

Time Utilization Study for Clinical Interventions Performed by a Complex Specialty Pharmacy



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Background

Clinicians providing complex specialty infusion services (e.g. pharmacists, nurses, dietitians) perform many tasks throughout their day related to dispensing, compounding, drug administration, and overall patient care. Within this organization, activities performed outside of the customary dispensing and administration processes are documented as clinical interventions. Through continuous patient assessment, clinicians can intervene in the patient's care plan to avoid care disruptions or complications. Interventions to recommend therapy modifications, mitigate side effects, promote adherence, decrease waste by educating on storage, and address insurance concerns all help to keep patients on therapy. Capturing the time it takes to perform these types of interventions delivers objective measurements to demonstrate the value specialty infusion clinicians provide to the overall healthcare system. The purpose of this study is to identify trends in the time it takes to perform an intervention along with the reasons and therapy types associated with the interventions for patients receiving infusion therapy in the alternative care setting.

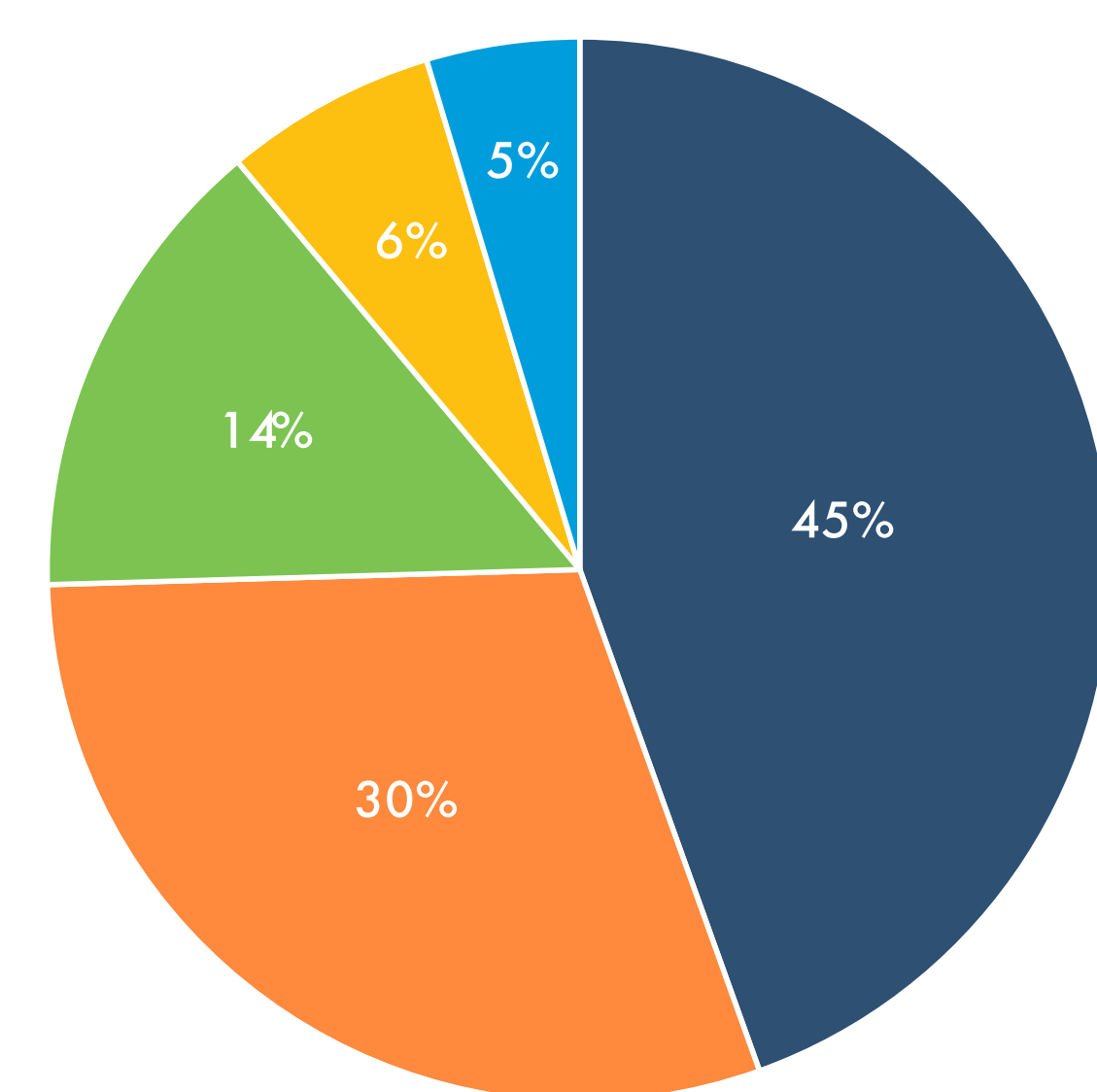
Methods

A modification to this organization's clinical intervention assessment to include a time measurement was implemented on October 1, 2022. The time it takes to perform an intervention is documented in 15-minute increments ranging from 0-15 minutes to >60 minutes. The reason for the intervention is selected from standardized options within the assessment. Multiple options may be selected for one intervention event. A comprehensive analysis of clinical interventions documented between October 1, 2022 – December 31, 2022, was performed using the proprietary clinical outcomes program SoleMetrics®.

