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Hospital Practice Report

Hospital Pharmacy

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I. INTRODUCTION

Nowadays, we live in a country where dreaming about the dream job is nothing more than that, a dream.

In university, when professors talk about Hospital Pharmacy or when you do summer internships in your local hospital, you imagine yourself doing that job, being in contact with other healthcare professionals, patients, and drugs. However, they also warn you that in Portugal it is very hard to become a hospital pharmacist, at least in the beginning of your career, once cuts are being made in most of the hospitals and the spots for new pharmacists are closed.

For that reason I thought if one day I have the opportunity of working or even just to apply for a job in a hospital, I should be prepared with extra experience and with a different view of that world. So, in my 4th year of University I decided I would apply for Erasmus placement in Vienna, to a hospital pharmacy.

Vienna is a wonderful city, full of culture and very different in several aspects comparing to Portugal, such as the people, the weather and the life style. The classiness of Vienna, its historical monuments and streets made my time in Vienna much more pleasant and helped me not missing Portugal after the first month.

In the Austrian capital you feel like an old movie character as classic music, dance, opera and theatre are present in the daily life of the inhabitants and tourists.

In June of 2015, I started my internship in Franz-Kaiser-Joseph-Spital (KFJ) with the duration of 3 months along with my colleague Cristiana Lopes Martinho. During these months our supervisor was Doctor Doris Haider, who since the beginning showed great sympathy and solidarity.

In this report I will describe the internship in a SWOT analysis where I will present my opinion about the strengths and weaknesses aspects as well as the opportunities and threats of the hospital pharmacy internship.

II. SWOT Analysis

Internal Analysis	A. Strengths <ul style="list-style-type: none">▪ Internship in Hospital Pharmacy;▪ Hospital Pharmacy Organization;▪ Laboratory and Analytics Department;▪ Clinical case;▪ The Distribution Department day;▪ The Quality Control project;▪ The Wards project;▪ Lectures participation;▪ Internship fellows.	B. Weaknesses <ul style="list-style-type: none">▪ German Language;▪ The initial period;▪ Pharmaceutical areas I was not involved in.
	C. Opportunities <ul style="list-style-type: none">▪ Hospital Pharmacy experience;▪ International experience;▪ Development of soft skills.	D. Threats <ul style="list-style-type: none">▪ Hospital Pharmacy in Portugal;▪ Erasmus Placement.

A. STRENGTHS

▪ INTERNSHIP IN HOSPITAL PHARMACY

The Erasmus placement experience allowed me to contact with a pharmaceutical area, which I had experienced before in a summer internship in Portugal, but this time abroad, Hospital Pharmacy. During 3 months, I had the opportunity of comparing the two models, Portuguese and Austria and I found some interesting differences.

I was really pleased with some aspects that in my view are superior in our country, such as the daily delivery system of drugs to the wards that in Portugal normally is unidose, and in Austria it was not. With the wards project that I will explain further in this report, I noticed a “waste” of medication and also money, for example with five boxes of the same drug open.

In my opinion, the review of expired dates is not as efficient as it is in Portugal. In KFJ they use the medicines until the last day increasing the probability of using it in the next months if they do not check for expired dates regularly. In the ward project we found several drugs expired.

The delivery of chronic drugs, for example for HIV, Hepatitis or Cancer, in Portugal is done by hospital pharmacists, and in Austria instead of hospital pharmacists, patients can go to community pharmacy and ask for those drugs.

On the other side, in Austria pharmacists are involved in the doctor’s visits to the wards and contribute with their clinical pharmacy experience and knowledge, whereas Portugal unfortunately is still behind in this area.

The Analytic department, as well as the laboratory, where they tested the quality of imported drugs and where they produced manipulated drugs, is a department that in Portugal we don’t have in such a vast area.

▪ HOSPITAL PHARMACY ORGANIZATION

The first day of the internship was excellent, we did not experience that feeling of being lost that normally interns feel on their first day, as they were expecting us and everything was very organized for our first day.

