## From A to Z. Vaccination of village chickens with the I-2 Newcastle disease vaccine.

# A Starter Package



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## Foreword

Newcastle disease ("chitopa" or "chideru" in Chichewa, "pupwe" in the north) is the biggest killer disease of village chickens in Malawi. It is a viral disease which comes in outbreaks about once or twice a year and kills most if not all of the chickens in a flock. It can be easily prevented by vaccination every four months.

This document attempts to provide an overview of all you need if you wish to institute a community based Newcastle disease vaccination program. It is designed with the I-2 type of Newcastle disease vaccine in mind. The I-2 vaccine (that's I-2, not 1-2) is produced at the Central Veterinary Laboratory, Lilongwe, and is particularly suited for use in the village environment. (There are other types of Newcastle disease vaccines.) This document is the first part of a 'package' of information and training materials which, together with an enthusiastic individual or two and some start-up resources, completes what is needed for whole groups of villages to adopt and sustain a vaccination program against Newcastle disease thus saving many chickens and contributing significantly to rural livelihoods. <sup>1</sup>

This document is aimed specifically at development workers who are based in the field and who have close day to day contact with rural Malawians. In particular, it has been designed for use by volunteers in the US Peace Corps program but it may well be taken up by people who work similarly in close collaboration with rural communities. It is not aimed at Community Based Vaccinators themselves - we have a comprehensive training package for that. It has been written on the assumption that the reader/user is not technically trained in poultry matters and is not highly competent in the local language. Please bear with us if those assumptions do not apply to you.

Pat Boland Veterinarian **National Rural Poultry Centre** 9 September 2014

<sup>1</sup> The package is almost perfect, but not quite! We are joking of course. So if you do find any errors, omissions or other vagaries, we would love to hear from you. We are keen to keep everything relevant, practical and above all, simple. You will find us via our web site referenced above.

## Some prerequisites

To successfully undertake this program, you will need:

> Time... You will need time to organise individuals and communities, to train, explain, encourage and support people, some of whom may never have gone to school. You will also need time, especially at the start, to read the training manual and learn a bit about the vaccine yourself.

Behind the package, the idea is to hand over responsibility to communities as soon as possible. Your input after the initial six months or so will hopefully be limited to making sure communities and their vaccinators take full responsibility for and ownership of their respective roles. Ideally, you should ultimately be fully dispensable.

- Interest... In preparing this package, it is assumed you are keen to assist rural producers to improve their ability to raise chickens and protect them from Newcastle disease. While some general knowledge and interest in chickens or other livestock would be useful, it should not be essential. Hopefully the package will give you all the information you need. Interest and enthusiasm are the main elements.
- Trust... By this is meant the trust of the communities you will be dealing with. If you feel you do not have the confidence of the community and/or their village head(s), just quietly look elsewhere. Most communities which have adopted a vaccination program with I-2 do see the benefits and want to continue. But that comes later. Confidence, trust and enthusiasm are essential at the start.

## A brief overview

The operation of a community based vaccination program is not complicated. The essential elements can be summarised as follows. We will come back to each of these steps in more detail.

#### 1. Prepare and inform communities.

 First, learn about chicken raising in the target communities. Communities wishing to participate should be given general information about Newcastle disease and its importance. Some basic technical points should be clarified especially that the vaccine prevents disease, it does not cure disease; and that it is effective only against Newcastle disease. Communities also need to clearly understand their own role as well as the role of the community based vaccinators.

#### 2. Select community based vaccinators.

- Each community should nominate one or two individuals who will be their community based vaccinators. Selection should not be haphazard; we have good, common-sense guidelines for selection.

#### 3. Train and equip community based vaccinators.

- Each community based vaccinator needs to be trained on Newcastle disease, vaccination, and simple micro-scale business management.
- We have training manuals for Newcastle disease and the I-2 vaccine. Our own manual is tailored for the Malawi situation but there are also more comprehensive manuals available. This training will probably require a local expert fluent in the vernacular. This is one of the parts of the program where you are probably going to need significant outside help.
- Once the community based vaccinator has gained confidence, he/she can consolidate the
  process of familiarisation and education of communities on the technical aspects of vaccination.
  We have a flip chart which the vaccinator can use to share information about the disease and
  the vaccine.

