

HEALTH INFORMATION SYSTEM FOR CRM IMPLEMENTATION IN TTD

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Abstract

TTD maintains several hospitals and dispensaries at Tirupati, Tirumala and Tiruchanoor for the benefit of its employees, pilgrims and the local population. The first and foremost responsibility of the Health and Sanitation department is to clear the waste which gets accumulated daily on Tirumala hills. It is one of TTD's priorities to ensure hygienic conditions both at Tirumala and Tirupati. The overall objective of the research was to capture devotees' perception, preferences and satisfaction with various services and facilities provided by TTD. More specifically the research will look into to measure satisfaction with respect to Healthcare facilities provided by the TTD Management and to design information systems capable of providing the healthcare facilities in a more efficient manner for the purpose of planning and managing the information systems (IS) / Information Technology environment.

Keywords: *Hygienic Conditions, Information Systems Design, Information Technology, Sanitation facilities.*

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1. INTRODUCTION

The target group for Tirumala Tirupati Devasthanams to provide facilities is devotees and donors. Unless their views and perceptions are obtained and analyzed it is not possible to draw inferences about the facilities provided to them. In this direction, on the basis of the data obtained through the survey the satisfaction levels on facilities are presented.

A comparison of donors with the devotees reveals that while ninety percent of the devotees are satisfied with the facilities, a relatively lower percentage among donors was satisfied. This could be because the donors expect better facilities and treatment from the TTD. Also the study brings out that there was hardly any communication with donors on the utilization of funds. This could have also resulted in some dissatisfaction.

Having analyzed the overall satisfaction levels, to have more insight about each facility like accommodation, darshan, prasadam, sevas, grievance redressal and other facilities are analyzed. In this paper an attempt for CRM implementation in TTD through Annadanam Management Information System.

Medical, Health and Sanitation Facilities

TTD maintains several hospitals and dispensaries at Tirupati, Tirumala and Tiruchanoor for the benefit of its employees, pilgrims and the local population. The list of hospitals and Dispensaries include Aswini Hospital, Tirumala, Central Hospital, Tirupati, Dispensary at the Vaikuntam Queue Complex, Tirumala, Employees Dispensary in Tirumala, Dispensary at INC, Tirupati, Dispensary at Sri Padmavathi Ammavari Temple, Tiruchanoor, Health Centre

at Padmavathi Women's College, Tirupati, Dispensary in Bairagipattada.

In addition, the following medical facilities are also available in Tirupati viz, Sri Venkateswara Institute for Medical Sciences - A superspeciality hospital, Balaji Institute of Surgery, Rehabilitation & Research for the Disabled, Sri Venkateswara Poor Home, Sri Venkateswara Ayurvedic College & Hospital, Sri Srinivasa Ayurveda Pharmacy. Pilgrims are given free medical aid at the Aswini Hospital near Seshadri Nagar in Tirumala. Twenty-four hour medical assistance is provided to pilgrims all along the footpath from Alipiri to Tirumala.

The first and foremost responsibility of the Health and Sanitation department is to clear the waste of 35 - 45 tonnes which gets accumulated daily on Tirumala hills. It is one of TTD's priorities to ensure hygienic conditions both at Tirumala and Tirupati. The quality of food supplied at all TTD canteens and private hotels at Tirumala is constantly checked by food inspectors. The Quality Control Department operates with a fully-equipped laboratory at Tirumala, to ensure the supply of pure drinking water, and the use of good-quality provisions. TTD also takes measures to prevent the spread of contagious diseases in Tirumala and Tirupati.

2. METHODOLOGY

A) Objectives of the Study

The overall objective of the research was to capture devotees' perception, preferences and satisfaction with various services and facilities provided by TTD.

More specifically the research will look into the following aspects:

1. To measure satisfaction with respect to Healthcare facilities provided by the TTD Management.
2. To design information systems capable of providing the healthcare facilities in a more efficient manner for the purpose of planning and managing the information systems (IS) / Information Technology environment.

B) Sampling Design

Spread of sample, selection procedure are far more important than size of the sample. Hence this criterion is adopted for selection of sample. A multi stage stratified sampling method was adopted for the research study. This design has ensured adequate spread of sample and proper representation of the universe.

