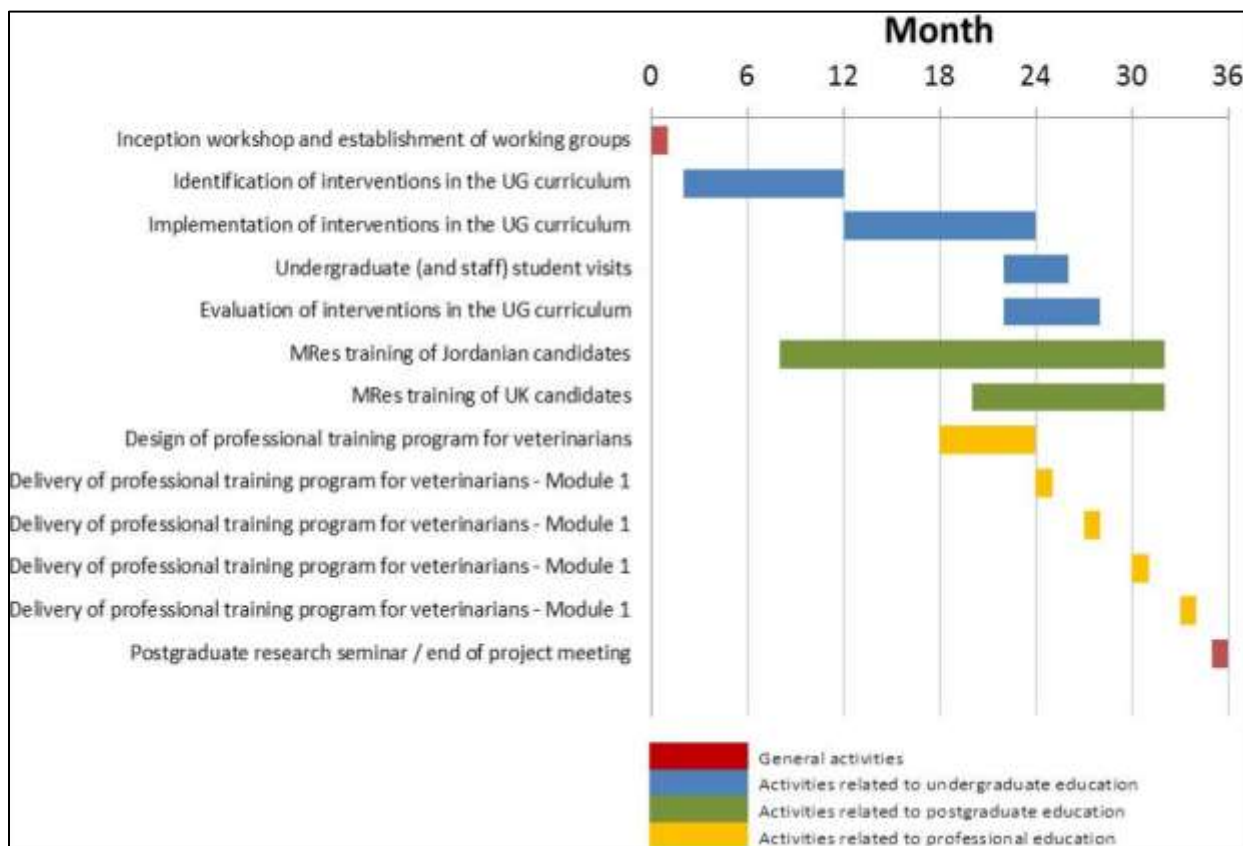


OIE educational twinning RVC-JUST

Activity report Year 1

1 ACCOMPLISHMENTS/NEW FINDINGS

During its first year of implementation, the project has achieved all the expected outputs as per project proposal with only minor departures from plans. In addition, a number of preliminary actions required for activities to be completed in the second year of the project have been carried out. Activities accomplished and findings are detailed below under the headings used in the work plan section of the project proposal and contract.



