




**VISION 2020 e-resource**  
*-for eyecare management worldwide*

A large graphic of concentric circles in shades of gold and white, centered on the page. The circles are of varying thickness and opacity, creating a ripple effect.

**KAP  
STUDY  
PROTOCOL**

## **Conducting a Knowledge, Attitude and Practice (KAP) Study**

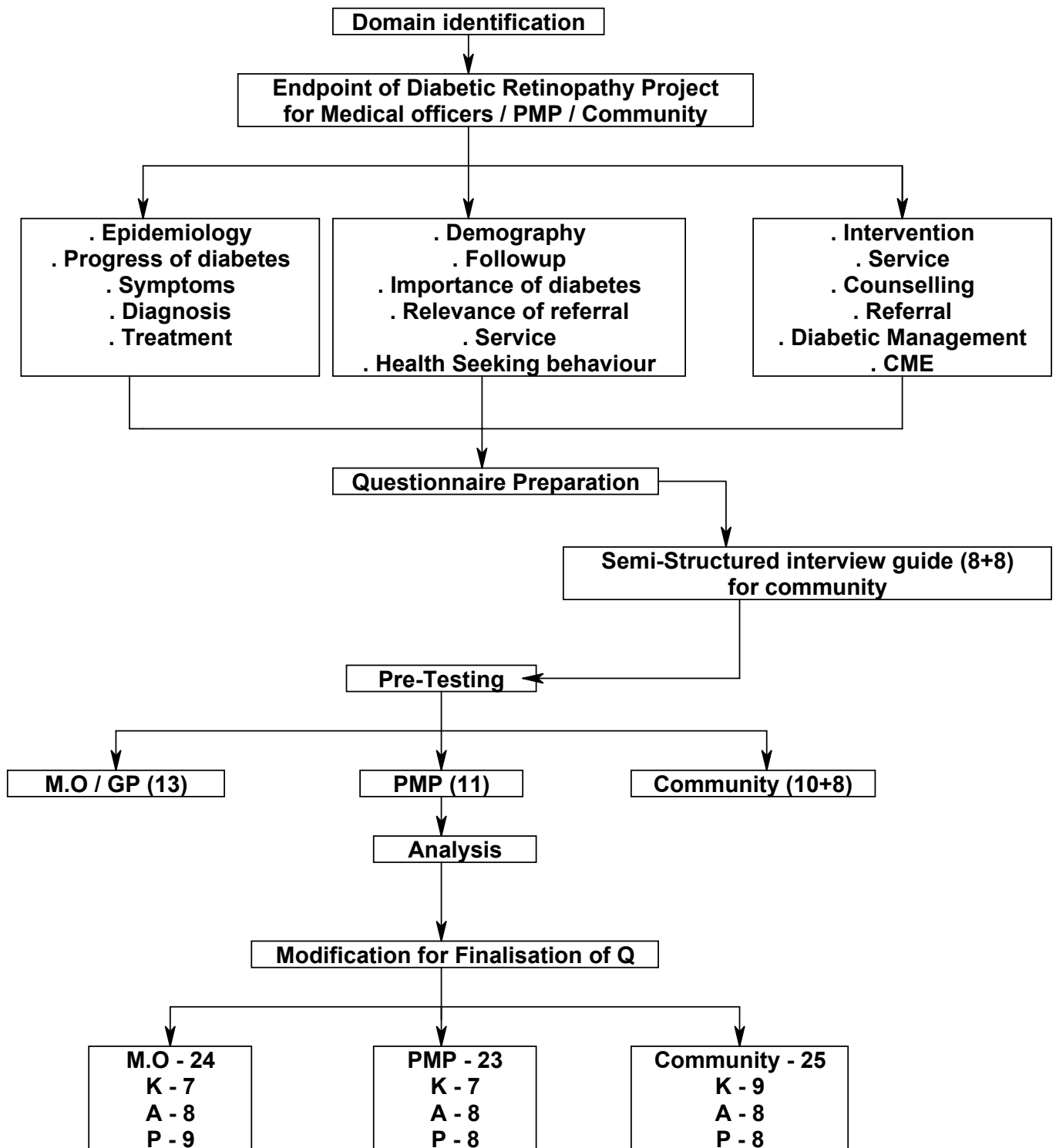
Before beginning the process of creating awareness in any given community, it is first necessary to assess the environment in which awareness creation will take place. Conducting a KAP study can best do this? KAP Study tells us what people know about certain things, how they feel and also how they behave. The three topics that a KAP study measures are Knowledge, Attitude and Practice. The Knowledge possessed by a community refers to their understanding of any given topic, diabetes and diabetic retinopathy in this case. Attitude refers to their feelings towards this subject, as well as any preconceived ideas that they may have towards it. Practice refers to the ways in which they demonstrate their knowledge and attitude through their actions. Understanding the levels of Knowledge, Attitude and Practice will allow for a more efficient process of awareness creation as it will allow the program to be tailored more appropriately to the needs of the community.

