Paper SP09

Great!! Not So Great… How to Capture it All in an Effective Lessons Learned Discussion

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ABSTRACT

Each day, while executing tasks during various phases of projects, techniques for improvements are discovered. Every lesson learned from a project can be valuable for future projects. The key to success is conducting lessons learned meetings to record project successes and areas of improvements and sharing these across teams to take advantage of organizational best practices and prevent teams from repeating past mistakes. Having had the opportunity to facilitate lessons learned sessions for both highly successful projects and projects with multiple challenges, I have gained valuable firsthand experience in discussing both scenarios. This paper will cover topics around conducting an effective lesson learned meeting from these experiences. The paper will outline preparations for a productive lessons learned meeting, how to achieve maximum participation during the meeting, and course of actions to be taken after the meeting. The ideas presented will make both learning from mistakes and sharing accomplishments easier.

INTRODUCTION

Every project has learnings from individual experiences and experiences of the entire team. These experiences once analyzed could be used to improve the remaining tasks of the current project and also for future projects. Lessons learned are both positive and negative learnings gained. The important thing to consider is how to record these lessons and make these available for future use. Lessons can be identified at any time during the project. When lessons learned sessions could be conducted would vary on the criticality, complexity, and the timing of upcoming assignments. A popular time to conduct a lessons learned discussion is towards the end of the project, but it is not necessary to wait until the end of the project for recording the learnings.

The experience and methodologies described in this paper will aid both the project-responsible person/people who are in-charge of conducting lessons learned meeting and the project team members. The scenarios of lessons learned discussion mentioned here would bring information for both the sponsor and the contract research organization teams.

The paper describes why lessons learned are important, when to have lessons learned discussions, checklist to complete before lessons learned meeting, what to do for a productive session, what are the action items post lessons learned meeting, example template to record lessons learned, examples of lessons learned, and a few ways to make lessons learned discussions available to all.

WHAT ARE LESSONS LEARNED?

In simplest form, lessons learned are positive and negative experiences encountered during the process of performing the project that improve project understanding.

WHY ARE LESSONS LEARNED IMPORTANT FOR PROJECT TEAMS AND THE DEPARTMENT?

We learn from the project's successes and failures. Failures would tell us how to do differently, and successes would teach us good processes and practices to follow. The goal of a lessons learned discussion is to brainstorm and collectively identify what project stakeholders believe was done well previously and what could project team members do differently for future efforts.

The discussion could bring ideas about new processes to define and implement, needs of new tools and techniques, roll backs of any decision which did not work well, changes on team's strength or location, and similar ideas.

WHEN TO HAVE A LESSON LEARNED DISCUSSION

Lessons can be identified at any point of time during the project life cycle. A popular time to conduct this meeting are towards the end of the project. In addition, selecting periodic intervals during the project for such reviews could be beneficial. For project team to hold the lessons learned meeting instead of considering a convenient time, a better approach will be an appropriate time. This discussion could be at any time when it means best to evaluate what is working best for the project and what to change.

Stage of the project, time frame in the lifecycle of the project, any other project which could benefit from this current project, and attendees' availabilities are some of the items considered for determining the best time to have this discussion.

CHECKLIST TO COMPLETE BEFORE LESSONS LEARNED MEETING

1. Plan as early as possible and give heads-up to the entire team for maximum attendance.
2. Gather the list of team members and of key stakeholders, their email addresses, and send meeting invitation to reserve calendar time much ahead of the actual meeting.
3. Share the importance of this meeting, and why it is important to have a positive and meaningful discussion. This would encourage team to gather thoughts for discussion.
4. Create and provide agenda items of the lessons learned meeting much ahead of the actual day of the meeting.
5. Reserve meeting room for the members who would be physically attending, and provide teleconference number, web link for the virtual conference for the remote attendees.
6. Request the key members of the team to give their perspectives well in advance.
7. As the meeting facilitator if you think that it would be hard to take minutes while conducting the session then, If allowed, either arrange to record the meeting or request additional help for taking minutes.
   Note: Check to see state laws, company policies, privacy concerns, and related scenarios before recording the actual meeting.
8. If any key member is unable to attend, arrange to receive their comments before the meeting.

WHAT COULD BE DONE FOR A PRODUCTIVE SESSION, CONDUCT DURING THE MEETING?