#### 4. Assist with logistics.

- Especially at the start-up phase, you will need to provide moral support with organisation of things like transport and supply of vaccine, refrigeration facilities for the vaccine, basic book-keeping and accounting for money, and so on. A big challenge is getting communities and their community based vaccinators organised to take full responsibility for their own logistics.

#### 5. Set up a 'Chitopa Association(s)'.

- "Chitopa Associations" (they may have another name) are cooperative groups of community based vaccinators who can pool resources to purchase vaccine from Lilongwe or elsewhere. In some cases, they can also take a role in supporting other activities such as training of new community based vaccinators.
- Chitopa Associations are an essential and effective way to give communities and vaccinators the capacity to continue a vaccination program after the initial momentum has waned. Our experience has shown that the entire long term capacity to continue **must** be community based. It cannot be vested in NGO or field extension services because changes to their staff and programs will eventually lead to diminution of support. It is important that you act as a facilitator to bring about community empowerment and that you do not indefinitely remain an indispensable element in the vaccination program. In this, the Chitopa Association can play a crucial role.

## Lessons and pitfalls - some experiences

The Malawi government's agricultural field services and a number of NGOs have collectively amassed a wealth of experience in Newcastle disease vaccination of village chickens. Those observations and experiences give us important insights which have a bearing on how vaccination programs should or should not be instituted. Here are some of the things we can be fairly certain about.

#### • Communities want to vaccinate.

- Newcastle disease is the major source of loss in village chickens and all communities recognise the disease.
- Almost universally, communities which start a program of vaccination with I-2, see the benefit of vaccination and will express a demand for continued vaccination after they see the initial results. They will approach the person who has previously supplied vaccine, looking for more.
- La Sota is the name of another variety of vaccine for Newcastle disease (and there are others). La Sota is designed for and is effective under commercial conditions. Many Malawian communities have tried to vaccinate village chickens with La Sota in the past but such programs have rarely met with success in village poultry (as distinct from commercial flocks). Many village poultry owners have thus lost enthusiasm about vaccination with La Sota and initially may not be particularly keen to try the I-2 vaccine. This is a general statement - there may be some exceptions.

#### • Chicken owners are willing to pay for vaccination.

- Communities won't admit this at first. They will tell you that the vaccine is horribly expensive. But try asking them how much they normally charge when they sell a chicken and then ask again whether the vaccination to protect that chicken is worth it. The second time around they will probably agree that vaccination is good value for money. In other words, communities have to be cornered into recognising the commercial reality of their village chicken raising enterprise. Be sympathetic though remember that most chicken owners have never spent one kwacha on that chicken which you are now asking them to vaccinate for a fee.
- Some NGOs vaccinate chickens gratis. They subsidise the cost on an ongoing basis. We firmly
  believe this is a mistake because subsidisation will not be permanent. When, sooner or later, the
  subsidy is cut off and communities have to start paying for a service which was hitherto free of
  charge, they will tend to refuse, notwithstanding the self-harm incurred.<sup>2</sup>
- Management of the money is critical.
  - Money is charged for vaccination of every chicken. The amount collected is used for purchase of vaccine for the next round of vaccination (4 months later) and the balance is a profit, an incentive for the vaccinator to participate in the vaccination program. At least, that is the theory.
  - Interruptions and delays in the flow of monies due to diversion of funds can easily occur and are most often avoidable. They impede the system whereby vaccine is sold and distributed through to the final user. They can easily delay or cripple the whole vaccination program.
  - At every level, people participating in the vaccination program should take responsibility for the financial aspects of the program. Communities should ensure their community based vaccinators handle the money properly and purchase vaccine when required. Community based vaccinators should ensure they can rely on the representatives of their respective Chitopa

<sup>2</sup> SSLLP has first hand experience of this. In a collaborative project led by a large and bureaucratic NGO (which will remain nameless to protect the guilty) SSLLP was unable to convince the lead partner to charge for vaccination. At the conclusion of the project, vaccination virtually ceased in the target villages.

Association to procure and pay for vaccine. Government and NGO extension staff should be careful to avoid making themselves indispensable in the vaccination program in their areas.