When assessing the KAP of a community, it is useful to divide that community into smaller sub-categories. In this case, these categories can be defined as the Medical Community and the General Community. The Medical Community consists of those that are responsible for the provision of medical care in a population, including doctors, paramedics, pharmaceutical providers, and others. This category can be further separated into Medical Practitioners and Paramedical Personnel in areas with a large enough population of these two groups. The General Community consists of those who then receive that care. There are many reasons to suspect that the levels of KAP will differ in these two categories, as they will have received different levels of medical training and information in the past. It is therefore useful to tailor any awareness creation project to suit the differences in these separate categories to attain maximum efficiency.

### **STEPS IN PREPARATION OF A KAP QUESTIONNAIRE**

#### **1) Domain Identification:**

The domain, or subject, which the study will be conducted on, must be identified. For the purposes of a diabetic retinopathy project, the general domain area is diabetes and diabetic retinopathy. More specifically, the domain will be the Knowledge, Attitude and Practices of the population in regards to these two diseases.



## 2) Question Preparation

Question preparation must be conducted in stages. The first stage in preparing questions for a KAP study is to meet with diabetologists, medical practitioners, eye-care service providers, and experts on diabetic retinopathy. This group of specialists should then identify the Endpoints or Goals of the awareness creation activities of the diabetic retinopathy project for Medical Practitioners, Paramedical Personnel, and Community Members. Questions should be created to test all three areas of the study, Knowledge, Attitude, and Practices.

## **Baseline Survey Questionnaire for Community**

No:

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<p><b>Confidential</b> For research and Service purpose</p>
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**Baseline Survey – For Community  
Sf-742 Diabetic Retinopathy Project  
Master Questionnaire**

Name: \_\_\_\_\_

Age: 

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Sex: M/F

**Type: Government/ Private Practice/ Private Hospital**

Mailing Address :

Phone No:

Date:

**Introduction:** The Aravind Eye Hospital , has been working in the field of eye care for the last 20 years. The main focus of its community work has been in cataract and refraction services. Now we would like to provide services to the community in Diabetic Retinopathy. For designing the service we would like some information from you. This will help us to plan and provide better service. This will take about 20 minutes of your time.

Please fill up the questionnaire by writing in the response, after which kindly handover the filled in form to the Diabetic Retinopathy team member. You may write the response either in Tamil or English.

**Consent:** I am willing to provide information. My responses can be used without any change in content.

**Yes:** \_\_\_\_\_ **No:** \_\_\_\_\_  
[Please Sign]

Form checked by : \_\_\_\_\_



Aravind Eye Hospital  
& Postgraduate Institute of Ophthalmology

### **Section-1**

We are Planning to provide information on diabetes and diabetic retinopathy for paramedical personnel. For helping us to decide the content, please answer the following questions.

- 1.1. What is diabetes?
- 1.2. State the symptoms of Diabetes?
- 1.3. What are the causes of Diabetes?
- 1.4. Which parts of the body are mainly affected by Diabetes?
- 1.5. How can diabetes be identified?
- 1.6. What are the treatment methods followed by diabetic retinopathy?
- 1.7. How does diabetes affect the eyes?
- 1.8. How does diabetes are at greatest risk for diabetic retinopathy?
- 1.9. What are the treatments given for diabetic retinopathy?

## **Section – 2**

These are some common statements we hear in the community about diabetes. Please read the statement and tick your opinion.

### **2.1 Diabetes can be cured completely**

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

### **2.2. Children can be affected if their parents are diabetic**

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

### **2.3. Consuming sweets leads to diabetes**

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

### **2.4. Diabetes is more among rich people**

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

### **2.5. Diabetes can be cured completely by proper diet control**

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

### **2.6. Diabetes are more likely develop eye problems than non-diabetics**

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree



2.7.All diabetics should have a periodic eye examination by an ophthalmologist one in a year.