Gantt chart from project proposal showing activities to be carried out during the first 12 months of the project, namely: inception workshop and establishment of working groups, identification of interventions in the undergraduate curriculum and start of MRes training of Jordanian candidates.

1.1. INCEPTION WORKSHOP (*month 1; achieved*)

The project inception workshop took place from 9th to 11th February 2015 at the Jordan University of Science and Technology Campus in Irbid. A total of 20 participants took part, including 11 academic staff from JUST, 5 academic staff and 1 graduate student from RVC and representatives from the Jordan Ministry of Agriculture, the Global Partnership Program and OIE (Regional Representative for the Middle East). The aims of the workshop were:

- i) To present the project to those likely to be involved in its implementation (including JUST and RVC academics and researchers) and to potential beneficiaries
- ii) To refine and agree the work plan incorporating a strategy to maximize engagement of stakeholders such as the official veterinary services at the Ministry of Agriculture.
- iii) To establish working groups for the undergraduate, postgraduate and professional education streams.

The workshop and of RVC staff visit to Jordan was used to engage with relevant stakeholders including the Jordanian Ministry of Agriculture, Princess Alia Foundation, Princess Haya Biotechnology Center and Jordan Bioindustries Center (JOVAC).

During the inception workshop working groups of RVC and JUST academics were established for each of the 3 strands of activities (undergraduate, postgraduate and professional education). The main activities to be carried out in each of the strands were agreed, namely:

- *Undergraduate education*
 - o At the time of the inception workshop the mapping of day 1 competences and skills for JUST graduates was *work in progress*. It was agreed that the development of this list of competences should be prioritized with input from RVC academics and taking into consideration OIE recommendations on the competences of graduating veterinarians.
 - o A number of potential interventions in the undergraduate curriculum of JUST were identified (with final decision pending on the result of the mapping of day 1 skills). The interventions were:
- *Postgraduate education*: The working group on postgraduate education discussed the criteria based on how the topics of student projects should be selected and, applying these criteria, produced a first set of potential topics. The ideal calendar for recruitment of students and initiation of projects both at JUST and RVC was decided based on the characteristics of the existing programs in both institutions.
- *Professional education*: The working group on continuous professional education addressed the questions: What areas to focus on based on needs and on PVS outputs? What is the potential for integration with training for medics - existing Field Epidemiology Training Program? What is the potential to offer the program to other countries? It became evident from the discussions that the provision of professional education could contribute to the enhancement of animal disease surveillance in Jordan but that other issues are of critical importance. As for the provision of a training program for veterinarians, it was agreed that it should include practical components that could make it more attractive and relevant for veterinarians.

1.2. UNDERGRADUATE EDUCATION

1.2.1. Identification of curriculum interventions and recommendations (months 2-10; achieved)

This project component has been successfully achieved with i) the development of JUST day 1 competences and ii) the identification of curriculum interventions.

- *Day 1 competences and veterinary skills for students graduating from JUST* have been developed including a student logbook based on day 1 competences that are expected from a DVM graduate from JUST and mapped to the OIE and EAEVE day 1 competences. Skills are divided into 3 categories based on the expected level of achievement:
 - *Category 1. Student is expected to have performed the skill him/herself*
 - *Category 2. Student is expected to have observed the skill performed by faculty course instructors*
 - *Category 3. Student is expected to have knowledge of the skill*

A survey based on the initial draft of the logbook is planned and will be administered to the current 5th year students to get feedback regarding the different levels, their ability to perform level 1 skills and knowledge and understanding regarding levels 2 and 3 skills. The survey will enable JUST faculty to identify gaps and strengths in the curriculum of day 1 competency teaching and assessment. The feedback from the survey using 5th year students will be used to update and refine the logbook, which will then be given to the current 4th year students. This will enable to refine the logbook and the new curriculum further. The final objective is to administer the logbook to ALL veterinary students once they get in the faculty of Veterinary Medicine. Students are expected to complete the logbook as they progress through the DVM program.