As the meeting conductor it is extremely important to check the pulse of the team and steer the entire meeting to capture what worked, what did not work, and what could be improved for either the remaining part of the project and for the future ones. If the lessons learned discussion is for a successful project then it is easy to get immersed in feelings of success and proud, and if the project was not so successful, it is very easy to get entangled in finding faults in people and processes. To keep the meeting not just for celebration or for pointing blame but to cover both positive and negative for projects could be challenging. To capture the items which has scope for improvement, and practices which proved useful there is a course of action one can use:

1. Create and use a well-structured meeting agenda where you would declare your schedule and stick to it. The start time and the end time of the meeting would be known to everyone.
2. Share the agenda items with everyone. It would usually involve opening address for the meeting, discussion rounds for lessons learned, capturing action items, and closing remarks.
3. Give everyone a chance to participate, and if someone is not present in the meeting but has provided their observations and findings, share those during the meeting.
4. As a facilitator, not only hear but listen closely to give equal value to all the concerned parties.
5. Mediate if there is a conflict without favoritism. Manage both agreements and differences of opinions.
6. Present open-ended questions to encourage team member's individual thoughts.
7. Steer the meeting to have a healthy discussion and avoid blame game.
8. Track the discussion, take great notes, and follow-up.

WHAT ALL TO COVER FOR A WELL-ROUNDED LESSONS LEARNED MEETING

When aiming for understanding the practices that were used, impacts these practices made and derived recommendations, the following topics could be covered to understand success and improvements needed:

1. Challenges and Successes of the project. What aspects went very well, and where were the glitches?
2. When problems witnessed, what solutions worked?
3. What recommendations could help teams in the future?
4. Best takeaways.

Depending on the project and which stage lessons learned meeting is conducted, the following sub-topics could be covered:

1. Goals of the project.
2. Expected deliverables.
3. Sponsor satisfaction.
4. Stakeholder management.
5. Quality achievement and improvement.
6. Timelines.
7. Budget.
8. Identification of risks and mitigation.
9. Infrastructure use, trainings and expertise needed
10. What aspects of the project could have been prepared in advance?
11. What aspects of the project were beyond team's control?
12. Were there any dependencies on any other team which is now recognized?
13. What challenges were experienced?
14. What could be done differently in future projects?

EXAMPLE TEMPLATE TO RECORD LESSONS LEARNED

Practice/Process Steps/Strategies/Successes/what worked well:

Description of Practice	Recommendation and How to Ensure Continuity	Responsibility to Ensure Continuation of Practice/Owner
Comment resolution meetings	Incorporate these meetings into overall	Monali

	timeline	

Areas for improvement/What didn't work so well:

Description of the Area for Improvement	Solution/Practice to Result in Improvement	Responsibility to Ensure Implementation of Practice/Owner
Responses to TFL findings not documented/Communicated in a central place.	Consolidated comments (track changes and/or comment log) with responses	All

ACTION ITEMS POST LESSONS LEARNED MEETING

1. Review the discussion topics addressed during the meeting and prepare notes.
2. Write detailed meeting minutes using notes mentioned above for comprehensive understanding amongst the team,
3. Circulate minutes for review amongst meeting attendees before finalization.
4. Within meeting minutes, document action items, record the owner(s) of the action items, and emphasize date due by for completion of the action by the owners.
5. Share meeting minutes with all the concerned parties, and store in a central location for easy retrieval.
6. Provide update to your management, and to all others who could benefit from the lessons learned meeting.
7. Encourage teams to evaluate and retrieve lessons learned meeting minutes, and or recordings from the repository for review. This information could be highly valuable for future tasks.

EXAMPLES OF LESSONS LEARNED, AND POSITIVE IMPACTS MADE FROM THEM

1. Having discussions and agreement in the early phase of project cycle than later for defining "Nice-To-Haves" for the project vs. "Required" helped team prioritize deliverables.
2. Recording skill assessment of the current project team members and utilizing these for future projects proved of immense help. For example, assessments like:
    - Team member 'A' can write programs for both safety and efficacy datasets, & TLFs.
    - Team member 'B' can program Tables, Listings, and Figures, or team needs training in writing programs for Figures.
    - In addition to having skills of programming the team member 'D' can write specifications also.
    - Team member 'E' can write a utility for batch processing.
    - Team lead could use administrative help in drafting meeting minutes.
    - Training is needed for using MS-Project software.