#### • The focus must be on communities and community based vaccinators.

- At this time, the availability of I-2 vaccine in Malawi is limited as there is only one distribution outlet, this being the Central Veterinary Laboratory (CVL) at Bwemba, Lilongwe. It is therefore important to arrange a mechanism whereby community based vaccinators can reliably get access to vaccine.
- Ideally, procurement of vaccine should be within the capacity of the community. It might for instance be done through the Chitopa Association if one exists. An elected representative of the group collects money from each member, including a surcharge to cover things like transport costs, and then goes to CVL to procure the vaccine and return to distribute it to members.
- Occasionally, the vaccine which is brought from Lilongwe may have to be stored locally for some time before being distributed to vaccinators. If that is the case, access to a fridge will be required. Here is a case where your moral support and networking might be useful in finding a solution which the Chitopa Association can continue to use.
- In some cases, local extension officers working for an NGO or for the district government services can and do get directly involved in vaccine procurement and vaccination. These people are more likely to have the means to procure vaccine and/or undertake vaccination in the villages. On the one hand, this is good because such people are often well motivated and very capable. On the other hand, staff movements may precipitately interrupt the program, leaving communities and their community based vaccinators with insufficient knowledge and capacity to continue. Hence, you should always keep sight of the objective of ensuring that communities and their vaccinators are fully empowered to continue vaccination.
- Be aware too of possible fraud involving the I-2 vaccine. This has occasionally happened and can seriously erode confidence in the vaccine. It can happen that imitation vaccine or watered down vaccine can be sold to unwitting communities. In such a case, the vaccine does not work, the community sees that it does not work, and there is a loss of confidence in the vaccine and a loss of trust in the program. Be vigilant and try to know who is vaccinating and where. Also try to ensure that communities are aware of the possibility of such fraud (without frightening them or diminishing their enthusiasm). They should be very wary of any unknown 'expert' who tries to sell them cheap vaccine. If you hear stories of failure of the vaccine, always keep this possibility in mind. <sup>3</sup>

<sup>3</sup> Be aware however that not every user of the vaccine is going to be satisfied, even when it is working perfectly normally. You may hear many stories of woe, that the vaccine did not work, where the real reasons for the failure are not clear to you. The I-2 vaccine, stored and used properly, is very effective. Have confidence in that fact and spread the message widely.

### Next steps - where to from here?

So far in this document, we have just been setting the scene. Now it is time to take stock. We are now getting to the nitty gritty of the program. Once you are ready to go, we will basically be following the steps briefly outlined above on page 4. The detailed procedures for those steps are shown in the next sections.

At this stage, you will no doubt be wondering how much time, effort and resources are going to be required for all this. So let us give you an approximate idea.

The five steps outlined below will take about a year to get through. The time when you will be most intensively involved is at steps 1, 3 and 4, viz community awareness, training, and assistance with logistics. If you or a replacement facilitator are around, there will probably be a need for ongoing inputs after that but they will probably be minor issues rather than major impediments to the program. In particular, the Chitopa associations will probably require support for quite some time. They need to become effective in terms of group dynamics, organisation of roles and activities, basic book-keeping and so on. Your role will probably involve strengthening their capacity in such things without beind pressured to actually do those activities for them. Judging by our experience, this might require input from time to time for a matter of years.

So, what are the actual resource requirements apart from your time?

- The costs for the trainer of the community based vaccinators (2 days);
- Certificates, training manuals, vaccination calendars, T-shirts and/or caps for vaccinators;
- · Cost of a cooler box to transport the vaccine from Lilongwe;
- The costs of the initial vials of vaccine used in the first vaccination campaign;
- Bicycles for vaccinators (if supplied).

NRPC or another agency might be able to fund some of these activities. You should of course be clear on the availability of such funding before you embark on the program. You will need to know in advance what you can or cannot do.

Vaccination with I-2 is normally done every four months. The government has promoted a coordinated calendar for vaccination campaigns, this being the months of March, July, and November each year. There are several examples of simple yearly calendars showing this timetable, which may be available.

In practice, farmers have the impression that Newcastle disease is most likely to come in the dry season. This, together with the timing of the yearly cycle of cash and food reserves, leads to a higher level of interest in vaccination in the July campaign. That is when farmers are more likely to have cash to pay for vaccination and it is a time when they expect Newcastle disease to be most prevalent<sup>4</sup>.

<sup>4</sup> We do not have hard data on the seasonal incidence of Newcastle disease in Malawi. It is possible that the farmers' impression is wrong and that the disease is just as likely to strike in one month as in any other.