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

### **Section – 3**

Currently there is not much accurate data available regarding diabetic patients, their treatment seeking behaviour and the services available for them. In this section we would like to know about your experience with diabetic patients.

#### **Diabetic patients**

3.1. When and how did you come to know that you have diabetic mellitus?

3.2. For how many year/month are you a diabetic patient?

3.3.What are the treatment methods you follow to control diabetes?

3.4.Who else, besides you, are suffering from diabetic mellitus in your family? If yes, who affected and for how long?

3.5.What treatment methods do they follow?

3.6.How many times have you undergone dilated fundus examination after knowing that you are a diabetic?

3.7.Have you shared your experience regarding diabetes either with your family members or friends?

3.8.Through which sources did you come to know about diabetic retinopathy?

3.9. What are treatments for diabetic retinopathy and where is it available?

3.10. What advices would you give to diabetic patients?

**Non diabetic patients**

3.1a. Is any of your family members affected by diabetes?

3.2a. In what ways are you helping your family members, with diabetes?

3.3a. What are the advises given by you for diabetic patients?

3.4a. Do you refer diabetic patients to an ophthalmologist?

3.5a. From which source did you come to know about diabetes and diabetic retinopathy?

3.6a. What are the information gathered from the diabetic patients after their eye examination, which you had refered to an ophthalmologists?

3.7a. What kind of treatment method is generally followed by the people for diabetes?

3.8a. What is the treatment for diabetic retinopathy?

**Thank you very much for sparing  
Your valuable time!**

## **Baseline Survey Questionnaire for Medical Practitioners**

No:

<b>Confidential</b> For Research and service purpose only
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### **Baseline Survey – For Medical Practitioners SF –742 Diabetic Retinopathy Project Master Questionnaire**

Name : \_\_\_\_\_

Age :  Sex: M / F

Type : Government/ Private Practice/Private Hospital

Mailing  
Address :

Phone No :

Date :

**Introduction:** The Aravind Eye Hospital, has been working in the field of eye care for the last 20 years. The main focus of its community work has been in Cataract and refraction services. Now we would like to provide services to the community in Diabetic Retinopathy. For designing the service we would like some information from you. This will help us to plan and provide better service. This will take about 20 minutes of your time. Please fill up the questionnaire by writing in response, after which kindly handover the filled in form to the Diabetic Retinopathy team member. You may write the response either in Tamil or English.

**Consent:** I am writing to provide information. My responses can be used without any change in content.

Yes: \_\_\_\_\_ No: \_\_\_\_\_  
[Please Sign]

Form checked by: \_\_\_\_\_



## **Section – 1**

We are planning to provide information on diabetes and diabetic retinopathy for medical practitioners. For helping us to decide the content, please answer the following questions.

1.1 Please mention all the diagnostic tests for Diabetes?

1.2 Please mention all the symptoms of Diabetes?

1.3 Please mention the main causes for Diabetes?

1.4 Which parts of body are mainly affected by Diabetes?

1.5 List the clinical features of

a) Hyperglycemia / Ketoacidosis

b) Hypoglycemia

1.6 Which diabetic patients are at greatest risk for Diabetic Retinopathy?

1.7 What is the treatment for a patient with Diabetic Retinopathy?

1.8 How often would you advise follow-up for Diabetic Pregnant women?

## **Section -2**

These are some common statements we hear in the community about diabetes. Please read the statement and tick your opinion.

2.1) More uneducated people have diabetes than those who are educated.

1) Strongly Agree   2) Moderately Agree   3) Undecided   4) Moderately Disagree   5) Strongly Disagree

2.2) All Diabetic patients must be refer to Ophthalmologists.

1) Strongly Agree   2) Moderately Agree   3) Undecided   4) Moderately Disagree   5) Strongly Disagree

2.3) As long as the diabetes is kept under control, there is no need to worry about diabetic complication.

1) Strongly Agree   2) Moderately Agree   3) Undecided   4) Moderately Disagree   5) Strongly Disagree

2.4) If the doctor has told the diabetes patient to come for regular follow-up, the patient will come.

