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*Relatório de Estágio em Farmácia Hospitalar realizado no
Hospital Kaiser-Franz-Joseph em Viena, Áustria*

Pharmacy Hospital Internship Report

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I. INTRODUCTION – INTRODUÇÃO

Hoje escrevo este relatório de coração cheio - foi há dois anos que a vontade de partir à descoberta de uma nova cidade e de um novo eu surgiu, mas sabia o quão difícil era conseguir concretizar este sonho.

Após 5 anos a estudar na minha cidade, a tão bonita e mística Cidade de Coimbra, era para mim lógico que algo tinha que mudar. Viver sozinha, estar por minha conta, aprender a gerir o meu tempo e as minhas finanças, esse era agora o sonho que eu queria tornar realidade. Achei que não era pedir muito, e decidi ir à aventura. Candidatei-me ao Programa Erasmus Placement apenas com uma certeza: eu vou para qualquer lado. Tive a grande felicidade de conseguir um estágio em Viena, cidade encantada, e ainda para mais numa área que sempre me despertou curiosidade, a Farmácia Hospitalar.

Sabia o que me esperava, conjugar a rotina de um trabalho com a dissertação de uma tese e ainda a grande vontade de viajar e conhecer novos lugares não foi fácil. Mas hoje sou mais e melhor, sinto-me capaz e com mais audácia para abrir o próximo capítulo e me lançar no mundo do trabalho. Porque sei que, seja qual for o lugar e a hora, seja qual for a minha função, eu serei capaz de superar o desafio, serei capaz de ir mais longe.

Durante os meses de Junho, Julho e Agosto, tive a oportunidade de realizar um estágio em Farmácia Hospitalar em Viena, com a duração de 240h e ao longo de 11 semanas. Para além de ter contactado mais de perto com a profissão do farmacêutico hospitalar, a qual sempre foi do meu interesse, tive também o prazer de partilhar o dia-a-dia e as mais diversas experiências e aventuras com uma colega de curso e amiga, tendo sido três meses muito enriquecedores não só a nível académico mas também pessoal.

Neste relatório irei descrever, em formato de análise SWOT, os Pontos Fortes (Strengths), Pontos Fracos (Weaknesses), Oportunidades (Opportunities) e Ameaças (Threats) do meu estágio. Devido ao facto de a língua Inglesa ter sido a ponte entre nós e os nossos colegas e orientadores durante estes meses, o relatório será escrito em Inglês por forma a ser possível partilhá-lo com a nossa Orientadora de Estágio, Dra. Doris Haider - for the purpose of evaluation, the following SWOT analysis is written in English.

II. SWOT ANALYSIS

Strengths

- Internship in Hospital Pharmacy
- Arrival, working environment and Institution organization
- Laboratory and Analytics department
- Clinical case
- The Quality Control project
- The wards project
- Distribution of medication
- Lectures participation
- Internship fellows

Weaknesses

- German language
- Beginning of the internship
- Pharmaceutical areas I was not involved in

Opportunities

- Hospital Pharmacy experience
- International experience
- Development of soft skills

Threats

- State of art in Portugal
- Erasmus Placement

A. STRENGTHS

- **Internship in Hospital Pharmacy**

The main strength of this internship was the fact that it allowed me to work in the hospital pharmacy environment and contact with the different departments involved. Throughout the last three months I had the opportunity of daily following the work of several hospital pharmacists and additionally compare it with the Portuguese system. Once we have only one semester of Hospital Pharmacy during our Masters, it is my opinion that an internship in this area is of major importance in order to understand and acknowledge the profession of a hospital pharmacist.

Although there are some differences between Austria and Portugal in which concerns the main hospital pharmacy departments and pharmacists' tasks and duties, it was a valuable experience to contact with this area and to approach this profession from a different perspective.

As pharmacy students in Portugal, we tend to think that Community Pharmacy is the way to go after College, and neglect other professional outcomes provided by our Masters degree. Ever since the beginning of my journey in the pharmaceutical sciences, my thought has leading me to different areas and the willing of exploring them was very much what led me to find this internship.

In my view, this experience of approaching a different field of my profession gave me more insight and provided me with more endurance to chase other things in life, work and personal-wise.

