Conversation about the Career Development for a Clinical Programmer-To Choose Their Own Way

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ABSTRACT

Some people believe that the pharmaceutical industry is in full swing now, and the sparrow can become phoenix, however, others think none of industries are prosperous especially after pandemic. Meanwhile, the trendy mainstream is that the future will be the era of AI, and AI will reshuffle the talent market.

As clinical programmers, we need to think deeply 'What we can do now? What we should do now and what kind of persons we will become in the future?'. In addition to making career plans in advance, we need to work hard to reach our goals so that we will not get lost in the fast-changing world.
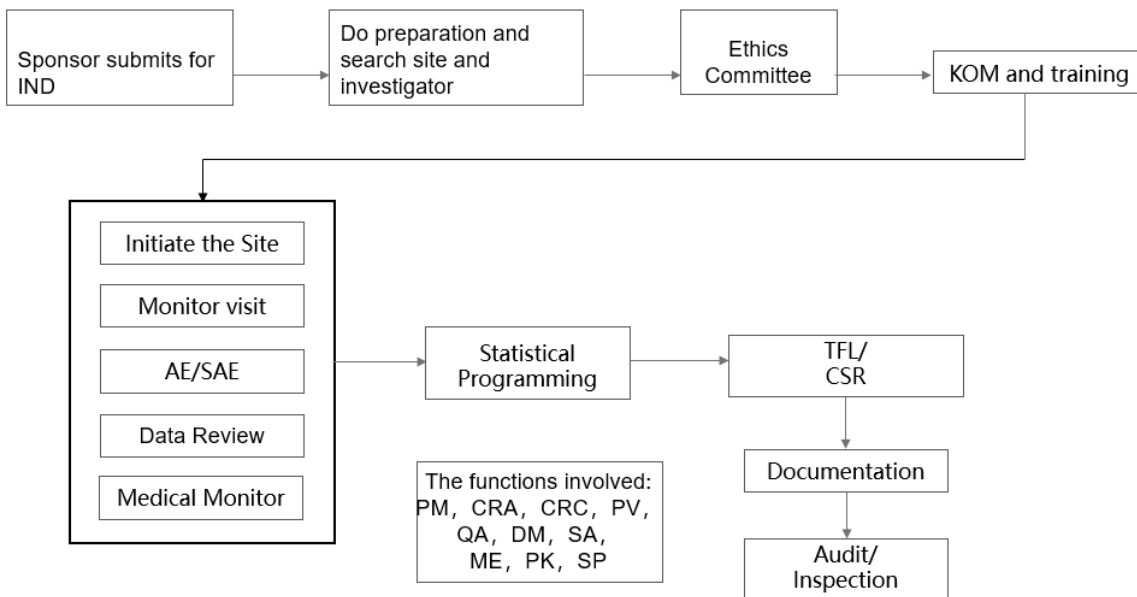
INTRODUCTION

