Using Lean Methods to Improve Efficiency of IRB Review

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Background:
The lean improvement framework empowers staff to continuously improve their work by conceiving and testing changes to their daily work processes and environment. We applied the lean framework to improve efficiency of the IRB review process at an academic hospital in the VA system.

Current State:
- The average time to receive IRB approval was 62 days, with some outliers at over 120 days.
- Process contained 71 steps
- Submissions required re-work due to missing forms or old versions of form being used.
- Some steps were replicated redundantly more than once (check-in review, scanning).
- No communication of expectation for how long reviews should take to lead to low customer satisfaction
- 49.5% surveyed somewhat dissatisfied or worse
- Specific steps delayed the process (Information Security review)

Improvements:
- Held weekly meetings with front-line staff to identify barriers and opportunities for improvement and value and non-value added process steps
- Redesigned the process to eliminate waste
- Visited another site to collect best practices
- Chose 11 changes to implement and test in these categories:
  - New checklist that gives guidance on which forms to use
  - Combine some forms to reduce redundancy
  - Communicate status of submissions
  - Remove redundant steps
  - Change the sequence of approvals to be more efficient
- Piloted changes and adopted those that led to increased efficiency

Results:
- Implementing improvements led to a 29\% (p=0.05) reduction in total process time, from 62 days to 44 days.
- The redesigned process had 38\% fewer process steps (reduced from 71 to 44), with fewer redundant tasks and more work done in parallel.
- Achieved better transparency and enabled management to work toward the long-term goal of addressing the root causes of rework.

Conclusions:
- This project demonstrates the power of applying standard lean improvement methodology to a complex administrative process.
- By using these approaches we were able to reduce the cycle time of the process by almost a third.
- Important steps in completing this project were engaging the right stakeholders, collecting metrics about the current state, keeping track of improvement ideas by documenting Just-do-Its and PDSAs, and having a data collection plan in place to see if the changes had an effect.
- Working through the improvement project also gave staff an opportunity to learn lean thinking and apply it to other parts of their work.
- Redesigning the process also improved regulatory compliance.