



مركز الدراسات الاستراتيجية الصحية  
CENTRE for STRATEGIC HEALTH STUDIES

## *Book of Abstracts*



A Project of the Syrian Ministry of Health Funded by the European Union  
In Co-operation with The Liverpool School of Tropical Medicine





**Ministry Of Health**  
**Minister of Health:**  
His Excellency Dr. Rida Said



**Centre for Strategic Health Studies**  
**Director:**  
Dr. Reem Akras



**Centre for Strategic Health Studies**  
**Deputy Director:**  
Dr. Raghad Takkidin



**Liverpool School of Tropical Medicine**  
**Director:**  
Prof. Janet Hemingway



**Liverpool School of Tropical Medicine**  
**Project Director:**  
Dr. Amir Hassan

## **Introduction**

It gives us great pleasure to introduce this book of abstracts of the research work conducted by the first group of Master students who graduate in November 2009 from the Centre for Strategic Health Studies of the Ministry of Health of the Syrian Arab republic.

The qualification obtained by the graduates were in one of the Master degree programmes offered by the Centre including, 'Health Systems Management', 'Hospital Management' and 'Public Health'. Graduates are exposed to the latest global knowledge and concepts through international faculty at the Centre and are expected to become the future health sector leaders in Syria. The Master degrees and the strength of their academic training ensure that the present students will be able to use their skills in Syria performing at international standards.

As part of their studies, the Master graduates of 2009 carried out in-depth research on priority health areas identified by the Ministry of Health, including; Decision making, Medical technology evaluation, Environment, Smoking, Diabetes, Cardiovascular diseases, Cancers, Quality of health services, Reproductive health, Drugs Management and Tuberculosis. The outcome of the research work is expected to help provide scientific evidence for policy and decision making for the leadership of the health sector as well as to inform the health professionals and the public with up-to-date knowledge of public health and health care. Policy-Briefing papers summarising the main findings and recommendations of the research work will be composed by the graduates, working with international faculty, and these will be submitted to senior management of the health sector and to the target relevant MoH departments as well as disseminated widely to all concerned in the public health community.

The Centre is funded by the European Union as part of the country's Health Sector Modernisation Programme. The European Union's overall support to the Syrian Health Sector is wide ranging and includes assistance to upgrade Syria's primary health facilities, hospitals and public health services, as well as helping strengthening the health sector capabilities in policy and decision making, health service financing, improved performance, better quality and management effectiveness.

The Liverpool School of Tropical Medicine, a premier centre of excellence in international health and public health systems and a long term collaborator with Syria Ministry of Health, provides the technical assistance supporting capacity building and institutional development to the Centre in the core areas of education, training, research and advisory services.

The Centre is envisaged to become the leading think-tank and driver for a sustainable health sector modernisation initiative in the longer term. The Centre ultimate aim is to establish itself as a centre of excellence and gain national, regional and international recognition.

Dr Reem Akras  
Director  
Centre for Strategic Health Studies

Dr Amir Hassan  
Liverpool School of Tropical Medicine  
Director, Technical Assistance Project

# *Book of Abstracts*

## *Table of Contents*

<u>Title</u>	<u>Name</u>	<u>page</u>
<b>Complications among Diabetic Patients registered in UNRWA, Palestine Health Centre, Damascus, Syria.</b>	<b>Tayseer Sabbagh. MD</b>	<b>1</b>
<b>Tackling waiting time in outpatient clinics at Ibn Al-Nafees hospital.</b>	<b>Tariq Al-Nabulsi</b>	<b>4</b>
<b>Evaluation of Cervical Screening Programme in UNRWA Health Centres in Damascus Area, How to Optimize Benefit and Quality?</b>	<b>Dr. Suzan Al Abyad</b>	<b>7</b>
<b>Needle Stick Injuries and Occupational Exposure to Blood Borne Diseases in Syria Curative Health Care: Case Study of Ibnnafis Medical Complex.</b>	<b>Dr. Susan Rasheed</b>	<b>10</b>
<b>Tuberculosis control: factors affecting the managerial system of DOTS in the TB training centre in Damascus city, Syria.</b>	<b>Reham Alaa Aldeen</b>	<b>13</b>
<b>Hepatitis B Vaccination and the Factors Influencing It's uptake among Health Care Workers In Al-Qunaitra Governorate Health Centres, Syria.</b>	<b>Dr. Nasser Shobut</b>	<b>15</b>
<b>Motivation and financial incentives among physicians and nurses in Damascus Hospital (semi-autonomous) and Ibn Al-Nafees Hospital (public).</b>	<b>Murad Al Masara</b>	<b>18</b>
<b>“An Evaluation of a Low Participating Village in the Syrian Healthy Villages Programme using participatory action research methods.”</b>	<b>Mazen Chamas</b>	<b>21</b>

<b>Searching ways to avoid infection risks in outpatient clinics in Damascus and Ibn-alnafis hospitals.</b>	<b>Manar Kamel</b>	<b>24</b>
<b>An Investigation into the Factors Affecting Compliance for Tuberculosis (TB) Treatment in The TB Centre in Lattakia, Syria.</b>	<b>Dr. Maher kashef</b>	<b>26</b>
<b>How can We Find the Best Way to Educate Children about Environment Protection?</b>	<b>Lucia Abazid</b>	<b>29</b>
<b>Screening for diabetes in Syria: a pilot study to explore the factors that influence people's utilisation of the diabetes screening service in health centres.</b>	<b>Khaled Al Sabouni</b>	<b>31</b>
<b>Quality of Sterilization and safety of radiation in dental clinics in public centres of Damascus.</b>	<b>Bassam Dabelah</b>	<b>34</b>
<b>Potential Impact of Introducing Semi-autonomous Hospital on Quality of Services from Patients' Perspective.</b>	<b>Bassam Shahada</b>	<b>37</b>
<b>Eye and Skin Problems from Human Contact with sea-waterIn Syrian Coastal Countries: .A case-Control Study in Lattakia.</b>	<b>Dr.Adiba Rabie</b>	<b>39</b>
<b>Risk of Obesity among School Children Aged 10-12 years in Damascus Public Schools: A School- based Diet and Physical Activity Study.</b>	<b>Iman Saleh Bambouk MD</b>	<b>42</b>

**Complications among Diabetic Patients registered in  
UNRWA, Palestine Health Centre, Damascus, Syria**

**By**

**Tayseer Sabbagh. MD**

**ABSTRACT**

**Introduction:**

Type 2 diabetes mellitus (type2 DM) is a major health problem among Palestinian refugees with a prevalence rate of 10.9% in persons aged 40 years and above. Its importance emerges from its chronic course, economic burden, and severe complications. The Complications are either micro vascular such as retinopathy, neuropathy, and nephropathy, or macro vascular such as ischemic heart disease, cerebrovascular disease and peripheral vascular disease. These complications are associated with persistent hyperglycaemia. United Nation Relief and Works Agency (UNRWA) was established in 1949 and started operation in 1950 to provide health services, education, and social services to Palestine refugees in five countries namely: Syria, Lebanon, Jordan, West Bank, and Gaza. In Syria they cover a total population of 462 Thousand Persons.

**Objectives:**

The objectives of this study are three folded: i) To determine the prevalence of cardiovascular, cerebrovascular, nephropathy, retinopathy, and neuropathy among type 2 DM Palestinian Diabetic Patients aged 30 years and above who are registered in UNRWA Palestine Health Center-Damascus (PHCD) Syria up to August 2008; ii) To evaluate the adherence to management provided to type 2 DM patients according to UNRWA guidelines and iii) To outline appropriate recommendations for improvement of quality of service.

**Methodology:**

This study is a cross-sectional study conducted in PHCD. The population is type 2 diabetic Palestinian patients aged 30 years and more who are registered in PHCD up to August 2008. There were 1388 type 2 diabetic patients aged 30 years and above who were registered in PHCD up to August 2008. Based on an estimated prevalence of CVD complication of 12% and 95% Confidence Limit the sample size was computed as 340 patients. To attain the 340 patients with an assumed response rate of 80%, the sample size was inflated to 408. The study population of 408 patients were selected by systematic sampling after stratifying for sex.

Participants were contacted and given appointments by either telephone or through relatives and neighbours or by home visits by the Non-communicable Disease nurse (NCDN). Methods used to evaluate the status of complications included:

- (i) Structured interview to collect demographic data, medical history and risk factors related to diabetes complications.
- (ii) Physical examination to detect late complications such as Myocardial infarction (MI), stroke, Congestive Heart Disease (CHD), Peripheral Vascular Disease (PVD), foot amputation, renal insufficiency, vision loss or blindness, and early complications as, Transient Ischemic Disease (TIA), retinopathy, nephropathy, neuropathy, and foot ulcer.
- iii) Review of laboratory profile during 2008 which included Fasting Blood Sugar, Post Prandial Blood Glucose, cholesterol, LDL, HDL, triglycerides, creatinin, and proteinuria.