A clinical programmer is labeled by programming from many people's perspectives, even by programmers themselves. Of course, we use a variety of programming tools every day (main tool is still SAS), and coding is a key section in our daily work. However, the actual purpose of work for all kinds of programmers including IT is to achieve a result, instead of programming. Programming is just a tool. Clinical programmers need to have certain medical knowledge to understand clinical data, statistical methodology, and use programming skills to get the final clinical study report. So clinical programmers can major in computer, statistic, or medical, as long as any person like this job and he can use SAS. Since our background is diversified, can multiple choices be provided for our career development?
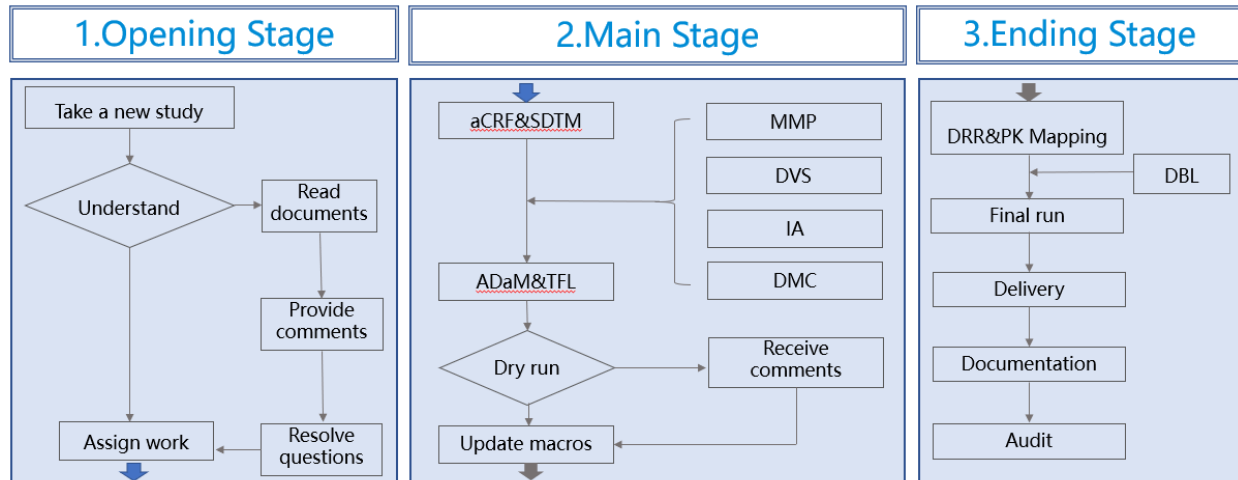
In this paper, we will discuss the position, responsibility, and future of clinical programmers in clinical trial.

CLINICAL TRIAL PROCESS AND WORKFLOW OF CLINICAL PROGRAMMERS

CLINICAL TRIAL PROCESS

WORKFLOW OF CLINICAL PROGRAMMERS

1.Opening Stage	2.Main Stage	3.Ending Stage

In the whole clinical trial process, clinical programmers are usually involved in a relatively later stage, and our work is far more complicated than most people expected. There are many factors which can affect our work. Even in very mature systems, it is very common to meet thorny problems.

DEVELOPMENT TYPE

COMFORT ZONE

- Technical staff, specializing in programming or statistics

  Conditions: full passion and strength

  (The actual demand for technical personnel in the market is currently limited, with a typical ratio of 1:10)

- Repeat similar tasks, day by day. Generally, aim to get a decent job with good benefits.

CHALLENGE AREA

Get out of the comfort zone and expand the flied of vision so that it is easier to meet challenges and more opportunities and become not much mediocre.

CHOOSE YOUR OWN PATH

KNOW THE EXTERNAL ENVIRONMENT

There are many possibilities for future development. It is important to choose the way which suits you.

'Statisticians, project management, technical expert, CRO, Pharma, Global, Local…' Each direction has different characteristics.

For example, what is the difference between global pharma and local pharma?

Global Pharma:

- Has a proven process

- Mature hardware and software with various tools

- Cutting-edge technology

In summary, we can set up a solid foundation of both training and project experience in global pharma which is important for personal growth.
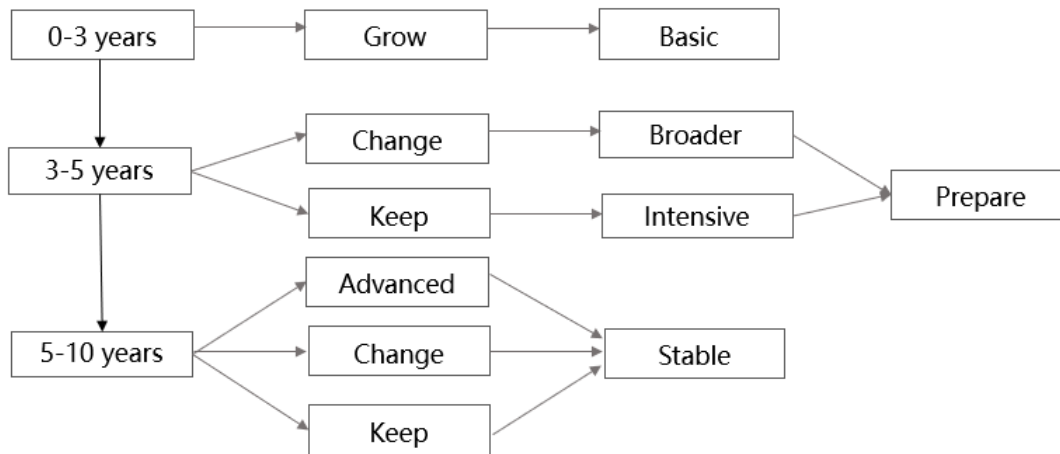
Local Pharma:

- Team is usually newly established and develops rather rapidly

- The rhythm is varied

- Large room for growth

Through cooperation with other functions, the scope of involvement is more extensive, we can get more profound understanding for clinical trials and clinical programming. Moreover, it is easier to have a certain degree of autonomy, and more innovative to establish their own set of rules.

SELECTION NEEDS TO BE CARRIED OUT IN STAGES

On the other hand, different considerations and various experiences are needed when faced with choices. Just like each stage of life has different mission and focus.

For young folk, it is important to have a solid foundation and be in the stage of learning and exploring their potentials.

Programmers with 3–5-year experience are equivalent to graduates in the career, and they can work independently. However, currently, they are already facing the 1st turning point. They have some options to choose about their future and may find suitable ones with rapid development.

For 5-10-year experienced programmers, some of them may have gained a lot of energy from the previous change and will face with a second chance to explode in this stage. Or some of them can feel that they missed the 1st chance, so they are brave and eager to change at this moment. Of course, some of them may continue to keep stable.

This is also a relatively common rule on our talent market. After 10 years, the overall professional state is very stable, and the corresponding career planning is relatively clear and fixed.

STORY

I have been a clinical programmer for more than 10 years. It has not been always plain sailing in the past 10 years. Sometimes I felt bored with my job so that I even don't like this whole industry. I even wondered if I could start a new world. On reflection, I was reluctant to completely give up the hardships I had suffered, and I began to consider the other direction 'How about a statistician'. However, after understanding the daily routine work as statistician, I realized that I am not interested in interacting with the people from the other functions and I enjoy coding and exploring data so much, therefore, it would be more suitable for me to be a programmer. But I still wanted to make some changes, so I chose local CRO and then went to local pharma. Through these experiences, I gained positive development and broadened my horizon. I put what I learnt before to use. I become more confident, and I am clearer about my future. So, I sincerely hope everyone can find their own bright sides and disadvantages and then make best fit career plans.

CONCLUSION

In recent years, the pharmaceutical industry is indeed hot, and headhunters are very active as well. Seemed there are lots of opportunities for clinical programmers, but meanwhile there are also a lot of hidden traps. It needs more cautious to make any decision about career development.

Moreover, many people are anxious whether AI will take their job one day. In fact, AI has not yet developed to an omnipotent state. We still use some automation as tools. Of course, we cannot ignore it and just relax, continuous development and non-stop learning is always the best option.

After reading this paper, please ask yourself the following questions,

1. What can I do? – Ability

2. What do I want? – Aim

3. What is my environment? –Condition

4. What do I need to do now? –Preparation

When we have answers to these questions and have been practicing toward our goals, then I believe that each of us will gain something. If we make continuous progress, we won't be washed out by times.

ACKNOWLEDGMENTS

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RECOMMENDED READING

- *International Conference on Harmonization (ICH) E6 Good Clinical Practice (GCP) Guidelines*

- *National Medical Products Administration and National Commission of the People's Republic of China Good Clinical Practice (GCP)*

CONTACT INFORMATION

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