I mention first, the well-known Chaulmoogra oil, which has been amply tried. I first used small doses, in substance, in emulsion, in pills and in capsules. The latter form was soon dropped on account of its expensiveness and technical difficulties. The emulsion first proved somewhat trying to the stomach, frequently causing nausea and vomiting. But by careful selection of the patients, and gradual proceeding, I have been able to attain even doses of 2.4 to 2.8 grammes (thirty-six to forty-two grains), three times a day, and may perhaps go still higher, as no toxic effect has been observed. While, like many other observers, I found the small doses of little effect, to the larger ones there may be given some credit for the general good state of health appearing in the patients, while under its use, the absence of any progress in the disease, and also the diminution of the nervous symptoms. I observed one case in Brazil, and several in the Hospital St. Louis, in Paris (partly of the tubercular form), all of which had been benefited by a prolonged use of large doses.

Gynocardic acid is considered to be the active principle of the Chaulmoogra oil, where it exists in large proportions. I have tried Merck’s preparation, and found it more handy and less expensive than the oil. The exhaustion of the stock prevented a prolonged use which, however, will be resumed as soon as possible.

In the second place I shall speak of a drug which I first introduced in the treatment of leprosy, several years ago. It is Salol, a chemical combination of the ether type, between salicylic (forty per cent) and carbolic (sixty per cent) acids. Insoluble in the gastric juice, it never affects the stomach, while the intestine where the absorption takes place, does not show any signs of irritation.

It acts as a perfect substitute for salicylic acid and its salts in articular rheumatism, without having their unpleasant effects. That it is indeed resorbed, at least in a considerable proportion, is not only shown by its action, but can also be proved by the urinary test. By adding some drops of a perchloride of iron solution, the urine emitted after the use of
Salol, turns to a color varying between cherry and a dark brownish red, according to the dose given. The latter hue is found when it attains 6.0 (ninety grains). The urine shows another very striking quality, viz: that it keeps for an indefinite time, without undergoing the ordinary fermenting and putrefying process. Even after months there are scarcely any bacteria in it, although there may be a development of mould fungus.

This explains why Salol gives good results in urinary troubles, and augurs favorably for its anti-fermentative action in the blood, which my observations tend to prove. As to its complete harmlessness, even when given in large doses, and to feverish patients, I collected a very large number of observations in 1889, during the most extensive yellow fever epidemic in Campinas, Brazil. It proved not only much safer than any other ancient or modern febrifuge, but at the same time, it had a very marked influence in lowering the high temperature and combating the severe pain of the initial period.

As to its use in leprosy, the observations I made in Brazil and at this place, have given me a very favorable impression. In half a dozen cases the leprous fever was almost immediately interrupted by the daily use of 6.0 to 8.0 (ninety to 120 grains), divided into three or four equal doses, not to appear again while the use was continued. In case number two the interruption was several times followed by a new attack of fever, but this was again subdued by Salol administration.

In the two first cases of my former practice the acute eruptions immediately and quickly disappeared under the use of Salol, leaving the patients in complete health during the next six months’ observation. In case number two a few tubercles appeared and partly persisted during the use of Salol, but they remained much smaller than the former ones. Perhaps even those might have been prevented by the use of still higher doses. There was, unfortunately, too little of the drug in the market to permit the use in a large number of patients, but it would have been a singular coincidence, if all the invariably good results in the acute period were due to mere chance, and not dependent on the Salol action as I believe them to be. I shall continue to use this remedy which is easily taken, as it is a tasteless white powder with a not unpleasant aromatic smell. I give it in powder, capsules, or compressed tablets, the latter form being very convenient.

In the same way, and with apparently the same result, I used the well-known salicylate of soda. It may be given in solution, powder, or capsules. An addition of bicarbonate of soda (about twenty-five per cent) is supposed to cause it to be better retained by the stomach. It may generally be given, up to 6.0 grammes a day, in three or four doses, quite safely for a long period.

Smaller doses are likely to prove insufficient, while larger ones may have unpleasant, and even alarming effects. In two patients it produced an exanthema, consisting, in one case, of small red spots, and in the other of large irregular erythematous spots. In other cases it seemed to have the effect of increasing the hard breathing so common in tubercular cases. The stomach does not support it as well, as the Salol and its action on the ears is objectionable. But the patients accustomed to these, and even higher doses, are much benefitted in acute periods. The urine, after its use, turns purple by the addition of perchloride of iron.