C) Total sample size

In order to elicit the views of the devotees a sample of 3000 was arrived upon after consultation with TTD officials. The next step was to distribute the sample of 3000 devotees into the following three stratas: Devotees at Tirupati / Tirumala; Devotees at other temples across the country (who are aware of Tirupati) and Donors to various schemes of TTD (Rs 5 lakh & above). A detailed sampling plan and distribution was worked to capture the perceptions and experience of the above categories of respondents.

D) Data Collection

Data relating to devotees perception was collected through three Questionnaires-a) Questionnaire for devotees at Tirupati/ Tirumala b) Questionnaire for devotees at other major temples across country, who were aware about Tirupati / Tirumala and c) Questionnaire for donors who had donated to various schemes of TTD. Data relating secondary sources is gathered through discussions with TTD Officials and other employees. The study is basically a survey based research, which was done in four stages viz., Desk Research, In depth Interviews, Pilot Study and finally the Field work.

3. PLANNING AND MANAGING THE

INFORMATION SYSTEMS /

INFORMATION TECHNOLOGY

ENVIRONMENT FOR TTD

3.1. General information

Ward Activities: Health department is in-charge of sanitation at Tirumala. There are seven wards in Tirumala. Each ward is further divided into zones. Ward will be working in shifts. The Sanitary inspector in the ward will allot the work to ward workers for each shift.

Sample Collections: Health department is also in-charge of checking the standards of food supplied by IID and also by the other food establishments. There are two types of samples,

Informal Sample - Sample taken from IID departments and Formal Samples - Samples taken from other food establishments. Samples taken in TTD will be tested internally in the IID Lab. Formal Samples will be sent to government labs for testing. Formal samples from TTD are also collected occasionally for the purpose of External Audit.

License Issues: Health department issues trade licenses to food establishments located at Tirumala. Health Inspector will inspect food establishments and check whether foods are prepared as per the standards before issuing the license. This trade license has to be renewed every year.

Public Health Act legal cases: Any establishment which is violating the Public Health Act will be filed a legal case in the court. The shopkeeper will be prosecuted and penalized in the court.

Stores: Stores in health department will maintain the inventory of health materials. The materials used in health department are Soaps, antiseptic solutions, bleaching powder etc. Purchases will be done both by health department and marketing department. Receipts of material from marketing department are registered in the stores ledger and the balance is updated. The materials are issues to wards for its activities and balance is updated. Wards are having their own stock register to record the material movement.

Laboratory: Health department is having Laboratory to test the raw materials used in Potu and Annadanam department. Prepared foods/ prasadam/ panyarams are also tested in laboratory. The informal sample taken in Health department will be given for testing. A separate stock register is maintained for materials used in laboratory.

Birth and Death Register: Health department is in-charge of issuing birth and death certificates for the births and deaths happening in Tirumala. Health department will receive information from hospitals located in Tirumala about births and deaths. Certificates are issued to concern to people on request.

Purchases: Purchase in health department is made by three ways. It's done by, Open tender system, direct purchase from Manufacturer, Quasi government purchases. The list of materials to be purchased in any of the above type will be decided by the higher officials in TTD. Only those materials that are eligible for each type are purchased in that category.

3.2. Entry Criteria:

Sample collection from various departments Or
Public Health Act cases received Or
Material Received from Suppliers / Marketing Department Or
Request for Trade License from Shopkeepers Or
Birth .or Death information from medical institutions

3. Validation Criteria

Birth and death details should be given by medical institution to issue certificates. Trade license can be given after inspecting the shop.

4. Process Description

1. Ward Details: Entire Tirumala has been geographically divided into 9 wards. Information relevant to Wards are recorded.

2. Area Details: Each ward is further divided into areas. Each ward will have around four or five areas. This information will also be recorded. Work will be taken area wise.

3. Work Details: Work details are the activities to be performed by health department. The work is associated to each area in the ward.

4. Shift Details: The health department works 24 hours a day in 3 shifts. The information relevant to Shifts is recorded.