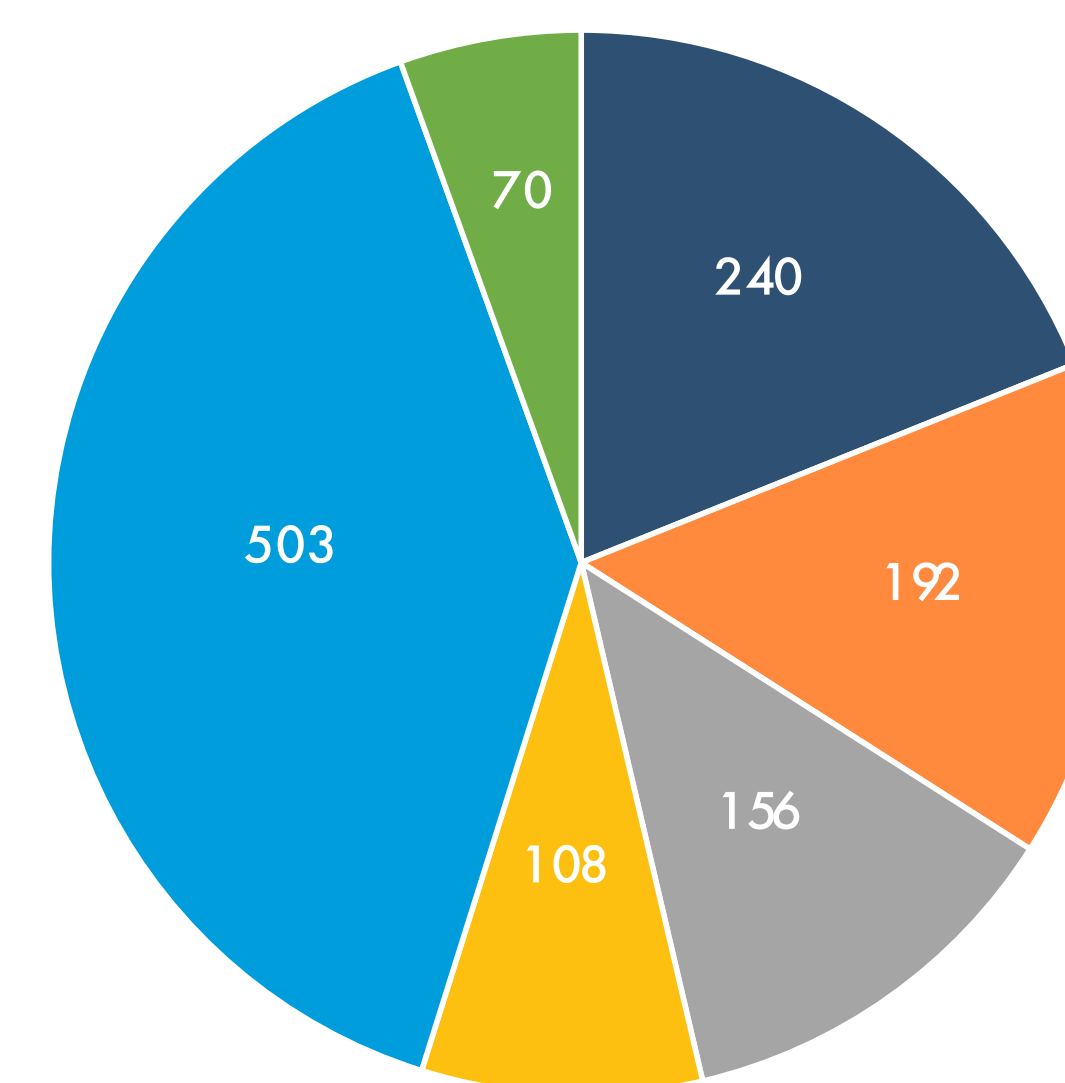
Results

A total of 9,626 patients received at least one dispense during Q4 2022. During this same time period, 783 patients had 1,269 clinical interventions documented. Most interventions took 0-15 minutes to complete (45%). The majority of the interventions that took 30 minutes or longer to perform were related to parenteral nutrition (64%). Nursing visits were prevented in 367 (29%) interventions, reasons including pump troubleshooting, dosing adjustment counseling, and flushing protocol review. Based on current estimates of nursing visit costs to payors, this represents a potential \$44,000 in savings for Q4 2022.

Time per Intervention



Number of Interventions by Therapy Type



Other Category	Number of Interventions
Related to Medication Not Dispensed by SP	11
Chemotherapy	10
C-GSF	10
Inotrope	9
Steroids	9
Edaravone IV	8
Ancillary Injectables	5
Iron	5
Factor	3