## Step 1. Prepare and inform communities.

It is assumed you are already generally familiar with the communities where you wish to start a program. If not, go round asking a few questions to test the water:

- How many households here have chickens? What are the major problems of raising chickens?
- Does this community see much Newcastle disease? How often? What do they do about it? Would they like to put in some effort to reduce deaths from Newcastle disease?
- What about community based vaccinators? Does the village already have its own community based vaccinator or community based animal health worker (alias livestock lead farmer, key-man, livestock technician)? If not, do they have people with a particular interest or aptitude for livestock, including chickens?

If it happens that the community already has a community based vaccinator, you will need to decide whether to go further. As a rule of thumb, if the vaccinator is enthusiastic, well appreciated by his/her community, and has been active in vaccinating within recent months, things are probably going well and you should move on. If the vaccinator is not achieving significant levels of vaccination, you might ascertain what are the impediments and consider your best option as to your intervention. Depending on the situation, you may need to assess the capacity of the community to either utilise the existing community based vaccinator or select a new person to be trained.

You will need to speak with community leaders. Do this at an early stage. First find out who are the leaders from whom you will need support. Brief them on the benefits and effectiveness of vaccination. Describe to them your plans and ensure they have a certain sense of ownership, participation and responsibility in those plans (but avoid any suggestion of a direct reward). Make sure you have their blessing to continue or else consider making a graceful exit.

Leadership within the community is a key factor which you should take into account before making a decision to press ahead with your program. If leadership is weak or disputed, you might reconsider your options.

If it is feasible, you should probably meet soon with a wider spectrum of the community, particularly including the women. Here is perhaps your biggest opportunity to prepare that community for the path ahead. In addition to the formalities which always accompany such meetings, try to ensure you get the opportunity to interact individually and directly with the wider group, especially the women. In addition to the questions listed above, you should consider the following questions/points:

- Perspectives:
  - "What are the advantages of raising chickens, especially as compared to goats, pigs, rabbits, etc?"
  - "Who receives the benefits and how?"
- Experiences:
  - Historically, what has been the experiences with control of Newcastle disease? Have people tried natural medicines and to what effect? Have they tried vaccination in the past? If so, do they know what type of vaccine was used and to what effect?
- Goals and aspirations:
  - Would people be willing to pay for vaccination of their chickens against Newcastle disease? (Get ready to ask them whether they sell any chickens and for how much. Refer to the scenario mentioned on page 5).
  - Are there reliable people (including women) in the community who could be trained and equipped to vaccinate chickens; people who know livestock and know chickens; people who can command the trust of chicken owners?

- Understanding<sup>5</sup>:
  - Clarify what is Newcastle disease and what is not. "What exactly is chitopa? We all know there are lots of diseases of chickens and people sometimes get a bit vague about what is chitopa. So just what is chitopa?" (The answer is clear in the training manual.)
  - Clarify the specific nature of protection given by the vaccine. Explain that all vaccines are very specific in their action. They protect against a disease and that disease only. They do not protect against other diseases.<sup>6</sup> Likewise, the I-2 vaccine protects against Newcastle disease and does a good job of protecting against that disease. But it has no effect whatever in preventing any other diseases. And do not be afraid to point out that there are other diseases which kill chickens, diseases against which this vaccine has no effect, but the single biggest killer is Newcastle disease.
  - Clarify the difference between prevention (vaccination) and treatment. To treat a disease and to
    prevent a disease are two different things. Some medicines are designed to treat a disease but
    vaccines are designed to give the body strength to prevent a disease. Vaccines do not treat
    disease they strengthen the body before the disease comes.
  - Clarify the need for time for the vaccine to take effect. Vaccines need time to take effect, typically about one week, before the body achieves a satisfactory level of immunity. If we vaccinate a chicken today, it is not protected immediately, but only after about one week. If chitopa comes and the chicken has not already been vaccinated, it is too late the chicken will die. If we try to vaccinate when chitopa comes, the disease will kill the chickens before they have built up sufficient immunity.

<sup>5</sup> In preparation for this discussion, you should probably familiarise yourself by reading through the training manual on Newcastle disease vaccination.

<sup>6</sup> Do not be afraid to bring up these technical points at village level. They may seem a bit high tech but our experience has been that, explained clearly, in simple language, their significance will sink in, much to the advantage of your program. Also, remember that most mothers already have some basic understanding of vaccines through the public vaccination programs for their children. Use analogies with human diseases freely to explain your point.