One of the workers, from the pharmacy secretariat, started by introducing us the whole team, from pharmacists to technicians, and showed us every department of the pharmacy, including the desk we would be using during the internship. After that we went to

the administration, always accompanied by someone, to request for our uniform, locker, keys and card, which you must have in order to enter and walk inside the pharmacy.

In Kaiser-Franz-Josef hospital everyone has to wear the institution uniform according to their function inside the hospital, and they have a place to change, like a locker room where everyone has their own lockers.

Moreover, the facilities were new and modern which together with the other facts were really motivating for us.

▪ **LABORATORY AND ANALYTICS DEPARTMENT**

As I referred before, the Analytics Department and the Laboratory was definitely something new for me. In Austria, when a new drug arrives to the Hospital pharmacy they always have to do the Identification control, following the pharmacopeia, before its use in the laboratory. The purity control is not demanded if it has the quality control certificate.

For example, one of the opportunities we had was with Miglyol PAA and we perform the IV test and refractive index.

Plant-based medication is very common in Austria, as well as in Germany, and therefore the pharmacy we worked in had an excellent laboratory, equipped with all the machinery necessary to analyze and prepare the most various kinds of pharmaceutical formulations (for instance, olinenol, mandenol, lavendenol, cineol and others). In addition to this, we also performed, in the early days of our internship, the filling of tea bags, cream and ointments packages and also syrups which gave us a different perspective on the use of different formulations in the hospital environment.

▪ **CLINICAL CASE**

Our first project involved a clinical case and this allowed me to contact with an important role of pharmacists in this sort of problems.

In the beginning of the year, they were asked to find an alternative way for the administration of oral Tretinoin (the only formulation commercially available) because a woman diagnosed with Acute Promyelocytic Leukemia was early unable to swallow the chemotherapy prescribed which was formulated in gelatin capsules. The medication consisted of 10 mg Tretinoin capsules and the pharmacists knew beforehand that it could

not be disintegrated and simply given in the feeding probe. They were able to find a way, a parenteral formulation, and the health state of the woman improved significantly.

Tretinoin is a Category X drug (risks highly overcome its benefits) and that it is also a teratogenic compound, thus needing special manipulation and administration procedures.

Our task was to search about what is known until the date about APL and Retinoic acid, especially the information related to extraction part, because one of the future purposes is to determine and prove the retinoic acid stability in the new IV formulation.

All this work permitted a great contact with a real clinical case where once again pharmacists were essential, and that makes me very proud, as well as the first interaction with German at work.

▪ THE QUALITY CONTROL PROJECT

The second project we were involved in was the Quality Control of the fridges. Although KFJ Hospital does not have the ISO 9001 Certification, it is highly dedicated to its internal procedures of quality management, and we were told that a future application is an objective of the hospital.

Regarding this, we were invited to participate in one of the procedures performed in the hospital pharmacy, the temperature control of all the fridges in the distribution and oncology department. During six weeks we were responsible for configuration 16 loggers with the respective fridge data and after a period of 3 or 12 hours

(at least one period of 12 hours for each fridge category) for collecting the results. (Fig. I)

This project proved that all the fridges were calibrated accordingly to each temperature set, and the objectives were successfully accomplished.

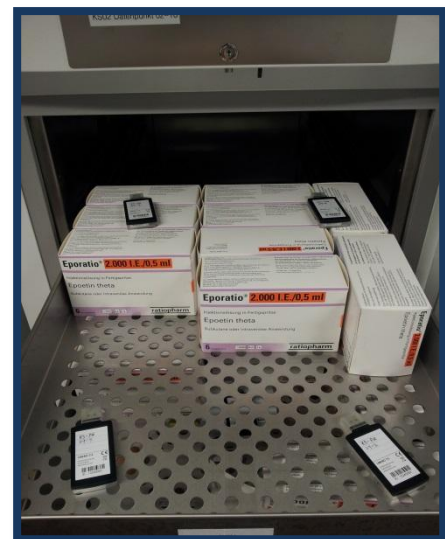


Fig. I – Loggers.