- **Arrival, working environment and Institution organization**

From the first day, I felt welcome and part of the hospital staff. By the time I arrived at the pharmacy I was immediately given my uniform and keys, with which we had access to all the doors in the department. A week later, a document was signed regarding the confidential rights of all the information, documents and clinical cases we were to be

given. Sara and I were both pleasantly surprised by the trust and credit given to us (once we could access every room and hospital information) and this made us feel part of the team and also more confident about the weeks ahead.

It is my opinion that *Kaiser-Franz-Joseph* Hospital is extremely organized in which concerns the bureaucracy involved in receiving new staff members or internees. The fact that from the first day we felt like every other staff member of this hospital, made us feel like we were participating and contributing for the Hospital running, which was truly motivational.

- **Laboratory and Analytics Department**

During these three months I had the opportunity to contact with a different department, which is non-existing in Portugal, the Analytics Department. In this sector, the responsible pharmacist proceeds to the analysis of every chemical substance that comes in the pharmacy with the objective of confirming the quality of the products which will be used to prepare new drugs in the Galenic laboratory.

Plant-based products are 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. Therefore, the previous analysis of all the compounds used for these formulations was needed as a validation performance of the quality of the final products.

We also performed, in the early days of our internship, the filling of tea bags, cream and ointments packages and also syrups (for instance, olivenol, mandenol, lavendenol, cineol and others) which gave us a different perspective on the use of different formulations in the hospital environment.

- **Clinical case**

The first project given to us concerned a clinical case of a woman diagnosed with Acute Promyelocytic Leukemia that 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. Moreover, tretinoin is a Category X drug, meaning its risks highly overcome its benefits and that it is teratogenic compound, thus needing special manipulation and administration procedures. Given all the cons, the pharmacists did a research on how to prepare a parenteral formulation from the tretinoin capsules.

Sara and I were asked to investigate whether it was possible to do this procedure by a different approach than the method used and also if there was a better way of obtaining the tretinoin fraction through HPLC methods.

We were very pleased by this opportunity, once it gave us the opportunity of doing an evidence-based research with a concrete objective and applicability.

In the end, we concluded that the previously used method was in fact the more adequate, once it was safer and more effective. Although we did not come to different conclusions, we were very happy to be given the opportunity to contact with a real-life case, where we saw and felt the value of a pharmacist in the administration of effective medication and its positive consequences in the patients' lives. In this case, the medication was successfully administered and the antineoplastic effect obtained.

- **The Quality Control project**

The KFJ Hospital does not have the ISO 9001 Certification yet, but is highly dedicated to its internal procedures of quality management, and is also considering a future application.

For this matter, we were invited to participate in one of the procedures performed in the hospital pharmacy. During six weeks we were responsible for the temperature control of all the fridges in the distribution and oncology department, aiming to prove that they were all calibrated accordingly to each temperature set.

The objectives were successfully accomplished and all the fridges were within the expected temperature range.

- **The wards project**

During the last two months of the internship we were responsible for checking all the medication and medical devices present in the wards. This project arose from the Hospital Administration need to acknowledge exactly 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 would go to the wards at a particular schedule, usually 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 the nurses that were always welcoming to our presence in the wards.

We managed to count every drug formulation, dosage and presentation off all the pills, capsules, granulates, syrups, drops, creams and ointments, infusion solutions and dressings; notes were taken in charts and updated in the system for further analysis and consultation.

With this project we concluded that each ward indeed holds a great amount of money in medication, leading not only to the waste of resources but also to eventual drug administration mistakes that might happen due to the lack of organization. For example, 6 packages of the same medication was a common scenario while all had only a few pills taken away. Also, packages with the expired date of 2019 were used before the packages with the expired date of 2016, the latter being probably wasted in a few months.

This situation of a great amount of medication in the wards walks hand-in-hand with the wasting of medication due to expired dates which was the main concern, in our opinion.

- **Distribution of medication**

Even if just for a day, we also had the opportunity of being in the distribution sector of the hospital pharmacy.

Similar to a Distribution Company, it looked a lot like the Portuguese companies such as *Plural Crl*. We collected the medication ordered by each service/ward after being approved by the responsible pharmacist. During that day we walked around the storeroom carrying the list of medications we were supposed to collect which was in a *phone-like* device, and by the means of an informatics program, each service/ward had a big container where de medicines were respectively deposited. Syrups and other fragile presentations were taken away by hand instead of by the big robotic system.