- *Identification of curriculum interventions:* Three specific areas for the development of teaching materials / activities have been identified and teams of RVC and JUST academics are currently working on their development. The first team, led by Dr. Steven van Winden (RVC) and Dr. Myassar Alekish (JUST), is focusing on the area of herd health / livestock medicine. The second team, led by Dr. Troy Gibson and Dr. Hani Talafha is working on animal welfare. The third team is led by Prof. Javier Guitian (RVC), Prof. Mohammed Ababneh (JUST) and Prof. Akram R. Al Abboodi (JUST) focusing on veterinary public health / food safety. In addition, the area of porcine medicine has been identified as a gap in the JUST curriculum and it has been agreed that interactive teaching materials will be developed and shared between the two institutions. For cultural and religious reasons this is an area that has traditionally being weak in the JUST curriculum and for which there is very limited expertise among JUST faculty. On the other hand, the RVC has some experience developing video-based teaching materials and has some resources already available in the area of porcine medicine. For these reasons, it was identified as an ideal area that could be strengthened in the JUST curriculum by developing video-based lectures. They will be introduced for the first time in the current cohorts of students, during the duration of the twinning program, will become embedded in the JUST curriculum and will be used in future cohorts, beyond the duration of the twinning project.

1.2.2. Design and implementation of curriculum interventions (months 12-24; ongoing)

Ongoing activity. The first intervention will be delivered during the week starting on Sunday 27th March. The main teaching staff involved in the delivery of this session are Drs. Myassar Alekish (JUST) and Steven van Winden (RVC). This first intervention focuses on herd health/livestock medicine and aims at highlighting the links between livestock health, livestock welfare and public health. The remaining two interventions (intervention 2 with an emphasis on animal welfare and intervention 3 focusing on veterinary public health) are expected to be delivered by August 2016. The three interventions consist in the introduction of a combination of didactic and problem-based sessions in the 3rd-5th year of the undergraduate curriculum of JUST. The sessions are delivered during a week and aim at promote integration between different elements of the curriculum that have traditionally been addressed independently. The materials will become available for JUST to run in the future so that these novel elements, upon revision based on feedback, become integral components of the JUST curriculum. *The interventions will embed different elements of professionalism into the graduates, such as ethics and life-long-learning, that will allow the graduates to engage with the profession as well as the sector in a broader way.* Materials on porcine medicine expected to be completed by December 2016.

1.2.3. Evaluation of interventions and reporting (months 12-24; ongoing)

Ongoing activity. A formal evaluation of the interventions will be conducted by means of pre- and post-intervention surveys administered to the students. Ethical approval to conduct the surveys has been requested and the survey questionnaires are currently being designed. The overall aim is to evaluate student perceptions regarding knowledge integration between subjects, problem solving skills, application of animal welfare principles in animal production diseases and public health, before and after three educational interventions to the veterinary curriculum at JUST. Specifically, the pre- and post-intervention questionnaires, administered to students for the 3 interventions will enable to project team to evaluate:

- i) the effectiveness of these educational interventions to enhance student skills in developing and integrating knowledge in the context of public health, animal production and welfare.
- ii) the students' perception of the interconnectedness (or integration) of the teaching of the three selected topics in this veterinary curriculum.

1.2.4. Student visits (months 22-26)

This activity has not been initiated as it is planned for the end of the 2nd year beginning of 3rd year of the project.

1.2.5. Alignment with OIE recommendations on the competencies of graduating veterinarians and OIE guidelines on Veterinary Education Core Curriculum (ongoing across entire duration of the project)

This is an ongoing project across the entire duration of the project; for progress up-to-date see above under 1.2.1. As specified in point 1.3.1, it has been agreed that one of the student research projects will be an educational project as part of which the impact of the twinning will be formally evaluated.