▪ THE WARDS PROJECT

During the last two months of our internship we were responsible for checking all the medication and medical devices present in the wards, mainly aiming to quantify the number of packages. This project arose from the Hospital Administration need to acknowledge exactly the stock in the wards whether it was large or not and also how much money was invested in each ward.

We started with the Internal Medicine ward number D17, then D27, and D37, and after that we changed to Neurology B01 and B11. Depending on the time nurses would use the medication room, we went to each ward at different times, but normally for a period of 4 hours per day. This project took us about 2 months to conclude, and we have to thank the kindness and sympathy of most of nurses that were always welcoming to our presence in the wards.

With this project we concluded that each ward indeed holds a great amount of money in medication and also that some waste could be prevented. For example, 6 packages of the same medication was a common scenario while all had only a few pills taken away. This situation walks hand-in-hand with the wasting of medication due to expired dates which was a serious concern, in our opinion.

Probably due to the fact that in Portugal we are used to the Unidose System, we think the Kaiser Franz Josef system may lead to waste of medication, once they probably use the last box that came from the Hospital Pharmacy, and the other ones which were stored are forgotten. In our concern, in the future there is the risk of someone giving an expired drug to a patient, as we found some examples of expired medication. Therefore, we think the philosophy of “First in First out” should be in fact implemented and more often controlled by the hospital pharmacists, since frequently we found boxes that would be expired in 2019 almost finished, and boxes for the same drug that would be expired next year closed.

As Pharmacists students, we could not help noticing that the way they have some drugs stored may lead to mistakes in the drug administration, because boxes are almost equal and with the rush wards are known for, the probability of changing the dosage is substantial. For this reason, we considered that all the medicines should be in the hospital pharmacy, as we (pharmacists) are the experts in that subject, so it should be under our control and supervision.

We hope our work was somehow useful, that in the future changes are made and we are remembered for the ones who gave the one of the efforts of the change.

▪ **THE DISTRIBUTION DEPARTMENT DAY**

In June, we had the opportunity of being in the distribution sector of the hospital pharmacy. The medication is stored by alphabetic order, and with the help of a small machine, a phone-like device, they collected the medication ordered by each service/ward after being approved by the responsible pharmacist. During that day we had the opportunity of doing that, and at the end of the circuit, each service/ward had a big container where de medicines were respectively deposited, after passing by the informatics code bar reader. Syrups and other fragile presentations were taken away by hand instead of by the big robotic system, due to their size and weight. Special medication, such as drugs that need to be stored in lower temperatures, are nearer to the last stage of the distribution process, therefore being taken away only minutes before the distribution staff coming to collect all the containers.

With regard to narcotic drugs, they are given exclusively by the pharmacist and directly to the nurse responsible for the ward the medication is destined, and it is documented with special receipts colored pink.

▪ **LECTURES PARTICIPATION**

The pharmacy had a lot of lectures, given by pharmaceutical companies, where we were invited to assist although they were in German. But nothing is impossible and we managed to understand the important parts. We felt part of the team and it also gave us a different perspective on the matter.

▪ **INTERNSHIP FELLOWS**

The internship would not have been the same if I did not the presence of my two internship fellows, Cristiana and Anne. Everything is harder when you cannot share your daily difficulties, victories and stories to someone, and fortunately I was able to do it with them.

B. WEAKNESSES

▪ GERMAN LANGUAGE

When I chose Vienna I already knew that language would be an obstacle in my internship. I took a year of German lessons in my university, but German is not something you can learn from the day to the night and I found it really complicated to learn. In Vienna as the time was passing by, I started to improve my German with daily expressions, greetings, though learning German becomes harder when you have English to “save you” all the time.