The Data was entered and then analysed by EPI Info (3.4.3 version) programme. All the work was done by the researcher himself.

### **Results:**

Of the 408 patients, 340 patients comprised of 212 (62.4%) females and 128 (37.6%) males agreed to participate in the study. No significant difference was detected between non respondent and respondents. The mean age of subjects was  $60.8 \pm 10.4$  years, patients 60 years and more accounted for 55.9%. The mean duration of diabetes at the time of recruitment and examination was  $8.5 \pm 5.8$  years; and 27.9% had diabetes for 10 years or more. There was no significant difference between males and female when compared for age and duration of disease. Males were more educated than females ( $p=0.00001$ ;  $X^2=15.4$ ), and the level of education decreased with age ( $p=0.0001$ ) in both groups. Current smokers were 21.8% with males being 3.2 times more than females ( $p=0.0001$ ;  $X^2=37.4$ ) while ex smokers were 15.9%. Positive family history of previous CVDs was found in 34.1%. Obesity ( $BMI \geq 30$ ) was more prevalent among females (74.6%) as compared to males (34.4%) ( $p=0.0001$ ;  $X^2=53.4$ ) and hypertension was found in 85%, it was uncontrolled in 61.6%. Creatinin and microalbuminuria were found high in 1.4%, and 18.8% respectively among females as compared to 1%, and 30.3% respectively among males. High Cholesterol, high LDL, low HDL and high triglycerides were 47,6%, 63.4%, 45,9% and 64,6% respectively among females as compared to 28,3%, 47%, 37.3% and 55% respectively among males.

Glycaemia control was found in 46.8%. Approximately three quarters of patients were treated with oral hypoglycaemic agents and one fifth with insulin. Adherence to case management of type 2 DM patients according to UNRWA Non Communicable Diseases (NCD) Guideline was observed in 65.9%. Among early complications, angina pectoris was found in 18.5%, TIA in 0.9%, Microalbuminuria in 23.2%, polyneuropathy in 38.2%, and retinopathy in 29.9%.

Late complications were common among studied patients with 25.6% of them had at least one of the late complications. The predictive risk factors for the presence of any complication were long DM duration ( $p=0.03$ ), male sex ( $p=0.01$ ), macroalbuminuria ( $p=0.002$ ), and previous smoking ( $p=0.0005$ ). MI was found in 17.8%, CVA in 5%, vision loss in one or two eyes in 2.1%, renal insufficiency in 1.2%, and above ankle amputation in 0.3%.

### **Research Implications:**

The findings of this study suggest a high proportion of late complications. This study found significant association between the complications and risk factors that are preventable, amenable to intervention, and modifiable, such as smoking, physical inactivity, Dyslipidemia, and hypertension which found to be a common co-morbidity among type2 diabetes patients of this study; the control rate of hyperglycaemias and hypertension are low. There is good evidence that risk factors associated with DM could lead to adverse outcomes in patients. As a consequence of the overall picture of type2 DM complications in this study which suggests the seriousness of the problem, it is very essential to focus on reduction of risk factor and provision of prompt more aggressive intervention and more appropriate management to improve the control of hyperglycaemia and hypertension to diabetes patients served by UNRWA and improve quality of service.

**Tackling waiting time in outpatient clinics at  
Ibn Al-Nafees hospital  
by  
Tariq Al-Nabulsi**

**ABSTRACT**

**Introduction:**

The Ministry of Health (MoH) is the major healthcare provider in Syria. It has taken many steps to develop and reform the health sector due to increasing demands on health care services. One aspect of health care reform is improving the quality of public health services. Waiting time for health care is a major component of improving the quality of health care for any facility.

Long waiting time represents the main complaint of patients when it becomes chaotic. Moreover, Waiting for treatment might affect both patients and the health care providers in many aspects such as the utilization of that facility, economic impact (waste of resources) and decrease satisfaction for both patients and health care provider. This study tries to tackle this issue. It was conducted at the outpatient clinics in Ibn Al-Nafees Hospital in Damascus and eight clinics that belong to this public hospital were involved in this study.

**The aim and objectives:**

The aim of this research was to identify a strategy to reduce waiting times at outpatient clinic at hospitals. The objectives were:

- To identify clinics with the longest waiting times.
- To identify reasons and causes for long waiting times and potential opportunities for improvement.
- To devise a strategy to reduce waiting times with staff participation.

**Methods:**

Firstly, the Critical Incident Approach (CIA) was used to define the quality dimensions of the services which interpret the patients' needs from that services to see whether waiting time is one of the service quality dimensions or not. Secondly, an exit interview from the patients' perspective was used to identify clinics' waiting time and clinics with longest waiting time. Thirdly, Patients Flow Analysis (PFA) was used to measure clinics' waiting time and to identify bottlenecks in the treatment process. Fourthly, Focus Group with staff participation (nurses) was

used to identify the possible causes for prolonging waiting time from the staff point of view and to suggest the possible solutions to reduce waiting time in clinics.

### **Results:**

It was found, by using the Critical Incident Approach (CIA) in a pilot study, that waiting time was one quality dimension. Furthermore, it was the second demand of patients. Then an exit interview with structured questions was used with patients to identify clinics' waiting time after that the involved clinics were arranged according to its waiting time from the longest to the shortest waiting time. The Neuro Clinic had the longest waiting time and the ENT Clinic had the shortest waiting time. Later on, three clinics were selected according to their waiting time to be involved in the PFA and Focus Group.

The Patient Flow Analysis (PFA) was implemented in the selected three clinics to identify inefficiencies in the process, the possible causes for prolonging waiting time and measure the accurate waiting time in these clinics. The possible causes were patients' coming time, doctor's delay and clinics' starting time.

A Focus Group with nurses was conducted and possible causes for prolonging waiting times from the staff point of view were: patients come at the early morning, sometimes doctors do not come on time, not enough places for clinics, starting time of some clinics, no incentives for staff and insufficient number of doctors. The suggestions for improvement were: simple appointment systems, a system for supervision, postpone the registration for clinics that start late, incentives for clinics that reduce waiting time and put signposts to tell the patients about the starting time for clinics.

### **Conclusion and recommendations:**

This study has concluded that waiting time is a very important issue and should be addressed by the authorities in order to increase the patient's satisfaction as is suggested in this study. The aim of this study was to identify a strategy to reduce waiting time in outpatient clinics and it has concluded that implementing one procedure might not solve the problem in all clinics because each clinic has its characteristics.

- This study has, identified clinics' waiting time and the reasons for such differences are related to the conditions that each clinic had with regardless to the number of patients per day that each clinic has.

- . Reasons and causes for prolonging waiting times were discussed in this study and it was concluded that there are some main causes that affect waiting time such as, clinic's starting time, doctor's delay and patients come at the same time.
- . A strategy was devised to reduce waiting times with staff participation. It was concluded that implementing some basic measures such as: simple appointment system for patients, good implementation for the referral system, a system for supervision, give incentives for staff who reduce waiting time in their clinics and postponed registration time for some clinics.

The MoH in Syria should pay more attention to waiting time issue in public hospitals and to increase the awareness about the waiting time issue among the health care workers and its effect on health care facilities. More investigation is recommended to determine how waiting times affects patient satisfaction with the system of care and satisfaction with provided health care. Finally, it is recommended for the hospitals to establish standards for acceptable waiting time, which might not be the same for all clinics but it depends on the type of the clinic and these standards will be seen as target for all hospitals and have to be reached.

**Evaluation of Cervical Screening Programme in  
UNRWA Health Centres in Damascus Area,  
How to Optimize Benefit and Quality?**

**By  
Dr. Suzan Al Abyad**

**ABSTRACT**

**Background:**

United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) is a relief and human development agency providing basic education, healthcare, relief and social services and emergency aid to registered Palestine refugees living in the region. Since 1950 UNRWA has been the main health care provider for Palestine refugees through its own programmes.

In 2006, UNRWA began implementing a new programme for prevention and control of cervical cancer. One of programme aims was to provide facilities for early detection of cervical cancer through opportunistic screening activities targeting women who ever married, aged 35-45 years, and accessed to UNRWA health centres (HCs) using Papanicolaou (Pap) smear as screening test.

**Aim and Objectives:**

This study is the first that attempts a structured evaluation of performance of screening activities aiming to develop recommendations to improve the programme through achieving the following objectives:

- 1- To evaluate performance of cervical screening programme in UNRWA HCs in Damascus Area during the period 1/1/2006– 30/6/2008.
- 2- To determine key factors that affect quality of the programme.
- 3- To propose recommendations for improving quality of service.

