Final Progress Report

**Project Title:** Improving Dyslipidemia management in the Gulf Cooperative Council (GCC) through the development of IAS-OSLA Course on “Lipid Metabolism and Cardiovascular Risk”.

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Emanuela Folco
Ann Jackson

**Organization:**

Oman Society of Lipid and Atherosclerosis (OSLA) in collaboration with International Atherosclerosis Society (IAS).
**Project Date:** 8/1/13 - 12/31/15

**Acknowledgment:**
We would like to thank Pfizer for providing educational grant to support the development of free of charge lipid educational program to improve dyslipidemia management among young physicians not only in the GCC but also in the Middle East and North Africa Region. We also, would like to thank IAS for their support and guidance toward developing and publicizing the program.

**Grant Award Number:**

11540163
1. Abstract:

**Purpose:** The IAS-OSLA Course on “Lipid Metabolism and Cardiovascular Risk” aims to increase the knowledge and experience of early- to mid-career English-speaking practicing clinicians interested in the management of lipid disorders in the Middle East and North Africa (MENA) region.

**Scope:** Cardiovascular diseases mortality rate remains high in the MENA region. This could be attributed to the high rate of uncontrolled multiple risk factors such as dyslipidemia, diabetes, obesity, hypertension and smoking. Data from the Gulf Cooperative Council (GCC) and other Middle East countries showed large gap in the management of dyslipidemia in the region that could be attributed to physician knowledge and patient awareness about the disease. In the MENA region few programs currently exist to educate physicians regarding dyslipidemia management. Therefore; the most effective method combatting dyslipidaemia and reducing morbidity and mortality outcomes in the region is by implementing educational programs for physicians.

**Method:** The lipid course consists of three days of lectures and interactive workshops delivered by leader and experts in the field of lipid disorders. The participants included were clinicians from different fields related to lipid management and restricted to the MENA region. The participants are admitted to the course upon submission of the required documents and selection criteria by the scientific committee consist of members from both IAS and OSLA.

**Results:** The 2015 and 2016, IAS-OSLA Lipid Course on “Lipid Metabolism and Cardiovascular Risk” has been extremely successful and has attracted 67 participants from 17 countries from the MENA Region including many of the GCC countries. The residential courses aims to increase the knowledge and experience of early- to mid-career English-speaking practicing clinicians interested in the management of lipid disorders. This unique series has also been successful in linking local, regional, and international leaders in the field of lipid management.

**Key Words:** Dyslipidemia, IAS, OSLA, MENA, GCC, CVD, Course.
2. Purpose of the Program:

The IAS-OSLA Course on “Lipid Metabolism and Cardiovascular Risk” aims to increase the knowledge and experience of early-to mid-career English-speaking practicing clinicians interested in the management of lipid disorders. This unique course will link local, regional, and international leaders in the field of lipid management with early-to mid-career physicians practicing in the Middle East and North Africa region (MENA). The course will help in establishing the resources and the basis for future development of lipid clinic network in the region.

3. Scope:

The increase in the cardiovascular disease (CVD)-associated mortality rate in the Middle East (ME) is among the highest in the world. Disorders of plasma lipids are key risk factors for the development of atherosclerotic cardiovascular disease (ASCVD) [1, 2], which is a leading cause of morbidity and mortality worldwide [3]. A large (n=4,378) study in the Middle East and Africa found that 70% of stable outpatients who attended general practice clinics had disorders of plasma lipids; in all countries in the study, the prevalence of these disorders in this population was >50% [16]. Of these, only 16% of subjects were receiving lipid-lowering medications and many subjects were not achieving LDL-C goals recommended by international guidelines [16]. In the Centralized pan-Middle East Survey on the under treatment of hypercholesterolemia (CEPHEUS), which was conducted in 5,276 patients in six Arabian Gulf countries (Bahrain, Saudi Arabia, Qatar, Oman, Kuwait and UAE) on LLDs [39], LDL-C goal was attained in 52% in the overall cohort. This study also showed that physicians in the Gulf region seldom use high doses of statins in high-risk patients. A total of 77.0% patients in this study reported that they remained on the same dose of statin since it was first prescribed [39]. From these studies we observe that there is high gap for management of dyslipidemia in the region, which is multifactorial, could be related to factors like physician knowledge, patient awareness and others. Therefore; the most effective method combatting dyslipidaemia and reducing morbidity and mortality outcomes in the region is by implementing educational programs for physicians.