I directed my special attention to the presence of albumen in the urine of patients treated with high doses of Salol, but never found the faintest indication of it.

In the treatment of consumption, the vegetable creosote, made of beech-wood tar, enjoys at the present time, a very high reputation. It has also been recommended in
leprosy. The most active part of this composite substance is supposed to be found in the guayakol, an oil fluid, with a burning taste and a strong creosote-like smell. I brought with me 100 grammes of the pure preparation, and gave it to three patients, beginning with a few drops, and increasing the dose, until twenty drops were taken, three times a day, in gelatine capsules. It was borne very well, the appetite being rather increased than otherwise, but I am not yet prepared to state if there is a beneficial effect on the disease itself.

In policlinical treatment, the internal use of nitrate of silver has been tried in several cases of leprous neuritis, but as this drug cannot be used for a long time, and there was no benefit observed, it was dropped again.

As a symptomatic treatment for the strong neuralgic pains appearing in lepra nervorum, antipyrine has given quite satisfactory results.

The successful treatment of syphilis by mercury and iodine, as well as the difficulty of distinguishing this disease from leprosy, without an exact knowledge of the symptoms of both of them, has led to the result that quite a number of cases of leprosy have been treated with anti-syphilitics. In certain countries scarcely any incipient case escapes this treatment.

The unanimous impression of the best observers is that this treatment never does any good and often may do harm. Some authors speak very strongly against it. For myself, I am ready to grant that mercury in the usual dose is of no benefit, and as we already use the highest doses that may safely be employed, there is not much to expect from it. But on these islands, the combination of the two diseases being very common, it may be worth recording, that a judicious employment of mercury has proved quite harmless as to the leprous, and very effective as to the syphilitic symptoms.

Speaking of iodide of potash, there is a possibility that ordinary doses may prove useless (as indeed they generally do in leprosy), while larger doses may be given with better results. This is the case, as shown by Haslund, in psoriasis vulgaris, which, in many clinical features, strongly resembles leprosy.

As a considerable number of my cases required the internal use of iodide of potash for tertiary symptoms, I paid special attention to the effect on the co-existing leprosy. Most of the patients did not bear it well in the beginning, showing marked signs of iodism, but by slow and methodical progress, they all accustomed themselves to it, and after some time, took a three to four times larger dose fairly well. Still, we have not exceeded a dose of 6.0 grammes per diem, and this was only given in severe cases, where it worked very well, whereas small doses gave no result. I have not seen any increase of leprous symptoms under high doses; two or three cases seemed rather to improve, and the general health was not unfavorably affected. But the matter requires still further observation.

I had occasion to use arsenious acid in a slight case, complicated by bad scrofuloderma, for which iodide of potash had given no results. It did not act favorably on the leprosy, and I think that this drug does not merit a further trial, having been very often tried without results.

Under the medicines for external use stands in the first order chrysarobin, sometimes erroneously designated as chrysophanic acid. It is extracted from the Goapowder, a vegetable detritus found in the hollow trunks of a Brazilian tree (Andira araroba). It has been used in Brazil for various forms of skin disease, and a dissertation published in Bahia, reports first two cases of tubercular leprosy, where the eruption was removed by
its external use. The cures were not perfect, as relapses afterwards appeared. It has since been very successfully employed by European dermatologists in the treatment of psoriasis, where it may still be considered the sovereign external remedy. Unna first directed the general attention to its efficacy in leprosy, which has been acknowledged later by many of the most critical authors. Its action is to make the tubercles of some standing gradually disappear, being less effective on the newly arisen ones. I find that it may be used with the same result, in many of the eruptions of the maculo-nervous form, principally on the psoriasis-like spots. Its action, although slow, is quicker than that of other substances, or the natural healing process. The time required depends largely on certain qualities of the patient’s skin, but may be limited between one and three months for the disappearance of tubercles of moderate size. I have seen also extensive paresthesia, consisting mainly of feelings of cold and numbness, quickly improved by its external application.

Chrysarobin may be used in five to ten per cent ointment, or in solution with ether, benzine, chloroform, etc. The yellow film which remains in the last case, may be covered with elastic collodion, or American sticking plaster. Another good way, tried by me, is to mix it with castor oil and to dissolve it in alcohol. It may be applied with a brush, and soon leaves a yellow, adhesive film, which may be protected with gutta-percha paper.