**Setting and participants:**

All cases among the target group registered in the cancer screening registers of fifteen UNRWA HCs in Damascus Area during the study period were included, while staff members responsible

for performing Pap smear were voluntary observed while doing this service for collecting data on quality of performance of Pap smear.

### **Methodology:**

The study method was quantitative, descriptive retrospective one describing the procedures used in the programme carried out in the involved HCs during the mentioned period. Four methods of data collection were used to achieve the mentioned objectives:

- 1- A structured form for collecting data on screened cases.
- 2- An overt systematic observation using a checklist to evaluate quality of performance of Pap smear.
- 3- SWOT analysis for the programme and study findings.
- 4- A workshop on study results to propose recommendations for improving quality of service.

### **Results:**

The coverage of screening test among target group was 15.7%, the majority of screened cases (54.4%) were in age group 35-39 years and (45.6%) were in age group 40-45 years old. The incidence rate of positive screening test was 2.7%, but it differed by age groups, HCs, date of performance, and the pathology laboratories performing the reading. The incidence rate was 2.1% for LSIL, 0.5%, for ASCUS and 0.05% for HSIL. The action that was requested by HCs staff for positive cases followed technical instruction of either UNRWA (colposcopy) or WHO (repeat Pap smear) in 77.7% of positive cases, while 3.7% were advised to have cryo therapy, 1.9% was referred to surgical treatment and no further action was requested in 16.7% of positive cases.

No action was requested for 60% of the ASCUS cases as compared to 6.8% of the group of LSIL/ HSIL, the difference was found statistically significant (OR= 20.5, P= 0.0005).

The positive screened cases that were followed up represented 46.3%. There was a significant difference between follow up in the two groups of actual actions (colposcopy, and repeat Pap smear), the group that investigated by colposcopy were more exposed to be not followed up than the other group (OR= 11.3, P= 0.04).

The positive predictive value of Pap smear was 33.3%. This result based on three cases only which is too small sample size to depend on. As for the evaluation of staff members while performing Pap smears and according to the total score for each participant, 68.2 % of them were classified in the moderate category, while 22.7% were weak and only 9.1% were in the good one.

By conducting SWOT analysis of the study findings in context of the strategy of this programme and available resources, the following were considered as key factors affecting quality of the programme: • The availability of infrastructure and sufficient staff in most of UNRWA HCs.

- The Low coverage of screening test and the lack of awareness about cervical screening among target population.
- The lack of good quality performance of Pap smear and lack of technical knowledge among involved staff.
- Poor follow up of positive cases.
- Lack of clarity in programme's technical instructions in relation to the pathological classification of Pap smear results and follow up of the positive cases which does not strictly follow the WHO instructions.
- There is no quality control on results of pathology.

**Conclusion:**

UNRWA in Damascus Area has the infrastructure, manpower, and the capacity in its health services to organize and sustain this programme. But, in order to make it successful, UNRWA has to focus on increasing the coverage rate of screening among the target group and to assure follow up and treatment of positive screened cases. Also it has to train its health staff on, counselling women on the screening, performing Pap smear in a competent way and management plan of all possible screening results. It is essential to monitor and evaluate the programme through implementing health information system.

**Needle Stick Injuries and Occupational Exposure to Blood Borne Diseases in  
Syria Curative Health Care: Case Study of Ibnnafis Medical Complex**

**By**

**Dr. Susan Rasheed**

**ABSTRACT:**

**Introduction:**

Health care workers who use or may be exposed to needles are at high risk of needle stick injuries (NSI) which can lead to serious or fatal diseases such as Hepatitis B, Hepatitis C and AIDS. "Improvement of health care quality in the health sector" is of Syrian Ministry of Health research priorities, and this study deals with improvements for health service provision. The 2004 injection safety assessment and the „Focus Project“ about injection safety in preventive services achieved substantial successes and described transferring them to diverse curative services as a challenge. This project attempts to respond to this challenge by transferring this successful experience to Ibnnafis Medical Complex.

**Aim and Objectives:**

The study purpose is to define the size of the problem of NSI among Ibnnafis Medical Complex health workers, investigate their related knowledge, attitude and practices (KAP), identify NSI influencing factors, collect information on all incidents in Ibnnafis General Hospital over a period of two months, review transmission risk and published evidence for the efficacy of safety procedures and recommend appropriate means to control and prevent NSI.

**Methods:**

Quantitative and qualitative methods were combined to achieve the research aim and objectives. A total of 281 HCW of all categories answered a questionnaire to describe KAP in this setting, NSI influencing factors, precautions observed, vaccines uptake and rate of NSI occurrence. Then, in-depth interviews were conducted with 10 needle stick injured workers and 6 of the managerial staff. Literature on transmission risk and efficacy of safety measures was closely reviewed. Additionally, a prospective study over two months was undergone.

**Results:**

Of 281 HCW shared in the quantitative part, about one third were nurses, clinical experience ranged from 1-47 years. 178 health care workers (63%) were HB vaccinated. The higher

percentage of vaccination was in Ibnnafis General Hospital (68%), the lower vaccination rate was among cleaning workers (48.6%). More than 50% said they did not receive any guidelines about safe injection, 70% said they did not have any related on-job training. Most preferred periodic lectures and practical courses as the best training method. The majority (94%) knew that an NSI can cause Hepatitis B, more than 50% said they know safe injection precautions. Attitudinal questions revealed positive attitudes in general (90% said they should wear protective gloves and commitment to universal precautions help prevent blood borne diseases BBD). On practices, 39% of workers said they always wear medical gloves

CSHS NSI in Ibnnafis Medical Complex 4 Susan Rasheed while working, 70% recap needles, 60% always use safety boxes to discard needles, 192 respondents (about 70%) have sustained at least one NSI during their service. 10 HCW and 6 of the managerial staff shared in the in-depth interviews. Poor compliance with universal precautions was attributed to lack of safety measures, gaps in KAP and need to better human resource management. The prospective study revealed that NSI are more likely to happen when a worker is tired and need to recap needles.

### **Discussion and Conclusions:**

The study showed a low rate of vaccination, a high rate of NSI and substantial gaps in KAPs related to occupational exposure to BBD and workplace hazards among health care workers in Ibnnafis Medical Complex. In general, the quantitative part results were consistent with research results in adjacent countries. In-depth interviews with staff and managers revealed the lack of appropriate system to prevent and manage NSI. The prospective study although limited could help identify some of the sustained NSI influences and reveal a deficiency in NSI management. This research aimed at improving knowledge, attitude and practices among Ibnnafis Medical Complex workforce. Beneficence of all health workers in this facility was our desired impact. Other studies in different settings may be useful. Further research on the reasons why participants were not interested to report NSI is needed. An observational component if combined to the research methods will be useful to detect gaps more accurately.

### **Policy implications:**

This study generated data about NSI rate and circumstances, health workers KAP on occupational exposure to BBD. Additionally it attempted to recommend feasible solutions. These findings may be used for planning training courses on universal precautions and proper

disposal of medical wastes. Furthermore, they can be used in planning and implementing a safety promotion programme in these services.

**Recommendations:**

NSI can lead to serious and fatal diseases such as Hepatitis and AIDS. Preventing the needle stick injury is the best approach to preventing these diseases. Improved training, clinical audit, clinical guidelines, enhanced reporting, improved data collection, safety measures, immunisation, post-exposure prophylaxis, better safety syringe design, reviewed legislations and sanctions, continuous supervision, more attention to cleaning staff and switching from blame to improvement are recommended to prevent NSI and its consequent complications.

**Tuberculosis control: factors affecting the managerial  
system of DOTS in the TB training centre  
in Damascus city, Syria**

**By  
Reham Alaa Aldeen**

**ABSTRACT**

**Introduction:**

A lot of health research worldwide has been conducted to study serious issues relating to the problems of TB and DOTS implementation. But, few of those studies have dealt with the administrative area in the institutes where the DOTS was applied. This study has been conducted in order to define the managerial issues that may become problems or obstacles during the implementation of the DOTS. It was carried out in the TB treatment centre in Damascus city and the TB department in the Ministry of Health, Syria. This study could be an attempt to outline the major administrative problems from the perspective of the health workers and two managers in the programme.

**Aims and objectives:**

**Aim:** the aim of this study is to investigate factors affecting the managerial system of DOTS in the TB treatment centre in Damascus in order to ensure the efficiency of this program from the managerial point of view.

**Objectives:** the objectives of this study are:

1. To identify problems in the human resources, the reporting system and patients' affairs from the perspective of the staff.
2. To identify problems in the organizational structure, the reporting system and patients' affairs from the perspective of the head of the centre.
3. To define obstacles in the reporting system from the perspective of the concerned people (people who are in charge of the TB program) in the TB department in the MOH.

