ABSTRACT
Remote Working or Telecommuting has become more of a norm than exception. To add a dimension of off shore Functional Service Provider who extend this to their employees whilst maintain the status quo is a challenge in itself. Companies situated offshore are embracing this feature of flexible hiring by casting a wider net or to retain the existing talent. Only a handful of companies in the Statistical Programming Sphere have been successful in having a Full Remote workforce.

Statistical Programming is a diverse field involving frequent discussions with fellow Programmers and Client Point of Contacts (PoCs) within the Statement of Work (SOW). A strong liaising with Data management staff, Statisticians and Medical writers is expected. Remote working thus throws a challenge for effective communication within & between global teams. Some examples being: Communicating timelines of each deliverable, data issues, validation comments and work transitions. The authors provide their thoughts of overcoming such challenges and in building a strong, transparent working culture. Other common issues like Upgrading skill sets, time management, work-life balance are also discussed. Authors with their own diverse experience, One with majority of experience at Onsite and the other from Offshore share their own candid experience of their Statistical Programmer journey in the current Remote working realm.

INTRODUCTION
Pharmaceutical Companies are always in the process of providing safe, efficient novel drugs and therapies for unmet needs of patients and thereby supporting a larger social cause. We therefore should endeavor to put forth our best efforts and make the most of the available time.

As we work with a team that is spread across different geographical locations, few factors help us to setup a smooth schedule of meeting Project timelines. The authors thereby wish to provide some basic suggestions and tips for improving and maintaining productivity in a remote working system and share their own experience of some of the main categories that stand out.

COMMUNICATION
One of the essential requirements for a strong remote working is to have an open and transparent communication between and within teams. Social interactions like conversing with team members in meeting rooms, lobby or cafeteria helps one connect with individuals better and helps channelize useful information. In Remote world, the team members can connect frequently through scheduled meetings and 1-1 calls. Depending on the scope of work and timelines, meetings need to be scheduled within/between teams wherein each team member has enough scope of providing project-based updates and getting necessary clarifications. Every team member should be encouraged to openly discuss about issues/challenges, new thoughts/ideas, achievements/accomplishments in their work schedule. Each meeting should keep at least 5-10 minutes of optional time to have lighter communications beyond project-based activities. This will help develop a strong bond and confidence between team members. Celebrating accomplishments of project milestones or any challenging tasks either individual / team level is another way of building strong camaraderie between team members.

VALIDATION/DATA ISSUES (TRACKERS, EMAIL)
Statistical Programmers are expected to review documents like Statistical Analysis Plan including mock shells, SDTM/ADaM specifications, Define.xml, SDRG/ADRG and validate programs for datasets and TLF reports. All review and validation comments must be recorded in a tracking sheet with proper date and response. If the Organization do not have a standard tracking tool or file, then all the findings must be
clearly written and emailed to the designated Stakeholder, keeping all the required team members in the loop. Comments and findings can also be supported with snapshots of data/text fields for clear identification of the issue. As most organizations allow email retention of 90-180 days, any validation/review comments shared and discussed over an email should be archived at an appropriate study location for future reference. On occasions when the complexity of the issue needs to be discussed over a call, either 1-1 or with other team members, meeting minutes/summary notes should be prepared after the meeting and should be shared with all stake holders. The meeting minutes needs to be archived accordingly.

Statistical programmers generally initiate the datasets development activity early in the trial and hence might encounter unclean data while programming. It is essential that these data issues are tracked and monitored carefully. Since the communication of data issues happens between different teams, a data issue log file needs to be maintained. This can be a running document wherein the issues are raised and responded at specific interval of time based on the study timelines. Meetings can be scheduled occasionally between the teams to obtain the status on data collection, review and open issues.

Sharing validation/review comments or data issues over an Instant messaging tool/app should be avoided.

ARE YOU THERE?

Understanding a team composition and following a disciplined working time is very critical. As a part of global team, Statistical programmer need to interact with Project managers, Data Managers, Statisticians, Medical Writers and Programming team members. It is essential to understand the composition of the team, location and dependencies. Based on the Scope of work, one can establish a common working time with the team of highest dependency and adjust the working hours accordingly. If the Statistical Programmer is based out from India and the Client/other team members are from a different location say San Francisco, USA (West coast) determining a common working hour might be challenging. However, as it is essential to have meetings/calls and discussions with the Client/team members, the Statistical Programmer needs to ensure that at least 3-4 hours of his/her working time overlaps with the Client/team members of highest dependency on a daily basis. This overlap time should be consistently maintained and informed to all global team members to ensure smooth flow of work activities.

Out of Office (OOO)

In a remote working system, it is imperative for individuals to communicate their leave of absence (late to work, planned or unplanned leaves) to the team members at the earliest possible. For any planned leaves, an OOO message with necessary details like start and end of leave period, reason and contact person who can handle the work during the absence should be mentioned. For late to work or unplanned leaves a short email to all team members or a note in the IM app/tool can be considered.

SETUP

In order to work effectively we need a proper set up. As we find ourselves working over an extended period of time, a quiet and relaxed environment is required where one could focus and get into the Flow - the zone where we carefully review study documents and write efficient code to solve problems.

Workplace: Identify a suitable workplace at home, typically a Study room where a proper workspace can be established. Working while watching television in a in living room or, while cooking/having meals in a kitchen/dining should be avoided. Workplace should help one focus and concentrate on the work and reduce possible distractions.