1.3. POSTGRADUATE EDUCATION

1.3.1. Selection of research projects (months 1-6; achieved)

The selection of the most suitable research projects was based on a number of criteria: the project topic had to fit well within the OIE remit, be aligned with the priorities and strengths of both JUST and RVC, it had to be feasible given the resources and expertise available in both institutions and ideally it could lead to long-term collaboration between both institutions. Applying these criteria and after discussions involving academics from both institutions the topics were identified as the projects to be carried out by MRes students:

1. Infectious causes of abortions and use of abortion records for syndromic surveillance
2. Drug resistant E coli in poultry
3. Predictive mapping of vector-borne diseases
4. Management of meat-borne pathogens
5. Antibiotic resistance in *Staphylococcus aureus* and mastitis
6. Welfare aspects of current slaughtering practices
7. Educational project: assessment of the impact of curriculum interventions facilitated by the twinning program on the learning experience of Jordanian undergraduate students



Figure 1. Rekaz, Dima, Lina and Ismael –JUST students registered for MSc degrees as part of the RVC-JUST OIE twinning project.

1.3.2. Implementation of research projects (months 6-30; ongoing)

Five Jordanian students have been selected and are already registered as JUST MSc students. They are currently progressing with the taught component of their MSc and in the coming months will be planning their research projects in detail with their JUST and RVC supervisors. Each student has a primary supervisor from JUST and a two co-supervisors, one from JUST and another from the RVC. Each project will be “twinned” with an RVC-based MRes project. Given the different duration of JUST’s MSc and RVC’s MRes projects (2 years for JUST MSc and 1 year for RVC MRes), RVC MRes projects will start in October 2016 to allow the RVC students to progress in parallel to the JUST students. RVC students will have a primary supervisor from the RVC and two co-supervisors, one from RVC one from JUST. The result will be “twinned” teams composed by 2 students (one JUST student and one RVC student) and 4 supervisors (2 from JUST and 2 from RVC), working in parallel in twinned projects.

1.3.3. Research seminar (month 36)

No progress to report as this activity will take place at the end of the project.

1.4. PROFESSIONAL EDUCATION (months 18-36)

No progress to report beyond what was discussed during inception workshop, as this activity will take place at the end of the project.

2 INTERACTIONS

In its first year the project has succeeded at engaging key stakeholders in Jordan such as the Government Veterinary Services, represented by the Chief Veterinary Officer in the initial workshop, the Princess Alia Foundation and the Princess Haya Biotechnology Center, institutions with which it is expected to collaborate as part of the professional and postgraduate training strands. A total of 5 RVC academics have carried out a study visit to Jordan during February 2015. This visit allowed completion of objective 1.1.1. (inception workshop and establishment of working groups) and contributed objective 2.1. (identification of interventions – detailed above under 1.2.1). The main outcomes from the visit included:

- i) initial engagement of academics from both institutions and relevant stakeholders (e.g. Jordanian Ministry of Agriculture and OIE regional representative)
- ii) scoping of the project, priorities, timeline and administrative arrangements between RVC and JUST
- iii) establishment of working groups composed of teams of RVC and JUST academics in charge of progressing different project components (undergraduate, postgraduate and professional education)
- iv) preliminary identification of undergraduate interventions, postgraduate projects and priority areas for professional training

Profs. Ehab and Guitian attended the OIE Global Conference on Biological Threat Reduction in July 2015. One JUST academic (Hani Talafha) has conducted a study visit to RVC during November 2015. The focus of the visit was the provision of undergraduate teaching in animal welfare and bioethics. This was identified as a priority for the enhancement the undergraduate curriculum at JUST, where Dr. Talafha is responsible for this part of the curriculum. During the visit Dr. Talafha interacted with RVC academics involved in animal welfare and bioethics teaching (Drs. Troy Gibson and Martin Whiting), observed the delivery of this teaching at RVC, had access to teaching materials used by RVC and develop a detailed understanding of the way in which this area of the curriculum is delivered at RVC. In addition, there has been regular interaction by email and teleconference between individuals in charge of progressing with the different project components.