**Methods:**

This study was a qualitative one. The study used one main qualitative method which was the interviewing. Twenty three semi structured interviews were carried out with all of the health

workers in the TB treatment centre in Damascus city and two interviews in the TB directorate in the ministry of health.

**Results:**

According to the participants, three main themes and nine Sub themes emerged from the data analysis. The three main themes were “human resources”, “reporting system” and “patients’ affairs”.

**Conclusion:**

The managerial system of the DOTS programme in the TB centre in Damascus seemed to be influenced by factors relating to the problems in the previous mentioned three themes: Human resources: the lack of the financial incentives, the absence of supporting facilities for the female workers, the insufficient numbers of employees in some departments, the need for more training courses and low level of safety provided during the work. As for the reporting system the main features were: the depending on the usual mail in the reporting system and the absence of the electronic net that can connect all of the concerned health centres, directorates, departments and the MOH with each other. That always caused a delay in receiving reports in the MOH. Another problem was the uncompleted reports that arrived to the TB department from the peripheral levels In the Patients’ affairs area: there were some factors that increased the patients' numbers attending the centre, creating additional work pressure on the health workers. The factors were mainly related to some problems in the accessibility of the health service, the low level of public awareness about TB and associated social and cultural considerations. It is hoped that this research and its findings will provide some insight into the managerial problems thorough the experiences of the staff and perhaps prompt further research into an area that has largely been left untouched.

# **Hepatitis B Vaccination and the Factors Influencing It's uptake among Health Care Workers In Al-Qunaitra Governorate Health Centres, Syria**

**By**

**Dr. Nasser Shobut**

## **ABSTRACT**

### **Introduction**

Hepatitis B virus infection is a serious global health problem. It is the 10th leading cause of death worldwide. The World Health Organization (WHO) estimated that hepatitis B infection results in more than one million deaths every year globally. From the Syrian perspective, the prevalence of hepatitis B chronic carriers was estimated 5.68% in 2004.

Health care workers are considered among the high risk groups of contracting hepatitis B virus infection. To our knowledge, no study has been conducted on hepatitis B vaccination among health care workers in Syria prior to this study. With the availability of hepatitis B vaccine since 1982, the incidence of hepatitis B virus infection and its complications has reduced; therefore, most of health authorities recommended that all health care workers should be vaccinated against hepatitis B virus infection.

### **Aim:**

To explore/investigate hepatitis B vaccination and the factors influencing its uptake among health care workers in Al – Qunaitra governorate health centres, Syria.

### **Objectives:**

- To determine the hepatitis B vaccination levels among health care workers in Al-Qunaitra governorate health centres.
- To determine the levels of knowledge, attitude, perceptions and their effect on hepatitis B vaccination uptake among health care workers in Al-Qunaitra governorate health centres, Syria.

### **Study design and methods:**

The study was a cross - sectional survey in design, based on the elements of the health belief model and on the K.A.P (knowledge, attitude, practice) levels. The study used peer-reviewed

pilot tested, anonymous, structured interviewer-administered questionnaires. One person (researcher) through face-to-face interviews conducted all the questionnaires.

Demographic data were analyzed in terms of frequencies and percentages. Chi-square significant test was used to determine the relationship between demographic data and vaccination status. Means of independent variables were calculated. Independent variables association with vaccination status was analyzed by using univariate logistic regression model, and forward stepwise logistic regression model was used to determine the most important predictors of all variables for vaccination. Results were obtained by using SPSS version 16 and analyzed in terms of OR, 95% CI, and P-values. Barriers for vaccination were identified, and listed in tables showing their frequencies and their relations to occupation.

### **Settings:**

All the interview - administered questionnaires were conducted at the participant's work places (health centres).

### **Study participants:**

A total of (906) health care workers in Al- Qunaitra governorate health centres who have a direct contact with patients or contaminated materials were included and divided into six groups according to their level of education and level of risk exposure ,

- Physicians
- Dentist
- Nurses/Midwives
- Laboratory Technicians
- Sanitation workers/Ambulance drivers.
- Radiology/physical therapy/pharmacy technicians

A study sample of 272 participants was decided by the power-calculation using Epi-Info 3.5.1, and stratified random sampling was used to decide and to select each group participants.

### **Results:**

Health care workers vaccination level was 52.9 % with participant's response rate of 100%. Groups vaccination levels were as follow: physicians 52.6%, dentist 92.9%, nurses/midwives 60.0%, laboratory technicians 52.4 %, Sanitation workers/Ambulance drivers (Sanitation / Ambulance drivers) 20.6% and radiology/physical therapy/pharmacy technicians 34.1%.

Significant demographic variables in relation to vaccination included age group  $p=0.036$ , level of education  $p=0.000$ , and occupation  $p=0.000$ .

All independent variables had significant association with vaccination. The most important predictors for vaccination were attitude, perceived threat, and perceived benefits. Means (score/full score) of independent variables were all low except for perceived severity, (attitude 3.1/6, knowledge 9.8/16, practice 3.0/8, perceived susceptibility 3.9/8, perceived severity 5/6, perceived threat 8.9/14, and perceived benefits 3.4/4).

Knowledge levels particularly about hepatitis B virus transmission and contagiousness were low, which had affected the levels of perceived susceptibility and consequently perceived threat. The most frequent barriers for vaccination were, "It just did not happen" (32 participants) followed by "I am at a very low risk" (27 participants).

The most frequent suggestion by participants was lecture and courses to improve knowledge. Association between vaccination and the geographical distribution of health care workers (urban/rural) was significant  $P=0.029$ , with urban vaccination level of 56.6% and rural health care workers vaccination level of 47.8%.

### **Conclusion:**

This study results showed that there is low level of hepatitis B vaccination among health care workers, partially due to barriers such as not having the time for vaccination, forgetting to get the next shot, and unavailability of the vaccine. Other reasons were low levels of perceived threat due to poor perception of risk and susceptibility, and negative attitude toward hepatitis B vaccine. Low levels of perceived susceptibility, perceived threat, and negative attitude were probably due to the significant low levels of knowledge about hepatitis B virus transmission and contagiousness.

Educational courses and seminars about hepatitis B virus infection, especially modes of transmission, should be conducted equitably to improve health care vaccination level. Vaccine, brochures, posters should be provided to health centres, and health care workers should be reminded of their next dose and the post vaccination serologic test.

**Motivation and financial incentives among physicians and nurses in  
Damascus Hospital (semi-autonomous) and Ibn Al-Nafees Hospital (public)**

**By  
Murad Al Masara**

**ABSTRACT**

**Introduction**

This is research about the effects of incentives given to staff under health sector reforms in Syria. The study compares key motivators for improvement in hospitals (that adopted the semi-autonomous scheme under the reform) and the public hospitals. The rationale of the topic is based on the fact that human resources for health plays a crucial role in improving health care services. Low motivation of health workers is one of the challenges in developing countries where human resources lack effective incentives to improve their performance. Strengthening Health systems in developing countries is a serious need to be able to achieve the Millennium Development Goals but the main constraint for that is the absence of adequately trained and motivated health workers. The health sector in Syria suffers many problems such as, low economic efficiency, great waste of resources, low actual productivity, poor quality of the government health services, bureaucratic inflation, and lack of administrative specializations. So, within this context, it is very important to know what motivates the staff in both public and semiautonomous hospitals. This helps manager and planners to set health policies.

Therefore, this **study objectives are:**

1. To identify the main motivators and de-motivators for staff in the selected hospitals in Damascus city.
2. To compare staff motivation between outpatient clinics in Damascus Hospital (semi-autonomous) and Ibn al Nafees Hospital (public).
3. To evaluate the incentives scheme from the staff' perspectives after three years of implementation in Damascus Hospital.
4. To make recommendations based on findings that may help managers and decision-makers for setting health policies.

In order to do this study, quantitative and qualitative approach was used. A quantitative face to face semi-structured questionnaire was used to get information on incentives from the staff (doctors and nurses) in out-patient clinics in both hospitals. The same questions were asked

about the motivation factors. To assess the changes on incentives scheme after the reforms, additional questions were asked to participants in Damascus hospital. Also, semi-structured interview was conducted with key managers to justify the findings and to evaluate the incentives system at Damascus hospital by exploring the advantages and disadvantages and the impact of this new policy on the workers, patients and the hospital.

Among the key results, the study showed that the main motivators for doctors and nurses were related to salary, working condition and good allowances and incentives. There were differences in what motivates doctors and nurses between both hospitals. Salary was the key motivator for doctors and nurses in both hospitals. The level of motivation was low in both hospitals but it was more pronounced in Ibn Al-Nafees Hospital (the public hospital) as well as, participants showing low satisfaction with transportation, training courses, supervision and the relationships with managers in both hospitals. Results also showed that doctors were more satisfied with the incentives scheme than nurses in Damascus Hospital. Many nurses and some doctors considered that the incentives are little, unfair and there is subjectivity in distributing the incentives, the others indicated that the incentives have had an important role in improving the workers performance and the quality of health services.