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.

Concerning narcotic drugs, we did not contact directly with the procedure but we came to the knowledge that it is given exclusively by the pharmacist and directly to the nurse responsible for the ward for which the medication is destined, and it is documented with special receipts colored pink.

- **Lectures participation**

During our internship we were also invited to attend two lectures given by pharmaceutical companies. The first concerned surgical needles and suture threads and the second was issued by AstraZeneca® and focused on the procedures issued from European Medicines Agency to Austria concerning the importation of drugs. Although both were given in German, we were glad we were invited as, once again, we felt part of the team and it also gave us a sense of belonging to the hospital staff.

- **Internship fellows**

I am deeply grateful for my fellow internees that accompanied me every single day and helped in the less motivating states of mind, Sara Nóbrega and Anne Bernard. As an extrovert, I could not imagine being quiet and silent all day long, and in a country where, in general, silence and quietude are a must (unlike what we are used to in Portugal), their company and friendship was somewhat essential to my well-being.

B. WEAKNESSES

- **German language**

When choosing Vienna as my internship destination, I knew language would be an obstacle in my internship. I took a semester of German lessons in my university, but German is not something you can learn in a blink of an eye 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 everyone felt comfortable with speaking English therefore the conversations and the connection were harder and more limited comparing as if we spoke their native language.

As a pharmacist to be, occasionally I was sometimes frustrated not being able to understand all the 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 I hope I can, in the future, improve my German 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.

Nevertheless, although language placed a very importance barrier, it is my opinion that efforts have been made and I felt interested and motivated in the internship environment regardless.

- **Beginning of the internship**

The first two weeks of the internship were not as good as I initially expected, although we completely understood the reasons why. Due to an auditing by the Austrian Government that were to happen in two weeks, they were all really busy and they could not pay much attention to us each time we had completed a given task.

The difficult part for me during those couple of weeks was to keep positive about the following months, once when I did not have anything to do I felt useless and had the feeling of being wasting precious time when I could be working on my thesis and community pharmacy report.

After all, I managed to keep confident and the internship turned out to be as I expected: Busy days, work routine and the strange feeling of time passing us by.

- **Pharmaceutical areas I was not involved in**

Last but not least, one of the weaknesses of my internship was also the fact that I did not 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 the patients and to help them with the prescription, in matters such as dosage, posology and other advices needed. The narcotics distribution was also an area 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**

This internship allowed me to contact with a new pharmaceutical area, the area of Hospital Pharmacy. Although I only have theoretical knowledge concerning the Portuguese system, during 3 months I had to opportunity of comparing the two models, the Portuguese and the Austrian and I found some interesting differences.

I was pleased to notice some aspects that in my view are superior in our country. For instance, the daily delivery of drugs to the wards in Portugal is normally done by a unidose approach, contrarily to what is done in Austria. With the wards project explained further, I noticed an increased waste of medication and money.

Additionally, the delivery of chronic drugs, for example for HIV or Hepatitis, is of exclusive hospital delivery in Portugal, which is done by hospital pharmacists, but in Austria instead of being given their medication in the hospital facilities, patients can purchase it in the community pharmacy when holding the doctor prescription.

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 on this matter.

This being said, it was a valuable opportunity to experience the hospital pharmacy functioning in Austria.

- **International experience**

In a multicultural world, that each day proves the need of international experiences to achieve personal development, it was always in my wish list to take this leap of faith and move from my comfort zone. In which direction, the path would soon tell me.

Coming to Austria was the best thing I could have done. Not only is it a beautiful country itself, where we can breathe culture and smell well-being, but it is also located in Central Europe, from where one can easily travel and taste different cultures. After traveling

to five countries in two and a half months (six cities to be more precise), with all the perks and all the downsides, I am a grown woman.

I arrived in Vienna with 23 years old, and that is exactly how old I am as I write this report. However, now I realize: that is just a number. In the middle of my routine, where I had to fit the internship, the thesis writing, fitness, hobbies and traveling, I found a way that leads to adulthood. Being responsible for my days, for my hours and minutes and making the most out of life while not neglecting anything was the best part of my summer.