## Step 2. Select community based vaccinators.

Selection of community based vaccinators must be the ultimate responsibility of the community involved. Your role will be to provide advice and guidance where necessary. Again, the collective experience of government and NGOs should be exploited. There are very good guidelines for selection of community based workers and the principles are clear. These principles should be conveyed to the community and community leaders before they select their community based vaccinators.

Selection can be done by a community committee which represents all sectors of the community, including particularly women. It may well be a good idea to suggest that each target community select one female and one male candidate for training.

Candidates for training should be:

- **Trustworthy**; they should be trusted and respected by the general community and have no record of default on financial affairs;
- **Committed**: they should be available, willing and able to serve the community and not be very busy with other jobs or occupations;
- **Responsible** individuals who have a good general knowledge of and interest in raising livestock and have farming as their primary occupation;
- Generally physically capable, able to visit and vaccinate poultry;
- Able to read and write (for record keeping) and do basic arithmetic (for charging and purchasing vaccine);
- Long term residents in the focus area.

You may need to reinforce the necessity for communities to actually commit themselves to these principles and not just pay lip service. Occasionally, communities agree wholeheartedly with the principles but do not actually ensure they are followed during the selection process. It is difficult to be specific about how you might ensure that selection is done according to the above principles. Every case will be different. Try to be aware of what is actually happening at the grass roots level. You will probably need to strike a balance between two risks: on the one hand, intruding too much on the community decision; on the other hand, having the community leave the decision in the hands of one or a few community leaders.

Once the candidates have been selected, you should meet with them and get to know them. You should discuss the plans for their training in Newcastle disease vaccination. That brings us to the next step.

## **Step 3. Train and equip Community Based Vaccinators.**

The training of Community Based Vaccinators is a step where you may well need outside help. Unless you are reasonably fluent in the local language and reasonably familiar with the technical issues, you will need experienced staff to undertake this training. In any case, it would be highly desirable for you yourself to read the training manual and understand more about Newcastle disease and the vaccine.

The National Rural Poultry Centre has its own manual for training of Community Based Vaccinators in utilisation of the I-2 Newcastle disease vaccine. The training session takes at least one day, probably two.

If you have a local counterpart, that person may well be able to do this training. However, they would first have to read and fully understand the training manual. NRPC would be willing to assist any such counterpart to understand all aspects of the training manual and program. Alternatively, and depending on factors such as location, time, money and transport, NRPC may be able to assist in finding experienced people who can conduct the training for you. Please do make enquiries.

The NRPC's manual for the training in Newcastle disease and I-2 vaccination is to be found at <u>http://www.ruralpoultrymalawi.org/downloads.html</u>. Hard copies of the manual can be requested from NRPC.

A more generalised and wide-ranging training manual was earlier developed by the KYEEMA Foundation. That manual was adapted for the Malawi situation. If you want to refer to the more comprehensive manual (in English), it can be found at <u>http://www.aciar.gov.au/web.nsf/doc/JFRN-5J473Z</u>

In addition to the basic training manual, NRPC is developing a 'flip chart' for training of ordinary community members about poultry, Newcastle disease and vaccination. The flip chart is an essential tool for the trained community based vaccinator to use for demonstrations and training of ordinary people in the community on Newcastle disease and its prevention. Every trained community based vaccinator should be trained in the use of this flip chart and equipped with a copy for use in association with his/her work. The NRPC flip chart will be available at <a href="http://www.ruralpoultrymalawi.org/downloads.html">http://www.ruralpoultrymalawi.org/downloads.html</a>.

At the conclusion of training, candidates should be equipped with additional materials for the purposes of recognition and facilitation of their work. Depending on the level of support available, some or all of the following should be supplied.

- A certificate of training is essential. NRPC has certificate templates of a full A4 page size,<sup>7</sup> on which the name of the vaccinator can be placed. Community based vaccinators should carry this certificate with them during their work of vaccination.
- A carry basket suitable for transporting vaccine should be supplied. An indicative design for such a
  locally made basket is shown in the training manual. Sometimes, vaccinators request a commercially
  produced insulated cooler box but this is not essential unless they are travelling long distances with
  multiple vials of vaccine. Such a cooler box might well be supplied to the person designated to
  collect vaccine from Lilongwe on behalf of the group.
- Things such as T shirts and/or caps embossed with an appropriate label are very significant for vaccinators. The label/message on the item identifies the wearer as a designated authorised vaccinator. Community based vaccinators gain a sense of recognition through being seen wearing such apparel. Do not underestimate the importance of this recognition and the significance it has for the effectiveness of the work done by the community based vaccinator. Find a sponsor to fund these items if you possibly can. NRPC will assist if it can.