The research concluded that motivators and demotivators differ from one hospital to another and from doctors to nurses. But, as expected, there was consensus that the main motivator and demotivator for all participants in both hospitals were related to salary. So, for managers, Herzberg model could be a useful tool for identifying factors that motivate workers in their specific context to set the suitable human recourses activities and effective strategies to address the motivation problems.

Although financial incentives are a very important factor for workers motivation, many considerations should be taken in to account in implementing reforms such as, fairness, adequate incentives, objectivity and transparency in distributing incentives. These issues require a qualified and effective management. In addition to that, financial incentives alone is not enough for successful motivation, but other non financial factors such as, opportunities for training and personal development, supervision and good working conditions are very important factors and should be given more attention. It is very important to establish an effective human resource department and quality resources unit to deal with staff needs, motivation and

performance. It is expected that this study will be useful for health policy makers to enhance the formulations and implementation of health reforms in the country.

**TITLE OF PROJECT:**  
**“An Evaluation of a Low Participating Village in the Syrian Healthy Villages  
Programme using participatory action research methods”**  
**By**  
**Mazen Chamas**

**ABSTRACT**

**Introduction**

This research paper is about the experience of a participatory action research (PAR) project in Alkoufrain, a healthy village in the Rural Damascus Governorate in Syria, using Photovoice and drawing research-techniques mainly. This study aimed to explore the barriers to public participation in Alkoufrain, the first village in the healthy villages program (HVP) in Syria from the population’s viewpoints, and ways to tackle them. The research developed participants’ recommendations to the HVP management body in order to encourage further dialogue and action to reawaken and sustain the development journey in this village.

**The research was undertaken in three phases:**

1. A drawing technique was used with all the volunteer community representatives (CRs) [33 females] working in this village, using stationeries and colors, to express their visions of the HVP points of success in their village, the possibilities of improvement for the population's participation, prioritizing, ranking the village's need , and developing their recommendations.
2. Photovoice was carried out with 12 volunteer CRs, by facilitating them to photography taking in their village conceptualizing the photos, discussing, prioritizing, ranking them and developing recommendation messages from the discussion.
3. Photo and drawing narrative technique was carried out with a convenient sample of the population and some respondents of the development council. Mainly by reflecting and elaborating on the results of the previous two phases of the methodology.

Follow up interviews with key people in the HVP in this village were conducted during all three phases to illuminate the emerging results and clarify points about the history and the running of the program in this village. These stages resulted in the prioritized following village needs in brief:

- The urgent need for a solution, preferably a strategic one, to irrigation and potable water problems;

- The urgent need to keep females in education and reducing their suspension to their studies due to very early marriage, either by educating the males and trying to change their attitudes or by combining the efforts of the media and changes to government policy.
- The need for building a fence for the kindergarten, and including it in the plans of the ministry of education;
- The need for improvement in high school inclusion regulations for rural developing areas to fit development requirements, and for providing all possible kinds of high schools to the village students on the village land on the spot run, and working on improving the attitude toward studying on the long term.
- Enforcing the decisions of inclusion for the students with special needs in the schools' system especially in developing areas.
- The need for useful courses: Those support the weak students in some parts of the curriculum, and courses that develop useful skills which are needed in the actual labor markets.
- The obvious need for intersectoral collaboration to achieve these actions.

The most successful stories residents reported from Alkoufrain were about the return of older people to education, the community school, and the health center projects.

The main managerial recommendation is the need for direct communication between the HVP management body and the population to eliminate the possibility of raising any false expectations or mis-understanding about the capacity and the performance of the HVP central management; that will reveal the HVP need for more authorities and capacity to be able to lead an active intersectoral collaboration ISC.

In addition, communication should be interactive to allow both sides to understand the position depending on facts and events - to agree that mutual steps should be taken to improve the relationship and to resolve any precipitating problems from the previous period, and revive the HVP.

Moreover, new initiatives and projects based on a more in-depth understanding of the village population's situation and needs are needed to regain the population's interest in the project, rebuild trust and foster mutual collaboration to revive the program. Responding to the village's

most urgent needs would be one of the best first steps. For example, participatory plans to dig a tunnel to import water from

**Searching ways to avoid infection risks in outpatient  
clinics in Damascus and Ibn-alnafis hospitals**

**By  
Manar Kamel**

**ABSTRACT**

**Introduction**

In spite of the advance in the health system, patients in hospital are still at risk of contracting infection during healthcare service delivery. Many nosocomial infections are caused by pathogens transmitted from one patient to another by way of health care workers (HCWs) who do not practice control measures such as use of hand disinfection, glove use etc. Ignorance of the protective procedures of healthcare associated infection could cause enormous costs to the patient , literally it can be a matter of life and death - the hospital, the Ministry of Health (MOH) and the country. In Syria, MOH was aware of that danger, so decision- makers set a policy, plans and instructions to control such infections. Infection control (IC) was defined by MOH, as prevention of transmission of other diseases during health services delivery or as a sequence of it. IC is very imperative in all hospital wards, but in the present study the focus is healthcare workers of outpatient clinic. The study was conducted during the period from 30th January 2009 to 28th April of the same year in outpatient clinics of two hospitals: Damascus Hospital which is semi-autonomous and Ibn-alnafis Hospital /,a governmental hospital.

**Aim:**

To investigate knowledge, attitude and practices among staff in outpatient clinics about infection control in the two hospitals. Design and Method: It is a cross sectional study with a mixed-methods design, a combination of quantitative and qualitative methods, to enable us to handle all dimensions of the research problem. The quantitative method is a structured interview so a questionnaire was administered to all categories of outpatient clinic HCWs to assess their knowledge, attitude and practice (KAP) on IC. A scoring system was devised to grade those (KAP) score. The qualitative method is a structured observation of infection control practice of staff and facilities using a checklist to avoid a researcher bias. A workshop or a group meeting conducted with staff to identify gaps and ways to bridge them.

**Results:**

A Directorate of Management Development (DMD) and quality in MOH has a quality office which is responsible for healthcare services quality improvement in Syria, consequently for infection control as it is regarded an important aspect of quality. By reviewing knowledge scores of both hospital staff, it was found that 57% of Damascus Hospital (DH) and 64% of Ibn-alnafis Hospital (INH) staff have poor knowledge, while 3% of DH and 6% of INH have good knowledge. It was noticeable that most staff (81%, 71% in DH and INH respectively) who did not receive any orientation have poor knowledge. Most staff have good attitude since 77% of DH staff and 73% of INH staff have good attitude, while 3% of staff of both hospitals have poor attitude. Concerning practice scores, it was demonstrated that 23% of DH staff and 12% of INH staff have good practice, while 36% of the first one and 49% of the second one have poor practice. There was no significant differences in knowledge, attitude and practice between the two hospitals were proved.

Observations of both hospital facilities revealed that IC supplies were almost sufficient, but separation of patients with communicable diseases from other patients is not applicable and the use of disposable linen is available just for bandage. In DH clinics, hand disinfectant dispensers were available with written instructions as a wall poster, only 20%, 23% of staff in Damascus and Ibn-alnafis hospital respectively washed their hands after each contact with a patient. Conclusions: MOH in Syria introduced policy and plan which concern is quality in general and infection control in specific, so it created a special directorate for healthcare services quality called DMD and adopted infection control as one of the important element of the quality.

There were no significant differences between a semi-autonomous and a governmental hospital in staff knowledge, attitude and practice on IC. Although DH had an infection control committee and training courses but most of the interviewed staff were not aware about the existence of IC rules or manual. Practice observation demonstrated low compliance to hand hygiene in spite of the existence of functioning and conveniently location sinks and sufficient supplies. Therefore, continuous education programs would be a cornerstone of the retention of staff knowledge, attitude and practice in addition to strict supervision and follow up of HCWs during work. Finally, we have not to forget that suitable reward of good practice will help in better compliance to infection control guidelines.

# **An Investigation into the Factors Affecting Compliance for Tuberculosis (TB)**

## **Treatment in The TB Centre in Lattakia, Syria**

**By**

**Dr. Maher kashef**

### **ABSTRACT**

#### **Introduction**

Tuberculosis (TB) remains an enormous and growing global health problem especially in developing countries. Globally, there were an estimated 9.27 million incident cases of TB in 2007, most of them were in Asia (55%).

This is an increase from 9.24 million cases in 2006, 8.3 million cases in 2000 and 6.6 million cases in 1990 (WHO, 2008). Part of the reason for failing to achieve a more rapid reduction in tuberculosis incidence, even though the means to do so are well established, widely available, and embodied in the internationally recommended directly observed treatment short course (DOTS) strategy, is patient compliance. However in developing countries like Syria, there is little information about the factors that can predict the compliance within TB patients.

