RESULTS

To reduce average TAT from 36-42 hours to 24-26 hours, the laboratory was restructured to include, relocation and a new floor plan for linear specimen workflow with a larger workspace. Conventional tissue processors were replaced with continuous flow, rapid tissue processors, cassette batch sizes reduced to an maximum of 32, and fully automated embedding was introduced. Personnel was rescheduled to decrease family unfriendly working hours (3pm-5am) and total hours, while increasing laboratory efficiency.

MATERIALS & METHODS

- Customized WinSURGE® (Computer Trust Corp) Scanning Records using customized tools in Microsoft® Excel® 2013.
- Floorplans analyzing pathway crossings.
- Analysis of scheduled personnel shifts, family unfriendly (3pm-5am) schedules, and overtime.
- Analysis of cassette number reduction by increasing the number of spatially separated cross sectioned ellipse/s in Tissue-Tek® Paraform® Sectionable Cassette Systems (Sakura Finetek, Torrance, CA).
- Specimens were processed on Tissue-Tek VIP® 5, Tissue-Tek Xpress® x120, and embedded on Tissue-Tek AutoTEC® (Sakura Finetek, Torrance, CA).

RESULTS

The Paraform Sectionable Cassette System allows multiple cross sectioned ellipse/s in one cassette, locking their orientation from grossing to microtomy using Paraform Cassette resulted in less cassettes grossed, processed, embedded, sectioned, and less slides stained and reviewed. Daily volumes decreased from 1,600 to 1,358 (-13%), reducing costs and increasing profitability.

The new laboratory set-up reduced overall daily workflow by 19% for the entire Team from 215.5 hrs. to 136 hrs. (-37%) while reducing the daily family unfriendly time (3pm to 5am) by 6% from 119.5 hrs. to 44 hrs. (-68%).

The Paraform Sectionable Cassette System allows multiple cross sectioned ellipse/s in one cassette, locking their orientation from grossing to microtomy using Paraform Cassette resulted in less cassettes grossed, processed, embedded, sectioned, and less slides stained and reviewed. Daily volumes decreased from 1,600 to 1,358 (-13%), reducing costs and increasing profitability.

CONCLUSIONS

- The TAT depends on the instrument platform used: using the Xpress x120 and AutoTEC shortens the average time to Microtomy to 3 hrs. compared to 13.5 hrs. using VIP 5.
- Only 2% of the daily volume needs manual embedding due to specialty circumstances.
- Utilization of the Tissue-Tek Xpress x120 and Tissue-Tek AutoTEC allows task variety.
- The 4 stacked graphs on the left show the effect on working time for the entire laboratory.
- The 4 stacked graphs on the right show the effect on working time for the 4 Histotechnicians.
- The Tissue-Tek AutoTEC allowed 6 Histotechnicians to perform additional duties allowing variety during the work day.
- Designing a laboratory in a new building with a Leap workflow floor plan eliminated retraced steps and excessive walking time.
- Clients, Pathologists, and employees are happier.

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