I did not stay endless hours at the beach with my friends, but I went to countless museums and appreciated countless artists and paintings; I did not join an infinite number of nights out with my colleagues, but I walked endlessly through streets most people will never walk through. Between Vienna, Prague, Berlin, Krakow, Zurich and Salzburg I lost all my belongings, lost patience, lost myself a couple of times and even lost my time with time consuming tasks. However, I gained something greater, the feeling of accomplishment and self-worth and the satisfaction to say I have walked this long road and made it through.

Three months later, my feet hurt but my heart is warm and smiles at the experience I have been given. Today I am more independent, emotionally stronger, and overall more capable of living my life regardless of what society might impose on me.

This being said, the personal growth this internship has provided me with is measured neither by a grade nor the money on my wallet, but by the self-empowerment and self-worth I have experienced.

- **Development of soft skills**

Aside from the personal and technical growth, I can say I have also developed my communicative skills and critical thinking during this internship, while living a more proactive lifestyle than the one I was living at home.

Not only am I more tolerant with other people, working in a different environment made me realizing the need for constant adaptation in any situation in life. Whether it is in my working environment, or in the city with all kinds of races and ethnics, I considered that I have improved my empathy towards others, respecting everyone's diversity and ideologies.

For instance, while living in an Islamic neighborhood I was fearful at first, not knowing if it was safe and not feeling comfortable, but it did not take much time until I realized how I was being affected by social standards and stereotypes.

In my view, all the little things had up into building a more respecting and tolerant self and therefore this was a much valuable opportunity of my internship.

D. THREATS

- **State of art in Portugal**

During my internship, I got in touch with two different realities, the Austrian and the French. Almost immediately, I understood that following a Hospital Pharmacy career was much easier than in my country, since there are more opportunities for students to choose this area, starting with the specialization immediately after finishing 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 be to pursue a career in hospital pharmacy.

With this statement, it is not my purpose to say that hospital pharmacy in Portugal is worse than in Austria and France, but that as a pharmacist student and a pharmacist to be 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 aspire the same will be forced to find an opportunity abroad and leave Portugal.

I considered it a threat, due to the fact that I have invested in an internship in Hospital Pharmacy even though I will probably not be working in this area. Today, I have indeed more experience in an area that fulfills me as a future pharmacist but if I will ever have the chance of putting it to use, only time will tell.

- **Erasmus Placement**

One of the issues of my internship that I felt as a threat was the fact that, due to being done in a foreign country, there were some aspects that I have learnt that I will not give future use in my country and yet others that I should have had contact with but, due to differences in the logistics of the pharmacy services between Portugal and Austria, I did not have the opportunity to learn.

This being said, the internship provided me with great work experiences, as stated above, but also lacked in some aspects that I would have benefited work wise.

III. CONCLUSIONS AND ACKNOWLEDGEMENTS

In the end of this journey, I fondly carry all the memories in my heart. From the first day of work and shy smiles between co-workers, to the look on everyone's faces in public transportation whenever we started speaking Portuguese – what a strange language, they all thought. From the first trip Sara and I took together to all the stomach-aching laughs we had; from the different ideas and ideologies to all the healthy discussions about life issues and shared dreams. From the knowledge acquired, to the free sunny afternoons we enjoyed. We travel back to Portugal with a million stories to tell, and with a fulfillment and joy no one can imagine, let alone understand.

For this matter, I thank to all that allowed me to have this experience and hope I am just one in a million we are lucky enough to cherish moments like this in life.

Esta viagem nao seria possivel sem a ajuda e apoio de algumas pessoas, as quais nao posso deixar de referir, e escolho agora a minha língua não só pelas saudades de a escutar, mas pela importância que tem para mim.

Um sincero Obrigada ao Professor António Ribeiro por nos ter facultado esta enriquecedora experiencia, tendo desde logo mostrado disponibilidade e entusiasmo por estabelecer contacto com a instituicao que nos acolheu, o Hospital Kaiser-Franz- Joseph em Viena. Agradeço também ao Professor Dr. Robert Terkola por nos ter recebido e pela flexibilidade que demonstrou em relacao as datas de estágio, o que tornou possivel a sua realizacao.

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Por ultimo, como nao poderia deixar de ser, agradeço a minha familia por me ter possibilitado esta enriquecedora experiencia, que nunca vou esquecer.