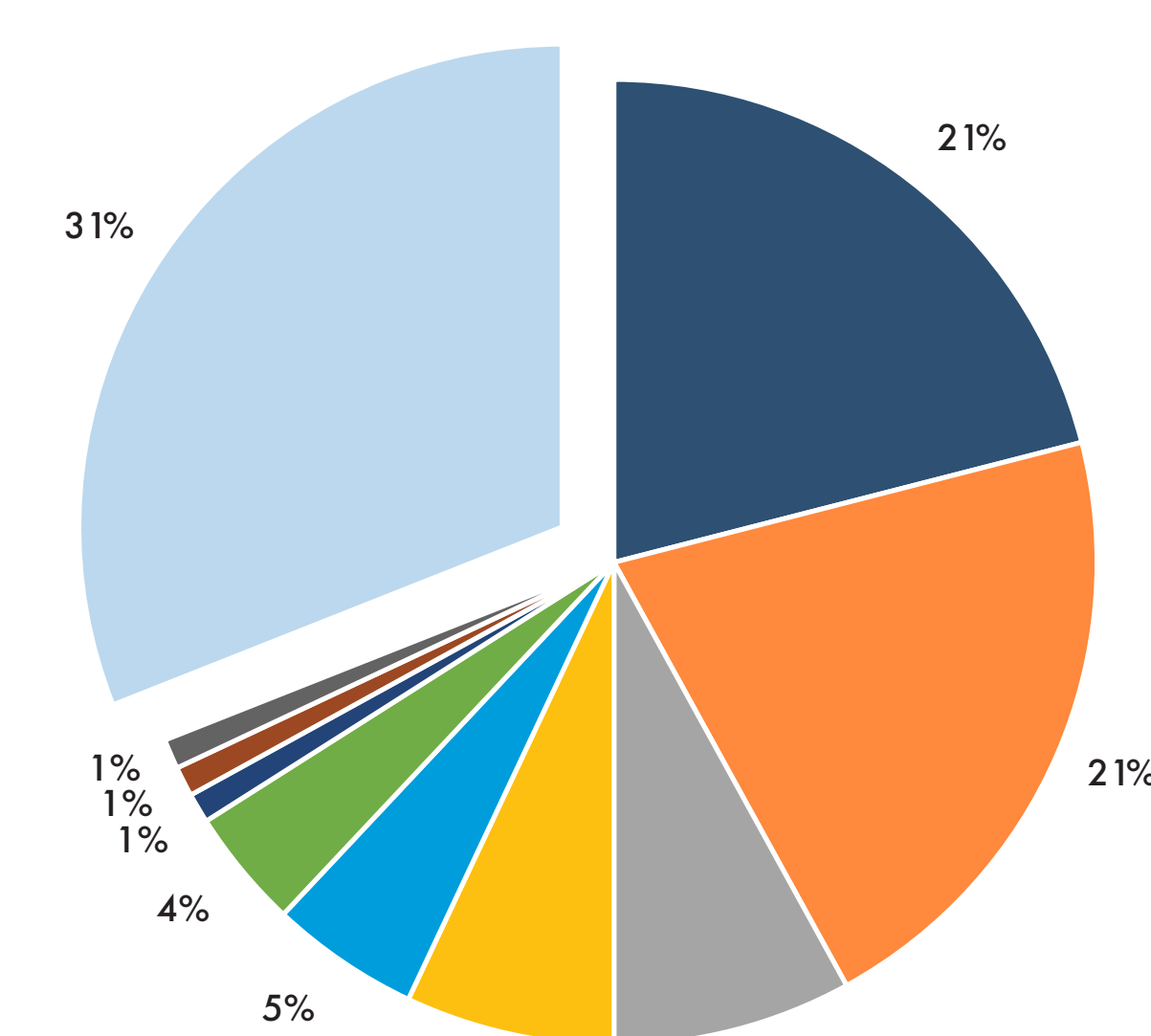
Discussion

After this first in-depth analysis of time utilization related to interventions, the next steps include a gap analysis to further investigate the intervention reasons marked as 'Other' to identify trends, if any, and modify the company's intervention assessment accordingly to include more options, further standardizing the responses and enhancing analytics capabilities. The organization's policy on clinical interventions will be reassessed and modified based on the gap analysis, and staff re-education will be performed.

Conclusion

Time utilization studies evaluating intervention activities objectively demonstrate the value specialty infusion clinicians provide to the overall healthcare system and to help forecast staffing models. Additional staff may be needed for patients receiving therapies that require lengthier or more frequent interventions, such as parenteral nutrition. Intervention analyses like this study can be replicated across the specialty infusion industry and used to develop care planning, practice guidelines, and training documentation. Continued studies will be utilized to further standardize responses and identify trends.

Intervention Types



- Other:
- Potential additions of OTC meds
 - Potential scheduling changes for medication administration and visits
 - Insurance related to other co-morbidities
 - COVID-19 related

- Lab values
- Counseling
- Response to therapy
- Adverse reaction
- Dose adjustment
- Therapy adherence
- Dose optimization
- Resolution of condition
- Allergic reaction
- Other

Intervention Time by Therapy Types

Therapy Type	0-15 minutes	15-30 minutes	30-45 minutes	45-60 minutes	> 60 minutes	Grand Total
Ancillary Injectables	3	0	2	0	0	5
Anti-infective	170	40	18	5	7	240
Biologic therapies (mAbs, etc.)	96	63	19	8	6	192
C-GSF	10	0	0	0	0	10
Chemotherapy	8	1	1	0	0	10
Edaravone IV	8	0	0	0	0	8
Factor	0	3	0	0	0	3
Inotrope	7	2	0	0	0	9
Iron	4	1	0	0	0	5
IVIg	83	41	13	9	10	156
Nutrition	97	197	120	56	33	503
Related to Medication Not Dispensed by SP	10	1	0	0	0	11
SCLg	62	31	9	4	2	108
Steroids	7	1	0	0	1	9
Grand Total	565	381	182	82	59	1269