4. Methods:

The lipid course consists of three days of lectures and interactive workshops delivered by leader and experts in the field of lipid disorders. The participants are physicians interested in lipid metabolism, including cardiologists, endocrinologists, pediatricians, general practitioners, lipidologists, and clinical biochemists. The course is restricted to participants from the MENA region. For the selection of the participants for this course, first the applicants are informed about the course through eblast send by IAS office to all societies
under IAS, in addition to information send to local and regional hospitals. The applicants must submit the following documents:

1. Proof of age
2. CV
3. List of publications
4. Recommendation from the head of the department

A joint committee from both IAS and OSLA reviews the applications and the selected participants are informed.

OSLA cover the registration, travel and accommodation for both participants and faculty. The course is certified by the Oman Medical Specialty Board. During the course period the participants are challenged with a pre-test and post-test to measure their improvement in the knowledge and experience in terms of lipid disorders management. Participants with best test score and most improved test score are awarded at the end of the course.

For the workshops the participants are divided into 3 groups and each group are exposed to different clinical case scenario for 3 days. Each group is supervised by two faculties to guide them through the case discussion. Each group will then present his case and highlighting the important steps in management of the case in front of the entire group. The group with the best-case presentations from each day will be awarded at the end of the course.

**Workshop Structure**

The participants will be divided into 3 groups, in 3 different rooms equipped with table, chairs, a computer and a USB key. Total Workshop time: 3 hours (180 minutes)

<table>
<thead>
<tr>
<th>Steps</th>
<th>Duration/min</th>
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<tbody>
<tr>
<td>Presentation of 3 clinical different cases by the afternoon faculty Each group will be assigned one case. Each group will convene in a room with two supervisors (afternoon faculty)</td>
<td>30</td>
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<tr>
<td>Each group will discuss the clinical case assigned, will prepare slides based on the discussion results. The discussion points and the slides will be presented by the group's representative in the closing plenary session afterwards</td>
<td>60</td>
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<tr>
<td>Plenary session - Presentations by the 3 group's representatives General discussion with all the faculty and participants Take home messages</td>
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<tr>
<td>Communication skills - One member of the faculty will critically review selected slides presented under the point of view of the graphics and communication clarity of content to help the participants improve their communication skills</td>
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5. Results:

Two lipid courses were conducted. The first lipid course was from 8-10 of February 2015 in Muscat, Oman. Number of participants 32, number of faculty 16.