1) Strongly Agree   2) Moderately Agree   3) Undecided   4) Moderately Disagree   5) Strongly Disagree

2.5) If the diabetic is treated early on, diabetic retinopathy can be prevented.

1) Strongly Agree   2) Moderately Agree   3) Undecided   4) Moderately Disagree   5) Strongly Disagree

### **Section - 3**

Currently there is not much accurate data available regarding diabetic patients, their treatment seeking behaviour and the services available for them. In this section we would like to know about your experience with diabetic patients.

3.1) What type of diabetic patients are referred by you to an ophthalmologist?

3.2) What proportion of new patients do you routinely screen for diabetes among the patients coming to you?

3.3) How do you decide whom to refer for treatment?

3.4) When diabetic patients come to you, who else besides you provides advice?

3.5) What advice do you give to the patient with diabetes?

3.6) How much does it take for you to explain how to manage diabetes?

3.7) Have you taken any sessions in the past one-year to educate the public regarding diabetes?

3.8) Do you follow-up the patients you have referred to the specialists?

3.9) From which sources have you learned about diabetic retinopathy in the past one year?

**Thank you very much for sparing  
your valuable time !**



## **Baseline Survey Questionnaire for Paramedical Personnel**

No:

**Confidential**  
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### **Baseline Survey – For Paramedical Personnel** SF –742 Diabetic Retinopathy Project **Master Questionnaire**

Name : \_\_\_\_\_

Age :  Sex: M / F

Type : Government/ Private Practice/Private Hospital

Mailing  
Address :

Phone No :

Date :

**Introduction:** The Aravind Eye Hospital, has been working in the field of eye care for the last 20 years. The main focus of its community work has been in Cataract and refraction services. Now we would like to provide services to the community in Diabetic Retinopathy. For designing the service we would like some information from you. This will help us to plan and provide better service. This will take about 20 minutes of your time. Please fill up the questionnaire by writing in response, after which kindly handover the filled in form to the Diabetic Retinopathy team member. You may write the response either in Tamil or English.

**Consent:** I am writing to provide information. My responses can be used without any change in content.

Yes: \_\_\_\_\_ No: \_\_\_\_\_  
[Please Sign]

Form checked by: \_\_\_\_\_



Aravind Eye Hospital  
& Postgraduate Institute of Ophthalmology



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Phone: 0452-253 7580; Fax: 91-452-253 0984; Email: diab@aravind.org

## **Section – 1**

We are planning to provide information on diabetes and diabetic retinopathy for paramedical personnel. For helping us to decide the content, please answer the following questions.

1.1.What is diabetes?

1.2.What are the different types of Diabetes?

1.3.State the cause for Diabetes?

1.4.Which parts of the body are mainly affected due to Diabetes?

1.5. What are the eye diseases caused by Diabetes?

1.6. Which among diabetes are at great risk for Diabetic Retinopathy?

1.7. What is the treatment for Diabetic Retinopathy?

## **Section -2**

These are some common statements we hear in the community about diabetes. Please read the statement and tick your opinion.

2.1. Consuming sweets will result in diabetes.

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

2.2. Diabetes are twice as likely to develop eye problem than non-diabetes.

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

2.3. Persons with a fat body is more prone to diabetes

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

2.4. Diabetic Retinopathy due to diabetes is a common health problem

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

2.5. People, who follow proper diet and regular exercise, need not take medicines for diabetes.

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

2.6. If the blood sugar level is kept under control, the patient need not worry about other complication of diabetes

1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

2.7. Referring the diabetic patient to an ophthalmologist can prevent diabetic retinopathy.

- 1) Strongly Agree    2) Moderately Agree    3) Undecided    4) Moderately Disagree    5) Strongly Disagree

### **Section -3**

Currently there is not much accurate data available regarding diabetic patients, their treatment seeking behaviour and the services available for them. In this section we would like to know about your experience with diabetic patients.

3.1. What advice will you provide when you meet the diabetic patient?

3.2. Through which source did you come to know about diabetes in the past one year?

3.3. What advice would you give to a person who has a wound, unhealed?

3.4. Through what ways did you come to know about diabetic retinopathy?

3.5. What type of study material do you have, related to diabetes?

3.5a) Where did you get the study materials?

3.5b) When will you use these study materials?