#### **Aim and Objectives:**

This study aimed to investigate the factors influencing patient completion of tuberculosis treatment and to provide guidelines for improving the management of the TB treatment programme. The objectives of the study were: first, to identify problems in treatment delivery that affect patient compliance in Lattakia Governorate from the perspective of the health professionals who run the programme; second, to identify barriers to compliance from the perspective of patients who have defaulted or failed to complete their treatment and third, to propose guidelines for effective intervention where appropriate for managing TB treatment.

#### **Methods:**

Thirty semi-structured interviews were conducted in 6 primary health care centres which provides TB treatment services in the governorate. Twenty two interviews were conducted with patients, 12 men and 10 women aged 18 to 59 years and 8 with health care workers who carry the TB treatment process (6 nurses one from each center; one specialist in TB program in Lattakia, and one doctor from main TB Centre). Interviews were conducted with 11 patients who were still on the treatment without any interruption or defaulting, nine patients who met the

formal definition of failed and two patients who met the formal definition of a defaulter. A defaulted patient is defined as "those patients whose treatment was interrupted for 2 consecutive months or more", and a failed patient is defined as "those patients who were initially smear-positive and who remained smear-positive at month 5 or later during treatment".(WHO, 2008) The interviews took place in each centre where patients or staff belong. The interview schedule was structured to cover six main themes: (a) knowledge about TB symptoms, diagnosis and treatment; (b) interaction with health personnel; (c) social support factors; (d) financial factors; (e) treatment barriers and default factors and (f) structural barriers (psychological factors like stigma & fear, health-seeking behaviour).

The interviews were tape-recorded with the participants' consent and some notes were taken in each interview. Interview data was analysed using a five-step process of coding and thematic analysis. Two focus group discussions were used after interviews as workshops to validate and further explore information gathered in the interviews, to ensure the dissemination of the results and to establish guidelines for an effective intervention.

### **Results:**

This study was of a small scale and limited in its resources, especially financial resources, which may reduce the study's power in generalizing the factors found associated with defaulting or failing from TB treatment. These factors were mainly related to four main themes:

- a) Financial factors which included, loss of job which led to financial stress and the availability of financial support affect the compliance level;
- b) Physical & Social support factors which included the level of physical support like walking to the centre and community support, especially in the intensive phase affect the completion of TB treatment;
- c) Stigma and Fear associated with the idea that the disease is related to dirtiness, embarrassment, upset and fear which led to delay in treatment and hiding their illness, and
- d) Treatment to barriers and defaulting included: preferring treatment in the private sector, the long treatment period, stopping taking the medicine because they felt better after finishing the first stage, the side effects of medicine and the most important factor was that patients were took their medicine home for two days or more without a rigid supervision.

**Policy/Research Implications:**

This study is the first systematic exploration of the factors influencing patient completion of TB treatment in Lattakia and Syria. The study findings highlight the importance of a comprehensive TB control program in Lattakia and Syria, which includes an emphasis on the availability of good quality of treatment services, patient and community education and patient involvement in treatment. Strategies to promote the efficient awareness of people with TB and to intensify health care workers training with adequate support for them are required to address the reported difficulties with treatment delays and non-compliance in Lattakia. These strategies will require both clinic-based and community-based components, and it is vital that they should be appropriate to the local context of the programme. Finally, future research on TB patients treatment barriers in Syria is required to get a comprehensive view and it should focus on developing strategies that will enhance completion of anti-tuberculosis treatment.

## **How can We Find the Best Way to Educate Children about Environment Protection?**

**By**

**Lucia Abazid**

### **ABSTRACT**

#### **Introduction**

The purpose of this mixed methods study is to evaluate and report the characteristics of Environmental Education practices and programs in primary schools in Damascus, Syria in 2009-2010. The research includes a review of the international Environmental Education literature, a questionnaire for students in the fourth, fifth, and sixth grades, and focus group discussions and interviews with teachers. The aim of this study is to describe the current Environmental Education programs implemented in the Primary schools in Syria. The objectives are summarized with reviewing the national curriculum set by the Ministry of Education to identify standards for Environmental Education in the Syrian public schools, investigating how the curriculum is implemented at local school level and the feasibility of its approach through interviews and focus groups with teachers and questionnaires with students, and last, making recommendations and suggestions on how the environmental curriculum can be improved at school level. A total of 407 students aged from 9-11 attending four public primary schools located in Damascus, Syria participated in the study. Questionnaires aimed to investigate the students' general understandings and perceptions of the following environmental issues through the current curriculum: litter management, definition of fresh water, living things (animals), relation with nature (forests, plants, gardens), resource management, waste management, school environment, water pollution, and air pollution. 14 teachers of fourth, fifth, and sixth grades in the same four schools were interviewed at the data collection stage during periodic visits to the schools. Five key issues were identified and discussed in depth with the teachers, namely: adequacy and development of the National Curriculum; Environmental Education as a separate subject; training teachers of Environmental Education; resources and materials; and Ministry of Education involvement. Results showed that the majority of teachers were extremely concerned about having very limited Environmental Education lessons included in subjects as reading, science, and geography. They stated that these materials are not sufficient to deliver the message and develop the students' understanding about the environment and the dangers around it. On the other hand, the majority of students have good environmental knowledge about the concepts asked, but there was no relation between that

knowledge and the neighbourhood of the schools” or the grades they are in; so the sixth graders did not display more understandings of the subject than the fourth graders in all schools. That is due to the lack of the environmental education practice implemented in the schools. Consequently, the current environmental education lessons are merged into some subjects in the national curriculum and this is not sufficient to educate and raise the children’ s awareness about critical issues and concerns that are major problems in Damascus. Recommendation and suggestions to the Ministry of Health and the Ministry of Education are made for enhancing these programs to make them more beneficial and to meet the students” and teachers” needs. (471/14,163)

**Screening for diabetes in Syria: a pilot study to explore the  
factors that influence people's utilisation of the diabetes  
screening service in health centres**

**By  
Khaled Al Sabouni**

**ABSTRACT**

**Introduction:**

The prevalence of diabetes is increasing all around the world with alarmingly high rates in the Arab region, and Syria is no exception. Diabetes screening is a significant way for limiting the adverse effects of the disease or even preventing the disease in some cases. Although venous plasma glucose, which is the standard screening test set by the World Health Organization, is a simple and feasible measure, the rates of undiagnosed cases suggest that the level of compliance with this screening procedure is low in the Syrian Arab Republic. This seems strange considering the fact that the diabetes screening service is provided at health centres free of charge for those at risk.

**Aims:**

The aim of this study was to explore the factors that influence the uptake of the diabetes screening service from the perspectives of both patients and staff and investigate why some might not be willing to use it though it is provided free of charge at health centres.

**Objectives:**

- To critically examine the existing literature regarding the research subject locally and globally, and use the findings to guide the study.
- To explore and compare both staff and patient views on what influences the utilisation of the diabetes screening service (perceived barriers and facilitators) through face-to-face interviews.
- To analyse staff and patient views and extract common barriers and facilitators that may be useful for guiding potential large-scale future studies, and integrate the main points in a clear fashion into the conclusion of the dissertation, along with appropriate recommendations.

**Methods:**

Data collection for this qualitative pilot study was accomplished by conducting In-depth interviews with 12 diabetic patients and 4 staff members at a health centre in Damascus. The selected patients were all above 45 years of age as it is recommended for this age group to go for regular diabetes screening tests. The staff members included in the study were the head of the centre, a family doctor, the diabetes department doctor and a laboratory technician. The interviews were semi-structured and aimed at exploring the participants' views of the factors that facilitate or hamper doing the diabetes screening test (fasting plasma glucose) at health centres. All participant interviews took place at the health centre. Participant statements were manually recorded by the researcher, and then the statements were transcribed and analysed to produce a number of common themes which were compared with the results of available research pertaining to the topic.

**Results:**

patients showed a low awareness level about diabetes in general and the significance of screening. One group of factors that influenced their decision to do the screening test at the health centre comprised time-related issues. These issues included time wasted in transportation and waiting, limited service provision time and time constraints specific to employed or working people. Other factors were related to the quality of service. These factors included cost of service, equipment, staff expertise, as well as organisation. The staff statements confirmed the presence of an awareness issue among patients and also indicated quality issues. However, the quality-related issues mentioned by the staff could be divided into already existing issues which will be referred to as 'real', and issues the staff considered to be misconceptions or only imagined by patients which will be referred to as 'perceived by patients to be real'.