<sup>7</sup> On some occasions, vaccinators have requested to be supplied with an ID card with their photo on it. NRPC has not acceded to this request, feeling that in the wrong hands ID cards could easily be the subject of fraudulent misrepresentations.

- A bicycle for transport may be supplied. In the past, SSLLP and several other NGOs have supplied each trained vaccinator with a bicycle for moving around from village to village. Obviously, this has only been possible where there is significant financial support for the program. It is essential that if a bicycle is supplied it be the subject of a contract signed beforehand, outlining the conditions of use. NRPC has available a model contract for such purposes. Be aware that a bicycle is a highly desirable item and it should not prejudice the selection of candidates for training. If a bicycle is to be supplied, keep it under wraps until after the selection process has been completed. NRPC prefers to keep things simple by not supplying bicycles.
- A vaccination calendar is a useful addition to the training program. Such calendars might be available through the government or through NGOs such as NRPC. They are rather prized by the vaccinators themselves and they play a role in public education about Newcastle disease vaccination. You should make an attempt to supply calendars to every trained vaccinator if possible.

## Step 4. Assist with logistics.

At the conclusion of training, community based vaccinators should have all the knowledge they require to undertake vaccination in their villages. However, before they can actually start vaccination, they will require assistance with some of the logistics in order for them to undertake their work. Of course, there is no guarantee that you can assist with all of these items. You are encouraged to contact NRPC beforehand to see what support is possible.

Some possible examples where assistance will be required are as follows:

- Start-up vaccine
  - Community based vaccinators should be encouraged to start their vaccination programs through
    provision of the first round of vaccine gratis. This will obviously give them more incentive to make
    a start but it should be on the clear understanding that in all future vaccination campaigns, they
    must pay up front for the vaccine needed.
- A refrigerator
  - Depending on the timing of supply and use of the vaccine, it may be necessary to arrange to have it stored in a fridge for some time before it is used. As mentioned earlier, through your networks, you might be able to assist in finding an individual or an institution who might be able to provide a small amount of fridge space for the period. Think particularly of government institutions, schools or hospitals.
- Supply lines for vaccine
  - Just how can a community based vaccinator (or a representative on behalf of several vaccinators) manage to procure, transport and store the vials of vaccine required for a campaign? Can you assist here? Perhaps you have contacts who might be able to assist or you could give general advice on how the logistics of this might be managed.
- Cooler boxes for transport of vaccine
  - We are talking here of commercially produced cooler boxes for long distance transport of the vaccine from the supplier, not transport from the distribution point to the target village (see the training manual for further details). Insulated cooler boxes can be supplied to each 'Chitopa Association' for use by the elected representative to bring vaccine from the supplier.

## Step 5. Set up Chitopa Associations.

It will already be obvious that several of the key elements which are essential for the successful execution of a vaccination program might be beyond the capacity of an individual community based vaccinator. However where a number of community based vaccinators can get together and form a 'Chitopa Association' the collective resources can be put to use to find solutions.

There are good working examples of Chitopa associations which show what is possible. In the southern region of Malawi for example, Chitopa associations have been formed and money collected from their members for the vaccination program. The money collected has included not only the cost of the vials required by each member but also an overhead to fund the cost of transport for one representative to travel by bus to Lilongwe and return with the vaccine. Other Chitopa associations have even been able to partially fund the training of new community based vaccinators where this was deemed necessary.

Your role here can be important. Community based vaccinators might need encouragement and guidance in the principles of handling and accounting for the monies which are collected. They may well need assistance in calculating an appropriate overhead to cover agreed costs for transport and storage. You should try to liaise closely with the community based vaccinators to assist them in doing these calculations.

## Conclusion

We are now hopefully very close to Z. You will undoubtedly find that issues and difficulties arise at any point during the vaccination program. They will arise not only during the development phase but also during the routine operational phase when you may have hoped that everything should be going smoothly.

Continued input, advice, and coordination will be needed but we reiterate that the final aim is to have the community groups independently operating their own vaccination programs. This is possible - there are some splendid examples.

In conclusion, please try to make good use of NRPC and other sources of support and advice. There are many sources available but not all are easily visible. Please do not hesitate to contact us for further information.

Good luck.