5. Shop Details: In order to keep track of trade license issuing and renewing the entire details about the shops are recorded.

6. Ward Work Allotments:

- Each ward will have a Senior Sanitary Inspector or Sanitary Inspector.
- Whenever a Shift begins the sanitary inspector will plan the work for the shift and informs it to the work maisteries.
- The details like date of the shift, area to be covered, Nature of the work, Number of workers involved are registered.
- In case of Malaria ward, the details of chemicals used are also registered.

7. Ward Work Feedback: Whenever a shift ends, the report of the shift or the feedback of the shift is recorded to check the work completion status.

8. Sample Collection:

- Health department will do regular inspections in the various food establishments located at Tirumala.
- The formal samples will be brought by the Health Inspector and sent to labs located at Hyderabad.
- The details like code number of the sample, name of the article, date of collection, place of collection, name of the food inspector and sent-to-lab name are registered.
- Health department will also do regular inspections in Annadanam and Potu department in TTD.
- The informal samples will be collected by the health inspector from various food establishments of TTD and sent to the lab in Tirumala.

9. Sample Collection – Results: The results of the testing done for the samples taken are recorded. The Sample code number will be used to refer the sample collected.

10. License Fees Collection: All the food establishments in the Tirumala should pay license fees to TTD through health department.

- The health department will inspect the establishment and then issue the license.
- The details like Shop owner name, address of the shop, shop name, license year, and amount paid are registered in the record.
- A receipt is given to the shop keeper for the fees paid.

11. License Approval: After 30 days of the license fees payment, the health inspector will inspect the establishment and issue the license. The status of license approval for the shop is recorded for future reference.

12. License renewals: Every year the license has to be renewed. There will be inspection every year and based upon the result of the inspection, the license will be available for renewal. The renewed year of the license is recorded in the license register.

13. PHA Legal Cases: The people who are violating the public health act are punished under this law. They will be brought to the court and accused for the offence made. The following details are registered, Date and time of offence, Name and address of the accused, nature of the offence, Section and act, date of filling, date of hearing, remarks.

14. Material Inward: The materials that are used for daily activities are received in the main stores. When a material is received it is taken into the stock with a receipts note. Each receipt note will have the reference number, date of receipt, material received, quantity received, and supplier name.

15. Material Outward: The materials are to be issued to wards for their day to day activities. The materials are issued only on requisition. Whenever a material is issued to the ward an issue note is raised. The issue note will have the ward name, issue note number, issue date, material issued, quantity issued and unit of measure. There is no financial entry involved in this transaction.

16. Interdepartmental Issues: Whenever a material is issued to other department an interdepartmental issue note is raised. The materials are issued only on requisition. The issue note will have the department name, issue note number, issue date, material issued, quantity issued and unit of measure. There will be financial entry between two departments

17. Lab Sample Collection: TTD is having its own laboratory to test the raw materials that are being used for Annadhanam food and prasadam/panyaram preparation. The samples of the material is collected by health department and brought to the lab for testing. The result of the test is sent to concerned departments and to the health officer.

18. Lab Material Receipts: To carry out testing the lab needs chemicals and glassware. These materials are purchased by the marketing department and issued to the lab. Whenever the material comes to the lab, it is entered in Material receipts activity. The details like Material, purchase order reference number, receipt number, received quantity, received value are registered during receipts.

19. Lab Material Issues: The materials are issued to the lab for testing. Whenever issue is made, an issue note is raised: The issue note will have Issue number, date, Material issued, quantity issued and unit of measure.

20. Birth Information: Health Department is in-charge of issuing Birth certificates of the concerned to the identified public on request. The details of birth will be given to health department by medical institutions run by TTD.

21. Death Information: Health Department is in-charge of issuing Death certificates of the concerned to the identified public on request. The details of death will be given to health department by medical institutions run by TTD.

22. Certificate Issues: People who want birth or death certificates have to give a request to health department. The details are verified in the records given by medical institutions before giving the certificates.

5. Exit Criteria

Issue of birth and death certificates Or
Lab report to concerned department Or
Inspection results to respective food establishments Or
Issue of trade license to external food establishments.

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