3. Use of version-controlled consolidated comments tracker (with track changes for responses and resolutions) placed in a central location for even small and minor comments helped team members to ensure completion of action items.
4. When assigning programming assignments to the team grouping unique & repeats TLFs together, and other similar structured outputs together brought efficiency in completion of outputs.
5. Creating and using macro for comparing new data cut to the previous data extraction before starting programming activities brought efficiency in programming activities. While checks could be made in great details, but broadly, data extractions comparisons for addition or deletion of any datasets, and awareness of any changes in the number of observations, and variables could save team lot of re-work and stress.
6. Adding incremental Subject Matter Expert/senior review in the timelines instead of only review at the end of the project helped project team complete deliverables on time. Instead of sending the deliverables for review at the end, incremental and rolling reviews avoided programming updates just before the final delivery.
7. In the onsite-offshore model issuing client laptops to offshore team leads greatly reduced the time spent by the client team leads on data transfer and preparation of assignments. Earlier, client lead Programmers were responsible for posting all data and files to the secure site for the offshore team. Once offshore team leads were issued laptops the bottlenecks, and the delays were less frequent. Client team lead would send the confirmation note about the data transfer, and offshore lead would download and assign work to the team.
8. Data differences arising from version mismatches when building integrated datasets was avoided by discussing in the kick-off meeting that if there is going to be pooling of data at a later stage. Specific questions about which version of MedDRA code to use for coding Adverse Events, which version of WHODrug to code concomitant medications and which version of Common Terminology Criteria for coding Adverse Events (CTCAE) for lab toxicity grading to be used gave information to the study team and reduced chances of potential re-work.
9. Start building Reviewer's guide and keep adding the content while decisions are still made proved out much easier than trying to remember every choice at the end of the trial. The reviewer's guide can be a living document throughout the course of the trial. Also, it helped in the cases where if for any reason any team members had to leave the team there would be documentation about data decisions being made to avoid confusion for new joiners.
10. Receiving dummy randomization file exactly in the same format as the final randomization file and much ahead of actual randomization time gave programming team time to prepare. For deliverables for meetings like DMCs, the timelines are very tight between actual randomization and the meeting. Once programming team has structure of the randomization file, at the time of randomization it would be simple rerun with some checking to ensure values are as expected and big programming efforts would not be required.
11. Scheduling daily project team meeting even if it is as short as for 15 minutes worked better than back and forth emails. This practice was very handy at stages when either the volume of the emails had increased or there was a need of frequent status checks amongst the team. Project team members prepared their questions, brought notes to the meetings, and clarified their doubts within the meeting.
12. Addressing warnings and errors found in the conformance report after running Pinnacle 21 validator or any other similar validation tool needs time. Similarly, documentation of unaddressed warnings and errors in the study data reviewer's guide or analysis data reviewer's guide need good amount of effort. Running Pinnacle 21 report during draft runs/dry-runs ensured these issues are addressed and not kept for the last minute when the final delivery is due.
13. In scenario of a study where the number of outputs is large and specific quality checks needs to be performed by a limited number of team members, deliveries in parts helped both sponsor and CRO teams. The division could be in terms of toplines outputs followed by non-toplines or,

division could be based on delivery of pre-decided outputs followed by the rest of the outputs or delivery of all unique outputs first followed by all repeats. This helped prioritizing deliverables and review for timely completion.

14. Inclusion of manual review in addition to CDISC compliance check by tools gave guidance to team on completing checks as well as drafting comprehensive study documents. The electronic tools could be used only after a certain stage of SDTM/ADaM development, but if an assigned reviewer or study lead could identify issues for domain mapping, data structure checks in the early stages, it could save lot of re-work later. In addition, experienced reviewer would look for both content and how well the contents are presented about the study data in the Reviewer's Guides.

HOW TO MAKE LESSONS LEARNED AVAILABLE TO ALL?

Lessons learned should be shared. Recording lessons learned and keeping them in a place accessible for the current and future members is a treasure.

The main idea behind lessons learned meeting and to record these is to prevent the problem from reoccurring in the future or to make a positive process available for future use. MS-Word document, MS-Excel spreadsheets, PowerPoint slide decks, and any other Project Management tool, are a few examples which could be used for recording these lessons. The current project team who participated in the exercise would receive the meeting minutes, and for others notification that the minutes are available and stored at a certain location could be made, or announcement can be made in a periodic departmental meeting. The resulting files placed and shared in the central location either on a common accessible drive or a collaboration portal are good places for storing these. Teams could use a defined place for holding not only current lessons learned but also multi project lessons learned notes. This place could be used as a reference area for all future projects. If there are company or department approved templates available, the recordings and storage of the meeting minutes would be easy.

NOW WHAT COULD WE DO WITH THESE LESSONS LEARNED?

- Allow individuals to have assignments to utilize their unearthed or newly developed skills.
- Retrain team members where weaknesses were identified.
- Review existing processes and policies for changes.
- Develop trainings for new processes to share with other teams.
- Give beneficial recommendations for an upcoming similar project.
- Encourage team to use communication plans placed in centralized place.

and similar actions.

CONCLUSION

How much we prepare ourselves ahead of the time with all what we can think of, each project brings its unique challenges and learnings. By conducting lessons learned meetings we have the opportunity to share the experiences of the project and try to avoid errors of the past and promotes best practices. Make a good habit of having lessons learned discussions and by capturing both positive and negative lessons learned notes, make the meeting effective for everyone!!

REFERENCES

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ACKNOWLEDGMENT

I would like to sincerely thank Christine McNichol at Covance for her thoughtful review and suggestions.

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