3.6. If a diabetic patient come to you, to whom will you refer to?

3.7. What kind of information did you come to know from the diabetic patient you had referred?

3.8. What type of treatment method does followed by the people for diabetes?

**Thank you very much for sparing  
Your valuable time!**

Questions included in the Knowledge section should be designed to test the knowledge of respondents on diabetes and diabetic retinopathy. These should be open-ended questions, without multiple-choice answers provided as this can result in guessing and therefore give a false impression of the knowledge of the population. Questions should cover the following topics:

- Epidemiology of diabetes
- Progress of diabetes
- Symptoms of diabetes
- Diagnosis of diabetes
- Treatment options for diabetes
- Risk factors for diabetic retinopathy
- Treatment options for diabetic retinopathy
- Service

Questions included in the Attitude section should be designed to gauge the prevailing attitudes, beliefs and misconceptions in the population about these diseases. This is most effectively done using a different strategy than that used for the Knowledge section. Statements should be provided, and respondents should be asked to indicate the extent to which they agree with those statements, on a pre-determined scale (strongly disagree, moderately disagree, neutral, moderately agree, strongly agree). These questions should cover the following topics:

- Demography
- Follow-up procedure and importance
- Importance, significance, and severity of diabetes
- Importance of referral
- Health seeking behavior

Questions included in the Practice section should be designed to assess the practices of the population with regards to these two diseases. These should be open-ended questions like those asked in the Knowledge section, to prevent false information as a result of guessing. These questions should cover the following topics:

- Intervention
- Counseling services
- Referral practices
- Diabetic management
- Continuing Medical Education (CME)

### 3) Evaluation of questions

Once the questions for the study have been prepared they must be evaluated. This evaluation should be aimed at assess their ease of comprehension, relevance to their intended topics, effectiveness in providing useful information, and the degree to which their meaning may vary for different individuals, which should be kept to a minimum.

Evaluation should be conducted through a Pre-Testing of the study on a small group of representatives from each population the study will survey. The questionnaire should be tested on approximately 15 members of each of the following groups: Medical Officers and General Practitioners, Paramedical Personnel, and Community Members, including both diabetics and non-diabetics.

Once this small group has completed the questionnaire the results should be analyzed. This analysis should evaluate the degree to which the questions were properly understood or misunderstood, the degree to which individuals within a group interpreted the questions differently, the effectiveness of the questions in soliciting the proper information, and any areas of information which were neglected by the proposed questionnaire.

Once analysis has been completed the questions should be modified to reflect the results of the Pre-Testing. This will result in the final version of the KAP questionnaire.



## CONDUCTING A KAP STUDY

The first step in conducting a KAP study is the selection of the sample to which the survey will be given. The sample should be sufficiently large so as to represent the population without being so large that the data collection and analysis is prohibitively difficult. In choosing a sample size be careful to take into account that some of those selected may be difficult or impossible to contact, or unwilling to participate in the study. A sample size of approximately 200 individuals from each group will suffice as long as care is taken to ensure that the response rate is reasonably high.

As mentioned previously, division of the population into smaller categories is typically desirable as differing groups in the community have different educational, cultural, and socioeconomic backgrounds and therefore will likely have differing levels of KAP. In practice, this distinction can be made based on geographical characteristics of the group in either Rural or Urban settings. The characteristics of the overall population should be considered when selecting the proportion of individuals from these categories so as to ensure that the population sampled will reflect the population at large.

The survey should then be conducted and the data collected. A standard method for conducting the survey should be decided upon in advance, and

should be consistent for each category surveyed so as to ensure that differences in the result are independent of the sampling method and depend solely on the characteristics of the population in question. Sampling methods include interviews, either in person or on the telephone, and distribution of the questionnaire by mail. Based on the experiences of the Lions-Aravind project, it is not advisable to attempt to conduct a survey through mailings, as the response rate has been observed to be significantly lower following this method than it is using the interview method.

After collection, the data should be analyzed to determine the KAP level of the community. Questions in the Knowledge, which often have more than one component to a 'correct' answer, must be analyzed differently from those in the Attitude section, which must in turn be analyzed differently from those in the Practice section. For example, if asked in the Knowledge section to list the symptoms of diabetes, a respondent may know anywhere from zero to seven symptoms. It will likely be most useful to analyze data from this section in terms

of the absolute number of correct responses to a question, so that it can be determined what percentage of the population knows all of the symptoms, what percentage knows 6, 5, and so on. The preparation of tables to illustrate both the percentage of those knowing each individual symptom and the percentage of people knowing multiple symptoms will provide a better understanding of the overall knowledge of the population, as there may be some highly knowledgeable members of each group and many others who entirely lack knowledge, a fact that would not be apparent without a more detailed breakdown of the data. Analysis of the responses to the Practice section should be conducted in a similar fashion to those of the Knowledge section, and be tailored to the specific nature of each question.