Study Table/Chair: Once a proper workplace is identified setup a good study table spacious enough to accommodate work accessories, reference books/materials, gadgets and any other items like desk organizer, an inspiring photograph, motivating quotes or a lucky charm plant. An ergonomic chair with proper lumbar support is highly recommended. As a Statistical Programmer one could always expect long hours of coding on a trot, a good chair significantly helps reduce stress on the arms and back.
Monitor: In addition to a primary desktop/laptop an external monitor is extremely useful. A monitor can be used to view a reference file like a Tables/Listings/Figures mock shell whilst generating/validating a program or a referring a Work instruction whilst developing/reviewing a study document in the primary system. An external monitor will also be useful to read study documents, view datasets, examine graphs and reports.

Keyboard and Mouse: An external keyboard and mouse can also be installed as per one’s convenience and comfort. An ergonomic setup expects good eye distance from the monitor and an external keyboard and mouse will help achieve a safe distance.

Printer: A multifunction device, typically all-in-one with print, scan, copy feature is recommended.

Internet: Since internet is a basic work necessity to connect to a secured remote workspace or VPN, a stable (wired, bandwidth) internet connection from a trusted service provider is essential. Having a secondary internet connection/back-up like a dongle or mobile hotspot is preferred in case of any interruptions in the primary connection.

Headphone: Using a laptop or external speaker might produce echo in the call. It is recommended to use good noise reduction headphones during online meetings and 1-1 calls. This will reduce distractions and ensures better voice clarity.

PRIORITIZE (AVOID PROCRASTINATION)

It is important to prepare a daily to-do list and prioritize the assignments. Understanding the nature and purpose of the deliverables (DMC, DSUR, Interim Analysis, CSR), timelines and planning to implement the same is essential. For example: In development of SDTM s, it is important to have all required information: Protocol, SAP, CRF, raw data, vendor files and specifications. If there is a delay in receiving external vendor files, domains which rely on these can be held off until we receive necessary information. Once the tasks are prioritized, ensure the same is communicated to team members. It is a good practice to keep the Study Tracker updated with priority tasks, progress and a tentative date of completion.

In rare cases where an activity is finished earlier than anticipated date, communicate this and take up the next tasks. By planning early last minute surprises on the day of deliverable can be avoided.

LOCATION (WHERE DO I FIND THIS?)

Storing any study related documents on the local system should be avoided. All documents should be accessed through secure connections like VPN or SharePoint as required. Any Sensitive files containing personal data can be uploaded to secured cloud drives, so that they can be accessed from any system with proper credentials. This will ensure that any system issues like login failure, hardware malfunction, corrupt software has minimal impact on the routine work.

Statistical programmers generally refer printed copies like Statistical Analysis Plan, Mock Tables/Listings/Figure Shells, SDTM/ADaM specifications to program complex algorithms and develop reports. In addition, Lead Programmers are required to sign off on critical deliverables sheet for each study. All signed hard copies of study related documents need to be preserved in a proper location to be readily accessible. Other documents containing confidential information should be shredded.

Transition (Knowledge Transfer)

Individuals moving up the ladder, accepting better prospects or taking a break from work causes knowledge drain. As a remote working team member, one needs to ensure proper knowledge transfer and documentation of study files takes place. A transition form should be completed and sent to the team members with at least the following details: Date of transition, Associated team member(s), Details of Study activities, Current Status and Upcoming deliverables/milestones. This activity must be planned so that the new member has enough time (at least a week) to gain sufficient knowledge and get any clarification. There could be unexpected changes in the timelines or deliverables and hence availability of the outgoing member for few initial days will be beneficial. Also, an organization can have a Knowledge management system wherein all the critical information can be stored.
**GROWTH**

Early on in the career of a Statistical Programmer, tendency is to share screen, explain the programming logic, data issues. Now, writing this for a cross functional team in an email takes a different approach. All through the education, focus is on writing one’s own ideas, understanding, thought process. Whereas, in a Professional working environment, this changes to how the reader of the email interprets. Preparing the team for email writing, for example making a problem statement, along with an objective of what one intends to achieve can be part of one’s training curricula.

Every Organization have their full-fledged training programs. However, they may not be adequate and might not fulfill individual interests, growth prospects. Apart from all the organizational trainings, individuals can also enroll for part time/weekend courses from reputed Institutes on topics which will help them on their current role or provide growth opportunities within the organization/Industry. Trainings can also be taken online through Massive Open Online Courses conducted from globally reputed academies.

**WORK-LIFE BALANCE**

It is essential to balance the available time for professional and personal life. One’s work should be rewarding enough and still provides enough time to spend on personal activities. Once the core working time is agreed and established, the same needs to be communicated with family and friends. It is generally helpful to take breaks between projects and deliverables to avoid burn out, a time to recharge and maintain the same passion, continued focus on work. It is recommended to spare some time for personal interests and hobbies. Even though maintaining a perfect balance between the professional and personal life might be challenging, an Individual can try to achieve it over a period of time with proper planning.

As a team member it is important to understand and respect other members time and personal commitments. Meetings and quick calls outside of the agreed working time should be avoided.

**CONCLUSION**

The key takeaway to unlock synergies lies within each individual, to recognize and rise above the fallacies that surround us. Let’s be open to new ideas and also take into one’s stride “Perfection is the enemy of the Good”.

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**CONTACT INFORMATION**

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