**Conclusion and recommendations:**

Patients in this study demonstrated low levels of awareness and understanding about diabetes and the benefits of screening. Other factors pertaining to time and quality of service need to be investigated on a larger scale to produce generalisable results. Therefore, it is recommended that further research be conducted on a larger scale to determine the extent of the awareness issue among the Syrian population and to assess the other issues more comprehensively. One suggested management plan is to design a health education programme based upon the health Belief Model, along with staff training programmes. Ongoing monitoring and evaluation of such

programmes are highly recommended. Finally, it is recommended to consider an 'invitation to screening' system.

**Quality of Sterilization and safety of radiation in  
dental clinics in public centres of Damascus**

**By  
Bassam Dabelah**

**ABSTRACT**

**Introduction:**

Dental professionals and nurses are exposed to a wide variety of microorganisms in the blood and saliva of the patients. These microorganisms may cause infectious diseases. Prevention of cross infection in the dental clinic is a crucial aspect of dental practice and dental clinic workers. Dentist professionals must adopt certain basic routines while practicing not only to protect themselves from cross infection but also to protect their patients, families and others.

Radiation may induce fatal cancer if no protection adopted. For dental practice, the use of X-ray is needed. Therefore protection protocols for ionic radiation should be compulsory as a common practice.

This study is about the identification of the real practice of the dentists and nurses in protecting themselves, patients and the others from potential hazards of infections due to malpractice on sterilization and the separated and scatters radiation. The objectives of the study are to:

- Investigate the practices of dental surgeon in sterilization to identify the gaps in Knowledge, and/or Practices.
- To investigate the practices of the safety from radiation machines in dental clinics
- To recommend “good practice” in infection control in dentistry in Syria.

**Study design and methodology**

The researcher conducted Non-participant observational methods and mixed methods (qualitative and quantitative approaches) study of dentists' and nurses' knowledge and practices of infection control and radiation safety procedures was conducted. These were compared with norms and standards in international guidelines. 20% of the center was chosen out of 37 public centres, from Damascus city represent all kind of the centres The first and the last center were chosen purposively with concern for the number of the dentist in each center, the rest of the center were chosen randomly after gave a number to all centres and then chosen randomly by polling the numbers.

The researcher himself observed the dentists and nurses through a checklist containing 61 items. Then a questionnaire consisting of 106 questions was given to the same staff to identify whether there was a gap in their knowledge, and/or practices or in the safety protection. Then, test had been conducting for both kinds of sterilizers to all sterilizers in the observed centres in order to monitor the validity and the capacity to each sterilizer The data was analyzed by using EPI-INFO and SPSS programs.

### **Research results:**

Knowledgeable among the dentists were greater than among the nurses however, the differences between them was not statistically significant as p-value >0.05. No significant differences between the knowledge and age, number of working years or the experience Comparison of data between the checklist and the questionnaire indicates that there were no real differences on infection control practices for the most important aspects (P-value > 0.05). However, there were some differences on the less important aspects of infection control In conclusion there was some evidence of consistency between participants responses to the questionnaire and observation, but less consistency on less important aspects of infection control. The main findings are:

- Two centres out of eight did not provide the sterilizers enough time or temperature
- (88%) did not have screening questionnaire.
- (69.7%) declared that they immunized against the most dangerous infections, (12.1%) sterilize the handpiece with autoclave, (87.5%). use gloves during patient' treatments (81.8%) used the matrix band for one time, (66.7%) used the mask during patient' treatment, (57.7%) they use the same mask all the day, (60.6%) received guidelines about sterilization.
- There are only one used handpiece in all observed centres
- Most sterilizers function was good
- Two centres out of six not conduct the real practice of radiation protection although they know the real practice.
- (68.8%) reported that they did not receive any training about radiations protection (43.5%) never wear personal lead protecting. All participants did not have a film badge.
- Five centres did not have lead protection inside the walls. The research results reported all the others results

## **Conclusion**

Perhaps the main finding of this research is that cleaning of re-usable dental instruments is undertaken using poorly controlled processes and procedures for sterilization, which increase the risk of cross infection. Therefore it concluded that efforts should be done to provide the means in which clear and unambiguous advice must be provided to the dental team, especially dental nurses, on appropriate equipment, chemicals and environment for cleaning dental instruments. The current training is not appropriate, since it is not being effective as shown in this research. This suggests that training program needs to be design, and the implementation of quality assurance procedures at each stage of the cleaning process should be compulsory. Moreover, as it was found that knowledge about infection control and sterilization and monitoring of the sterilizers was inadequate to guarantee good infection control, some urgent measure should be taken soon.

Additionally, several areas of the radiographic service in public Damascus centres felt short of current recommendations on good practice. The results indicate that for minimizing any unnecessary radiation, attempts should be made to improve dentists' knowledge about radiation dose reduction techniques and safety procedures tools, by training the staff and improve the quality of services. Recommendations are made to improve the services and the knowledge, the quality of education and to establish postgraduate education.

**Potential Impact of Introducing Semi-autonomous Hospital on  
Quality of Services from Patients' Perspective**

by

**Bassam Shahada**

**ABSTRACT**

**Introduction:**

This study tries to explore Syrian experience in introducing hospital autonomy regarding the quality of services from the patients' perspective. It aims to investigate whether there is real improvement of quality of health services from the patients' perspective in autonomous hospitals in Syria. In order to reach this aim, a comparative study will be done to assess the quality of services from the patient perspective in two hospitals, autonomous hospital (Damascus Hospital) and centralized hospital (Ibn-Alnafees Hospital).

Decentralization, in its various forms, is now a common feature of reform in both developed and developing countries. Syria adopted these kinds of reforms in the process of modernization of health sector that began in 2000. One important feature of this reform was an extending the degree of public hospitals authorities. Consequently, nine hospitals received the status of a partially independent hospital through Presidential Decrees. Damascus Hospital is one of them, while Ibn- Alnafees Hospital still keeps the centralization status.

This study is based on quantitative method, which was conducted by surveying patients about some quality indicators measured in three outpatient clinics in each hospital. The quality indicators were elicited by critical incident approach. Then, the assessment tool (the questionnaire) was developed according to this approach associated with lot of tips elicited from the literature review. Thus, the patients were surveyed about the quality in the two selected hospitals by using a questionnaire. The questionnaire included 20 questions \_19 closed questions and one open question\_ about interpersonal aspect, cleanness, availability of staff, competence of staff, privacy, unnecessary procedures required by doctors, in addition to their opinions whether there is improvement in quality when it compared to the situation 5 years ago(before the autonomy was introduced in the hospital).

The sample included 270 patients who were randomly surveyed by conducting exit interviews after they have utilized any clinic of the three selected clinics (gastrointestinal, respiratory, and

orthopedics surgery clinics) in each hospital. The main finding from the survey was the huge difference in patients satisfaction perceived from both hospitals. Around three quarters of patients in Damascus Hospital rated their satisfaction over than 70%, while only one quarter of patients in Ibn-Alnafees Hospital rated the same.

Moreover, 49.5% of patients in Damascus Hospital considered that quality of the hospital is the same or better than the quality in private clinics, while only 17% of patients of Ibn-Alnafees Hospital considered the same. Furthermore, in Damascus Hospital 89.7% of patients considered that quality is today better than it used to be 5 years ago (before introducing autonomy to this hospital), whereas 76.9% of patients in Ibn- Alnafees has reported no differences perceived in quality during the last 5 years. Also, the majority of patients in Damascus H. (about 52.3% of patients) said that the care and interest for their health of staff were improved if compared with the service given 5 years ago, whereas in Ibn-Alnafees Hospital 9.3% think that the care of staff is improved during the last 5 years. While 49.5% of patients in Damascus Hospital think that there were improvements in cleanness, only 5.6% said so in Ibn-Alnafees Hospital. The evidence from this study revealed that there are significant differences between two hospitals in terms of interpersonal aspect of staff, communication with patients, time with patient, cleanness, availability of staff, trust with the accuracy of lap tests and radiography, improvements during the last 5 years, and overall satisfaction. In addition, this study found that no significant differences in terms of waiting time, unnecessary procedures, privacy. Thus, the statement could be concluded by this study is: patients in Damascus hospital are satisfied more than patients in Ibn-Alnafees Hospital in terms of quality of care. In addition, most patients in Damascus Hospital revealed improvements after introducing autonomy to this hospital. This study provides evidence to decision makers that quality of care in the autonomous hospital is better than the quality of care in public (non-autonomous hospital) from the patients perspective.

Although it is very difficult to attribute the improvement in quality in autonomous hospital to specific factor or more, this study could prove- to some extent- that introducing autonomy (Syrian style of autonomy), which includes many features such as retaining user fees, incentives for staff, some sort of authorities to the managers, may lead to improve quality of care from the patients perspective.