In the Attitude section, a numerical value can be assigned to each choice in the range of responses, with the middle response given a score of zero and positive and negative scores assigned to those around it. In this way a score can be calculated for each individual in relation to the highest possible score.

Once the data has been collected and analyzed it should be presented in a report that can then be distributed to other interested parties. A KAP report should include the following items:

- Introduction – As those reading the report may not be familiar with the problem of diabetes and diabetic retinopathy, the severity of the problem, the importance of KAP studies, and the characteristics of the area being

studied, all of this information should be contained in an introduction to the report before the findings are presented.

- Design – The design of the study should be explained prior to the presentation of findings. This includes the process taken to generate the questions that the study asks, the composition of the population being studied, specific details about the sample used to study that population like their geographical composition, gender and age breakdown, and the types of institutions the work for, and any other salient features of the study that need to be explained.
- Findings – The findings of the study should be presented in a clear, easy to understand fashion. The results to each question should be detailed, using graphs and tables so as to facilitate comprehension. These tables

- should include both the raw numbers of responses for each question and the percentages that these numbers result in. The results of the separate surveys for the different groups studied should be placed in separate sections so that the data presented in the report gives an accurate representation of the actual population studied. A short introduction to the importance of correct Knowledge, Attitudes and Practices for each of the groups should be given before the data collected from that group is presented so that the reader has a clear understanding of the relevance and importance of the results.
- **Analysis** – The results of the study should be analyzed briefly so that the reader understands what the results mean. For example, merely detailing the responses to a question will be of little value to the reader without additional information being provided that gives the correct response to that question.
- **Conclusion** – A conclusion should be drawn from the data, and presented in the report. For a KAP study, this conclusion should take the form of detailing the course of action that will be taken to remedy any unsatisfactory results of the study.

Once a report has been written, it should be edited by internal sources and then presented to external sources as well. A review of the report for accuracy and relevancy by at least two experts in related fields, such as diabetologists, medical practitioners, or statisticians, will help to ensure that the report is an accurate and useful document.

After editing is completed, the finalized report should be submitted for publishing to all appropriate agencies. This includes any internal publishing division, local medical journals and newsletters, and any journals, both national and international, that may be interested in your findings. Publication in external journals will likely require the writing of an addition, more concise report in accordance with guidelines that these journals may have for publication, as well as an Abstract of the report. The writing of these documents should follow any guidelines presented by the journals, and be edited in the same manner as the initial report.

The knowledge gained through a KAP study can be used to shape the form that the awareness creation process will take. Mistaken beliefs should be righted, negative attitudes converted to favorable ones, and detrimental or incorrect practices changed to correct ones. The KAP study will illustrate the areas in which the population most needs education and training. As financial and temporal restrictions will likely exist for the program, the budget and time frame, these areas must be evaluated and ranked in terms of their importance to the success of the project. The actions undertaken as a result of the study should reflect this analysis so as to guarantee that the project is as effective as possible.

KAP studies should be conducted at regular intervals throughout the project. Subsequent studies will not only help to ensure that the program is evolving with the changing needs and characteristics of the environment, but can also be used to gauge the success of the program, and its strengths and weaknesses. These studies should be modeled on the initial one as closely as is possible so that their findings can be compared easily and accurately, but they should also be tailored to reflect the knowledge gained through conducting all previous studies so that each subsequent study is more effective and efficient than the one that preceded it.

Reports written for subsequent studies should include the same information as the initial one did, and additional information and the awareness creation activities undertaken during the intervening time that may have changed the KAP of the population surveyed.

In addition to a report being written for each subsequent study, comparisons should be made to earlier studies to help gauge the successes and shortcomings of the project. These comparison documents should include tables and graphs similar to the reports of each study to illustrate the change in KAP in the population. The analysis and conclusion sections of these comparisons should analyze the changes in KAP and therefore the effectiveness of the program. Once the program has been analyzed in this fashion, changes can be made in awareness creation activities to increase its effectiveness.