**Final Program:**

<table>
<thead>
<tr>
<th>DAY 1</th>
<th>Time</th>
<th>DAY 2</th>
<th>Time</th>
<th>DAY 3</th>
<th>Time</th>
<th>DAY 4</th>
<th>Time</th>
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<tbody>
<tr>
<td>Feb 7th</td>
<td>7:30 – 8:00</td>
<td>Feb 8th</td>
<td>8:30 – 9:30</td>
<td>Feb 9th</td>
<td>9:30 – 10:15</td>
<td>Feb 10th</td>
<td>9:30 – 10:15</td>
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<tr>
<td>Breakfast</td>
<td>Introduction &amp; Pre-Course Test</td>
<td>Breakfast</td>
<td>Lipid &amp; Lipoprotein Structure and Metabolism (Overview)</td>
<td>Breakfast</td>
<td>Genetic Approaches to Prevention and Treatment</td>
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<td>8.30 – 9.30</td>
<td>9.00 – 10.15</td>
<td></td>
<td>Philip Bates (Australia)</td>
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<td>Philip Bates (Australia)</td>
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<td>9.30 – 10.15</td>
<td>Agents to Reduce LDL (and Future Developments)</td>
<td></td>
<td>Raul Santos (Brazil)</td>
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<td>Non-coronary Arterial Disease</td>
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<td>10.15 – 11.00</td>
<td>Metabolism and Atherogenic Properties of LDL</td>
<td></td>
<td>Raul Santos (Brazil)</td>
<td></td>
<td>Dimitri P. Makris (UK)</td>
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<tr>
<td>11.00 – 11.30</td>
<td>Metabolism and Protective Properties of HDL</td>
<td></td>
<td>Jaquesa Serfaty (Canada)</td>
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<td>Diabetes, Metabolic Syndrome and CVD</td>
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<td>11.30 – 12.15</td>
<td>Inflammation and Atherosclerosis</td>
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<td>Cell Adhesion &amp; Lipid Lowering Treatment</td>
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<td>Noor Al-Busaidi (Oman)</td>
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<td>12.15 – 13.00</td>
<td>LUNCH</td>
<td></td>
<td>Dr. Antonio Maraldi (Italy)</td>
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<td>Lipid Guidelines: 2015 Dimitri P. Makris (UK)</td>
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<tr>
<td>13.00 – 14.30</td>
<td>WORKSHOP 1: Familial Hypercholesterolemia: Diagnosis and Treatment Options</td>
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<td>WORKSHOP 2: Management of Complex Lipid Cases</td>
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<td>WORKSHOP 3: Lipid Management in Special Populations</td>
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<td>14.30 – 17.30</td>
<td>Al-Wazir (Oman)</td>
<td></td>
<td>Zunaid Al-Saadi (KSA)</td>
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<td>Khalid Al-Rasadi (Oman)</td>
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<td>17.30 – 18.30</td>
<td>Faculty Meeting</td>
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<td>Waad Al-Ahmad (KSA)</td>
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<td>Mahmoud Al-Habib (KSA)</td>
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<tr>
<td>18.30 – 22.00</td>
<td>WELCOME DINNER</td>
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<td>Meeting of the Gulf FH Foundation</td>
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<td>Post-Course Test Evaluation &amp; Discussion</td>
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<td>19.00 – 21.00</td>
<td>DINNER</td>
<td></td>
<td>DINNER</td>
<td></td>
<td>FAREWELL RECEPTION</td>
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The second lipid course was from 22-26 of February 2016 in Muscat, Oman. Number of participants 35, number of faculty 19. The additional day in this course compared to the previous course was for communication and leadership workshop.

**Final Program**
Conclusion and Implications

The 2015 and 2016, IAS-OSLA Lipid Course on “Lipid Metabolism and Cardiovascular Risk” has been extremely successful and has attracted 67 participants from 17 countries from the MENA Region including many of the GCC countries. The residential courses aims to increase the knowledge and experience of early- to mid-career English-speaking practicing clinicians interested in the management of lipid disorders. This unique series has also been successful in linking local, regional, and international leaders in the field of lipid management.

The participants and the faculty are keeping an open communication through emails, networking to discuss the management of several interesting cases from their clinical practice. Also, some participants decided to start their own lipid clinic within their hospitals and organizing serial of educational lectures concerning lipid disorders management. Other participants showed interest to collaborate on research to collect data from the MENA region concerning the prevalence, management and the treatment gaps concerning the different dyslipidemia especially diabetic and familial hypercholesterolemia.

The OSLA with the support from the IAS are planning to seek for more grants to continue conducting this highly valuable educational course and graduate more clinicians who will be able to improve the management of dyslipidemia in their hospitals and institutions.

6. List of Publications and Products:

You can access the course timetable, lectures, photos, faculty and participants lists at the IAS official website www.athero.org.