**Eye and Skin Problems from Human Contact with sea-water  
In Syrian Coastal Countries.A case-Control Study in Lattakia.**

**By**

**Dr.Adiba Rabie**

**ABSTRACT**

**Introduction:**

The Sea is the engine room of the planet. It creates weather and helps to control balance of the air. The sea produces water through evaporation and rain. This water is essential for life on land, but the sea is vulnerable to upset and abuse. Moreover, if the sea is upset, all of the life on earth can be upset. Our activities destroy the life in the seas. Unless they are controlled, they will ultimately threaten our own survival.

Untreated raw sewage, including excrement, and sanitary items are dumped into the sea. Raw sewage is a serious form of water pollution as it causes disease in wildlife and bathers. A significant proportion of bathing beaches have unexpectedly high bacterial content mainly because of untreated sewage being discharged into rivers and the sea. In the short term, the health risk includes stomach upsets, eye infections and skin rashes. More serious long-term health effects include the risk of typhoid, salmonella, polio, and cancer. The Mediterranean Sea is vulnerable (as other seas and oceans) to the pollution, this study is a contribution to the worldwide endeavour to defend the environment, in particular the marine one.

**Aim:**

This study intends to highlight the environmental health problems. The aim was to elucidate potential eye and skin problems related to human contact with polluted sea- water in Syrian coastal countries with particular reference to Lattakia.

**The Objectives:**

- To identify the type of eye and skin problems related to human contact with seawater.
- To determine seasonal variation of the occurrence of the defined health problems in the coastal health centres.
- To determine the incidence of the defined problems during the summer season and compare it with the same problems in the health centres away from coast,
- To outline relevant recommendations and disseminate the results.

**Method:** The study design is a retrospective case control study .Two coastal health centres and two far away health centres were selected. The study period was the summer months (June, July, and August 2008) when the maximum human use and contact with seawater takes place in this period yearly. The medical records of patients attending the four health centres during the three months period were the source of information. A questionnaire was designed and used as a tool to review the medical records in the selected health centres. Age, sex, symptoms, and the medical diagnosis were documented. The defined health problems were compared between the coastal health centres and the far away health centres to verify the incidence of cases in the two areas.

**Cases Definition:** Two types of cases were included:(a) skin problems which may occur after contacting polluted sea water (erythroderma, rash, pruritus, allergic dermatitis, contact dermatitis, infectious dermatitis). (b) eye problems that may occur after contacting polluted sea water (red eye, swimming-pool conjunctivitis, allergic conjunctivitis, purulent conjunctivitis). The research will determine the incidence of defined problems in the summer season. The next step was to define the controls in the coastal health centres, and thereafter those participants were interviewed to verify if they had experienced contact with seawater or not.

The next step was to compare the cases that had the problems with the controls, who where defined as those who had visited the same health centres in the same period but did not have the defined health problems. After that to analyze the raw data by **SPSS** programme. .

### **Results:**

The study found that **9%** of all the patients in the coastal health center in Lattakia complained from eye and skin problems, as compared to **2.8%**among patients who visited the health center far away from the sea. After follow-up interview with some patients through face to face interview or by calling them, the percentage of those who were diagnosed as research cases after contacting with sea water was **77%** from all the participants. Regarding the controls, it could be communicated with **30** cases. The researcher and the defined nurses spend time as they could (during the period of data collection in this study) to catch any of those who visited the defined center in the last summer (relevant period) but their complaints were not eye and skin problems. After interviewing them, there were that **7** cases of them had contacted the seawater, the percentage of them **23.3%** .But the participants whom did not experience contact

with sea water were **23**, the percentage of them was **76.7%**. Therefore, the odds ratio was **11.5**. This implies that the cases had an increased risk with **11.5** of getting related eye and skin problems, compared with the controls.

**Risk of Obesity among School Children Aged 10-12 years in Damascus  
Public Schools: A School- based Diet and Physical Activity Study**

**By**

**Iman Saleh Bambouk MD**

**ABSTRACT**

**Introduction:**

Obesity has become a global epidemic in both developed and developing countries but our understanding of the problem in children is limited due to lack of comparable representative data from different countries, and varying criteria for defining obesity. This study presents some information of recent studies about trends in childhood overweight and obesity prevalence in Damascus Governorate.

Overweight and obesity in childhood are also known to have significant impact on both physical and psychological health. Most researchers consider childhood obesity as a disorder with multiple causes, but the mechanism of obesity development is still not fully understood. Environmental factors, lifestyle patterns, and cultural environment play essential roles in the rising prevalence of obesity worldwide. In general, overweight and obesity are assumed to be the results of an increase in caloric and fat intake. On the other hand, there are supporting evidence that excessive sugar intake by soft drink, increased portion size of meals, and steady decline in physical activity contribute to the rising rates of obesity all around the world. Consequently, both over-consumption of calories and reduced physical activity are involved in childhood obesity.

Middle school students are more cognitively mature and have more control over physical activity options and food consumption than elementary school students. Research showed that middle school students are most receptive and responsive to efforts directed at changing behaviour. Therefore, middle schools are good place to start from a research like this...

**Aims and Objectives**

This study has four objectives: (i) to estimate the prevalence of overweight and obesity among children aged (10-12) years old; (ii) to explore diet habits among school children; (iii) to investigate the most important forms of moderate or vigorous in school and out of school physical activities of Syrian children; and (iv) to outline appropriate recommendations.

## **Methods**

A cross-sectional study was conducted in public middle-schools in Damascus governorate during the period from March to May 2009. A random stratified sample selected four public middle schools in four different districts, two urban and two semi-urban, in Damascus Governorate. The four schools are mixed schools, so there is no gender bias was to be done. Approval was solicited from the education authorities at different levels, as well as, from the administration of schools. In each school children in grades five and six were the target population. The classes included in the study were selected randomly. All students in the selected classes have been asked to participate in the study. The study includes a survey and anthropometric measure. An indicator taken from the " Body Mass Index" (BMI) was used to estimate the obesity. No exclusion criteria for selection. Parents were sent letters to get their consent.

### **Data Collection:**

A self-administered structured questionnaire was developed on the basis of theoretical models and review of the literature. It addressed diet including frequency of vegetable, fruit, fat and sugar consumption and physical activities and its frequency inside and outside the school and barrier that hamper such activities. Participating students completed the questionnaire in the classroom, after it was read to them by the researcher.

Weight was measured without shoes, jumpers, or sweatshirts and was recorded to within 0.1 kg with portable digital scales. The height was measured using a free standing stadiometer and recorded to an accuracy of 5mm. All measurements were recorded by the researcher herself and then BMI was computed.

## **Results**

Out of the 614 selected children, 540 (88.9%) students participated, of whom 263 (48.7%) were boys and 277(51.3%) were girls. The overall prevalence of overweight and obesity was 31.1% among school children involved in this study. The overall prevalence of obesity (BMI z-score more than 95th percentile) among 10-12 year old children was 12.0% and it was 15% in urban areas 15% as compared to 8.8% in rural areas. The difference was statistically highly significant ( $P=0.002$ ;  $X^2= 4.8$ ). The prevalence of obesity was (19.6%) and (10.5%) among boys in urban

and rural areas as compared to (9.0%) and (7.7%) among girls respectively. The difference was statistically highly significant ( $P=0.002$ ;  $X^2=4.8$ ).

The overall prevalence of overweight (BMI z-score between 85th-95th percentile) was 19.1 %; while it was (18.2%) in urban areas as compared to (20%) in the rural areas. The prevalence of overweight was (18.9%) and (21%) among boys in urban and rural areas as compared to (17.2%) and (19.4%) among girls in urban and rural areas respectively. The difference was statistically highly significant ( $P=0.006$ ;  $X^2=7.5$ ). Thus the overall prevalence of overweight and obesity was 31.1% among school children involved in this study.

### **Conclusions**

As it was found in similar studies, there was an association between obesity and socio-economic status, low consumption of vegetables due to being not preferable to the children, the habits of watching TV while eating lunch and some positive factors related to physical activity in school. Therefore, to prevent and control the childhood obesity in Syria, effective prevention programs addressing physical activity and healthy food consumption are urgently needed to be established.

Excessive school-based programmes are recommended to support physical activities, healthy food and to minimize childhood overweight and obesity. Efficient multi-sectoral policy interventions are also recommended to encourage healthy lifestyle and to decrease barriers to physical activities among children at risk of obesity in the Syrian context.



Pembroke Place  
Liverpool L3 5QA  
United Kingdom

**Tel:** +44(0)151 705 3100  
**Fax:** +44(0)151 705 3370  
[www.liv.ac.uk/lstm](http://www.liv.ac.uk/lstm)

**Liverpool School of Tropical Medicine  
2009**

**This project is funded by the EUROPEAN UNION**  
يمول هذا المشروع الاتحاد الأوروبي