3 PUBLICATIONS AND REPORTS

The poster “Building Capacity for Biological Threat Reduction in the Middle East: RVC & JUST An OIE Educational Twinning Initiative”, was presented and awarded 2nd prize at the OIE Global Conference on Biological Threat Reduction and an editorial outlining the project has been published in “The Veterinary Record” – with the project featuring in the front page picture of the October 3rd issue: <http://veterinaryrecord.bmj.com/content/177/13.cover-expansion>

A poster outlining the project has been presented at the International Symposium on Veterinary Epidemiology and Economics (ISVEE).

The first publication arising from the project is an editorial in a peer-reviewed journal of worldwide circulation (The Veterinary Record), entitled “Building capacity to reduce biological threats in the Middle East”.

A Weblog for the project has been created: <https://rvcjustoietwinning.wordpress.com/> and is being regularly updated and used to maximize visibility of the project.



Cover of the *Veterinary Record* featuring RVC graduate student Peter Holloway and the RVC-JUST team article on capacity building for biological threat reduction.

4 HONORS/AWARDS

The poster “Building Capacity for Biological Threat Reduction in the Middle East: RVC & JUST An OIE Educational Twinning Initiative”, was presented and awarded 2nd prize at the OIE Global Conference on Biological Threat Reduction.

5 COURSES TAUGHT/TRAINING PROVIDED

Undergraduate: No undergraduate training has been provided so far as the first ten months of the project have been used to define the scope of interventions / training. This component of the project is expected to be initiated in the coming months with the introduction of a number of training elements in the undergraduate curriculum of JUST with a focus on mastitis. This will be used as a vehicle to introduce innovative teaching components in the JUST undergraduate curriculum.

Postgraduate: Postgraduate training of JUST MSc students has started, with five students currently undertraining the taught component of their MSc studies with co-supervision from JUST and RVC academics.

6 MAJOR EVENTS ANTICIPATED IN THE NEXT 6 MONTHS

The main activities in the next six months will be i) the delivery of the three new teaching components in the undergraduate curriculum of JUST by teaching teams composed of JUST and RVC academics, ii) the selection of RVC MRes students, iii) a study visit of JUST faculty to the RVC clinical skills center. To facilitate these processes a team of five RVC academics visited JUST in February 2016.

7 CHALLENGES INCURRED AND SOLUTIONS TO OVERCOME THEM

Undergraduate component: no issues identified; progressing as per-plan.

Postgraduate component: the original plan of allocating two of the seven JUST MSc scholarships to staff from the Ministry of Agriculture of Jordan has faced a number of administrative difficulties. We would like to propose that the resources allocated to these two studentships are used to support MSc studies in wild animal health at the RVC of a Jordanian veterinarian currently working for Princess Alia Foundation and providing teaching support to JUST: Dr. Zein Shaheen. Specifically, Dr. Zein would be part-time teacher at JUST based at the Princess Alia Foundation facilities near Amman. It is in these facilities where the delivery of practical teaching on wildlife medicine to JUST students takes place and Dr. Zein will be in charge of this delivery. This role will have continuation beyond the duration of the twinning project.

This has been identified by JUST as particularly strategic as their teaching staff is currently lacks expertise in the field of wild animal health. In addition, Dr. Shaheen will train students from JUST and Veterinarians at Princess Alia Foundation facility. This will be a great opportunity to strengthen this area of expertise in JUST and at the same time build local capacity in Jordan in this field.

Professional component: no issues identified so far as this component will start at a later stage. However, during discussions between the project team and other stakeholders it has been proposed that replacing some of the planned face-to-face training by online training could allow this part of the project to have a much wider impact by including a larger number of participants. We would like this potential change to be considered by OIE. We confirm that this change will not result in additional cost to the project.