At the hospital, not every person felt comfortable with speaking English therefore the conversations and the connection were harder and more limited comparing as if it was in the native language.

As a pharmacist to be, occasionally I would feel frustration in not being able to understand a lot of documents, co-workers (for example doctors and nurses), and also the patients. Frequently they asked for some information, and I was incapable of helping the way I would help if I had understand them.

For that reason and also, a personal matter, in the future I look forward to improve my German to a level where I will be comfortable speaking to people, since it was impossible to have German lessons in Vienna, due to the high cost of the courses and mostly because I had to conjugate work with the thesis writing.

▪ THE INITIAL PERIOD

The first two weeks were not as good I expected in the first day, where I was really well received and everyone was very welcoming to me. However, due to an auditing of the Austrian Government that would happen two weeks after, they were all really busy and they could not pay us much of attention each time we had completed a task given.

As we knew it was temporary state we tried not to disturb them, unless it was truly needed. The difficult part for me during those couple of weeks was to keep positive about the following months of the internship, once when I did not have anything to do I would have the feeling of “waste of time” due to the fact that, at the same time, I was working on my thesis and community report.

After all, I managed to keep confident and the internship turned to be as I expected: Busy days and the feeling of “time flying”.

- **PHARMACEUTICAL AREAS I WAS NOT INVOLVED IN**

To conclude the weaknesses of my internship, the last one was the fact of not being able to participate in every area the KFJ hospital' pharmacists are involved. Although they tried to explain what they were doing we did not participate in the clinical pharmacy area, where pharmacists have their own medical area, and weekly go with doctors to the wards to see patients and to help them with the prescription, in dosage, posology and other advices needed. The narcotics distribution and the department were also areas I did not have the opportunity to try, mostly due to my lack of knowledge in German.

Furthermore, in KFJ hospital the distribution of oncology, HIV or hepatitis medication is not exclusively given to patients at the hospital pharmacy, being also acquired in community pharmacies. For this matter I was not involved in this pharmaceutical area as I would have been if I had done the internship in Portugal.

C. OPPORTUNITIES

▪ HOSPITAL PHARMACY EXPERIENCE

The differences between Hospital pharmacy and Community pharmacy are numerous.

In Hospital pharmacy you contact daily with other healthcare professionals, different medication of hospital exclusive use, different diseases, and you may be involved in severe clinical cases, for example a formula alteration in patients that suddenly are incapable of swallow and doctors ask pharmacist for an IV alternative (as it happened with the tretinoin case referred in strengths). Moreover, especially in polimedicated patients, you contact a lot more with drug interactions, and only in hospital pharmacy you are able to be involved in clinical trials.

As a result, having the opportunity of working in Hospital pharmacy for a longer period was not only something I wanted since a summer internship in the area in 2013, but also an opportunity to improve my experience in the area. We never know what the future brings in terms of hospital pharmacy jobs in Portugal, so I am confident that having more experience in the area will definitely increase my odds.

▪ INTERNATIONAL EXPERIENCE

Nowadays, we are coming to a point where each day proves the need of international experiences to achieve personal development, so it has been a goal since I started pharmacy studies to finish with an internship abroad, not only because I always felt the need of contact with pharmacy through the perspective of other foreign pharmacist, other countries, other politics, but also because of my interest since I was young for travelling.

Vienna will have forever a special place in my heart. I knew all the goods of this city but living them was an astonishing experience. In other words, Vienna it a beautiful city itself, where culture and politeness is everywhere, besides being located in Central Europe, from where one can easily travel and taste different cultures.

In my daily my routine, I had to fit the internship, the thesis writing, fitness, hobbies and traveling. It was not easy being responsible for my days and for my hours and having so much to do but I managed to enjoy the most of my time here.