While using the chrysarobin in any form, particular care must be taken not to get it in the eyes, where it may produce a severe irritation. If the eyes become painful, an immediate application of a five per cent solution of cocainum muriaticum proves very useful. Chrysarobin should never be touched or applied with the fingers. An inspection of the nails of the patient, which are stained purple by the drug, will reveal whether he has been meddling with it or has been careful. The linen is stained in the same way, while the skin of the patient becomes more copper-colored, and remains so for some time after discontinuing its use. Itching is very often present; an erythema shows that the remedy is beginning to work, and that its use must not be carried further, or a severe vesicular and even pustular dermatitis might ensue. While these symptoms are decided drawbacks, on the other hand, I never observed the least toxic action, even in using very large doses.

I have now to mention the pyrogallic acid, introduced in the treatment of skin diseases by Tarisch, and since used in many affections, but principally in psoriasis. In this disease, and in leprosy, its action is very like that of chrysarobin, but generally slower. We use it in ten per cent ointment. It stains the skin a blackish tone, and also the linen, but does not affect the eyes. It ought to be used with care, as an extensive use may produce toxic symptoms, it being a blood poison. A slow intoxication is recognized by the presence of anemia and loss of appetite, and may be combated by a liberal use of hydrochloric acid, after the drug has been discontinued. Following the example of Unna, we use it only on the face and hands, and so avoid any bad consequences.

I have also experimented a good deal with one per cent sublimate ointment, containing citric, salicylic or carbolic acid (four to five percent), to make it more active. While it is free from the drawbacks of the already mentioned substances, it seems to be also less active.

The external use of iodine and hydroxylamine is still under trial. Strychnia, tannic acid and ichthyol have not left me the impression that they possess specific value in leprosy (internally given). The latter, however has a local effect in combating inflammatory symptoms.

This report may be completed by some general remarks.
Leprosy is a chronic disease, and therefore, requires a chronic treatment, like syphilis and tuberculosis. While in the latter disease, we can do nothing more than help the natural tendency to a cure, and all the methods tried in late years, have led no further, still the hope survives that specifics may be found, as for syphilis. This latter disease is perfectly curable, although the moment when the cure is accomplished may never be ascertained. But we know that watching the patient from the first, and curing every fresh outbreak by immediate treatment, we may finally come to a real cure.

The stationary tubercles and nerve affections of leprosy do not endanger life, and their removal, which is often possible, does not warrant cure. It is probable that most of the microbes in these tumors are dead and that the effect of our remedies is only to hasten re-absorption of the dead material. This may be obtained, perhaps, without a specific action, by an artificial irritation and hyperemia.

But at the same time, we may again throw into the circulation a few surviving organisms, and thus promote new outbreaks. We must, therefore, direct our principal attention to the general treatment. If we learn to recognize the very first outbreak, as I have done during the last years, with several patients in my private practice, if we can check it, as seems to be possible, by the use of Salol and salicylate of soda, if we treat in the same way every feverish and eruptive period, giving in the intermediate time other remedies, which have a favorable influence, and finally, slowly remove the morbid deposits, where they already exist, we do more to prolong the life of the patient than is done in all the sanatoria for tuberculosis. At the same time, we may avoid, at least a good deal of the consequences of the untreated cases, and make leprosy, as it has proved with most of my private patients, a rather benignant disease, I believe we shall then also see cures, which may be attributed, not to extraordinary fortunate chance, but to our methods of treatment.

I have still to mention the complications observed in our patients. Most of them have suffered from epidemic influenza, the disease being generally benignant. We had one case of measles (number twelve), followed shortly afterwards by remittent fever, and still have a case of severe pleuritis, accompanied with pulmonary symptoms. There was also one case of a torpid ulcer of the cornea.

Among the patients received, we find nearly twenty per cent affected with florid syphilis, and about the same proportion suffering from the itch. Among the suspects we had several cases of other skin diseases. Among the lepers waiting to be transported, I did some surgical treatment, and cured several cases of itch.

I may finally state that, I found here the disease quite the same as in other places, and by no means more malignant. In the former reports of the Board of Health there is sufficient evidence to show that formerly the physicians were not so well acquainted with leprosy as they are now, and this may explain why the disease appeared to be more severe. The infection from one person to the other furnishes probably the largest number of patients. Heredity, if it really exists at all, is quite secondary, being perhaps only simulated by family infection. The influence of vaccination appears most doubtful.

I shall treat those questions more in detail on a further occasion, after I have had more local experience.

Hoping that the present report may prove satisfactory to you, I am

Yours respectfully,

A. Lutz, M. D.
Honolulu, April 1st, 1890