In brief, I went to several museums and I walked endlessly through streets most people will never walk through. I went to Prague, Berlin, Krakow, Zurich and Salzburg on weekends and did my thesis on afternoons and late nights. As Doctor Haider said in our first day, I did not just visit Vienna, I lived it. Today, the feeling of accomplishment and satisfaction occupies my heart.

The routines were different, I got up every morning at half past six, I would start lunching at 11:30 AM and leave work at 3 PM. Here, people have time to enjoy life after work, and I was a member of this community so I also had that time.

I am now more independent, stronger, and more self-conscious of the world problems. I may have seen the most beautiful landscapes, but holding hands to it I have seen the misery of lost people with no purpose in life, where drugs and alcohol are their food and water every day.

All in all, I have to say I returned to Portugal a better Portuguese, with new routines and the will of becoming a great pharmacist. We are capable of anything as long we work hard and have some faith in ourselves.

▪ **DEVELOPMENT OF SOFT SKILLS**

During the internship I have also developed my communicative skills and critical thinking, while living in a different place and working in a different environment. Both, me and Cristiana, lived in an Islamic neighborhood and we had to adapt ourselves to that picture every day, once you do not have it a lot in our cities in Portugal.

I am now more capable to communicate with new people, more tolerant with others, and also more aware of the differences between all kinds of races and ethnics, respecting them.

This was a much valuable opportunity of my internship allowing me to grow in a personal and professional way.

D. THREATS

▪ HOSPITAL PHARMACY IN PORTUGAL

In Vienna, I got in touch with two different realities, the Austrian and the French reality with Anne, my French colleague.

Almost immediately, I understood that these realities are very different from my country, since there are more opportunities for students to choose the area, and also a direct specialization when they finish faculty. In these countries, it is possible to dream with hospital pharmacy, while in Portugal, jobs are rare due to the actual economic state of the country, forcing pharmacy students to follow other pharmaceutical areas even if their first choice would have been hospital pharmacy.

With this statement, it is not my purpose to say that hospital pharmacy in Portugal is worse than in Austria and France, I just want to state that as a pharmacist student and sooner a pharmacist I will not have the same “fortune” as I would have in other European countries, and I am certain that, unfortunately, a lot of students that have the dream to be hospital pharmacists will try to find an opportunity abroad, being forced to leave Portugal.

I considered it a threat, once I have invested in an internship in Hospital pharmacy even knowing that in my near future I will probably not be working in this area. Today, I have more experience in an area that fulfills me as pharmacist to be, but will I ever have the chance of using this experience? As an eternal believer, I hope so.

▪ ERASMUS PLACEMENT

An additional threat of my internship may be the fact that being done in a foreign country, there was information and other aspects that I have learned that probably I will not use in the future as they are related specifically to Austria or to KFJ hospital and yet others that I should have had contact with but I did not, since there are differences in logistics, and other services between Portugal and Austria. Nevertheless, knowledge is never too much, and will leave Austria richer, both in a personal and in a professional matter.

III. Conclusion and Acknowledgments

Today, I leave Austria a richer person in terms of maturity, knowledge and friendship. For all this, I must thank Professor Dr. Antonio Ribeiro for allowing me to have this opportunity in Vienna, Dr. Doris Haider for taking care of everything that was necessary for my time here, for her help and availability inside and outside the hospital, Dr. Angelica Döbrösy for her guidance and sympathy, Sabrina for her kindness and smile that was so welcoming everyday and of course, Professor Dr. Terkola for accepting to receive me in the hospital to do my internship.

In addition, I would like to thank Cristiana Martinho for being my “partner in crime” these 3 months and for being always there every time I needed, and above all my lovely family for allowing me to be part of such unforgettable experience. Thank you.

The internship in Kaiser Franz Josef hospital was one of the greatest experiences of my life, mainly because I had the opportunity to learn a lot during the three months, but also because of all the memories and stories that I will remember forever.

I truly loved these 3 months in Austria, but I must say I also miss home, I miss my blue sky and my blue sea, and I miss my Portugal.

