Five Pillars of Successful Time Studies

2023 Benchmarks of Top-Performing Hospitals

Table of Contents

A Letter from Our Founder

My introduction to time studies was a rude awakening. With a background in computer science and an entrepreneur's drive, I started a software engineering firm that developed a following among hospitals.

One day I went into the office of a CFO at a major hospital and behind him were stacks of banker boxes. He said, "Can you help me with these?" Inside were what he called "blue sheets," which were timesheets completed manually by hundreds of physicians, nurses, and other staff members. These time studies were all completed and entered manually, then manually validated, compiled, and aggregated to meet the enterprise's reporting and regulatory requirements.

My firm developed software to administer, track, validate, and report all of this information. It was a great success and cut the effort needed to a fraction of what it had been. That project is what became Time Study's origin story.

After years of developing a loyal customer base, we discovered the opportunity to innovate the practice of studying time in healthcare. Too many organizations are relying on outdated practices, whether it is manual sheets or unsophisticated homegrown software.

The goal of the *Five Pillars* report is to start sharing data-driven information to demonstrate the foundation of well-designed and executed time study programs. Together, with education and persistence, we can transform time studies into a strategic enterprise data asset and unlock the power of gaining timely insights into an enterprise's most valuable resource.

We appreciate our clients who have contributed to this effort and we look forward to creating more content in the coming years to further innovate this practice area.

Kishau Rogers

KISHAU ROGERS
CEO and Founder

Thanks for coming along for the journey!

Introduction

Every year in the U.S., millions upon millions of hours in hospitals and other healthcare settings are tracked, recorded, and reported – primarily to evaluate the efficiency and quality of care and to identify billions of dollars in Medicaid and Medicare reimbursement.

This process is a considerable endeavor when looked at in aggregate. Yet, healthcare leaders have little guidance on how to make it more efficient, insightful, and accurate. Without industry standards in place, health organizations risk losing reimbursements or not meeting compliance requirements with time studies that are slow and unreliable.

To elevate this practice, we must establish a new level of academic rigor. This landmark report is an effort to turn the proverbial ship in a new, more productive direction by learning from three top-performing healthcare organizations to identify benchmarks and best practices for strategic and effective time study processes.

Our aim is that these findings serve to educate and inspire practitioners and provide healthcare leaders with a roadmap to drive improvements for the future.

Data-driven Peer Benchmarking

As an example, if one knows that another organization can achieve 100 percent participation in time studies by its staff, that may be something to aspire to. (In fact, one team in the report's cohort achieved that result!)

For the purpose of this report, we analyzed a dataset that includes time studies conducted over 75 hospitals across the past five years, reflecting over 11 million hours studied, making it one of the largest data pools of time study in the industry.

The goal of this research is to use this data to show a path forward for the healthcare industry. By broadening awareness across practitioners and administrators, we can raise time study performance levels, provide more efficient and accurate data, and deliver new insights that open doors to growth.

A Push for Excellence in Time Studies

Back in 1956, one of the greatest barriers in human performance was broken when Roger Bannister ran the first recorded sub-4-minute mile – a record that had been chased since the 1880s. Another athlete followed less than two months later, and within a year four athletes broke it in a single race.

> ## As Bill Taylor wrote in the Harvard Business Review:
>
> *What changed was the mental model. The runners of the past had been held back by a mindset that said they could not surpass the four-minute mile. When that limit was broken, the others saw that they could do something they had previously thought impossible.* [1]

Let's examine what is possible, and in doing so, we can greatly improve a key area of work that consumes vast amounts of intellectual capital. Once we see what is possible, we can all reset our expectations and take a step forward together.

Taylor, Bill, "What Breaking the 4-Minute Mile Taught Us About the Limits of Conventional Thinking," Harvard Business Review, March 9, 2018.

Roger Bannister, 1954

Framework for Excellence

Time Study is the leading platform for conducting time studies in hospitals. Many of the top U.S. hospitals use our application to make remarkable improvements in workforce effectiveness, operational efficiency, financial performance, and compliance.

This report outlines the characteristics of successful and innovative time study programs. Through our analysis of three top-performing hospitals, we've identified five pillars for measuring time study program success.

Participation Rate

Our top performers averaged a 96% participation rate by addressing common barriers, such as inconsistent training and onboarding procedures, burdensome workflows, inability to recall or attest to the accuracy of the information reported, and poor accountability and executive sponsorship.

Process Efficiency

Top-performing organizations use automated communication systems to drive process efficiency and enable intelligent automation. For example, the average time study administrative team spends less than 3 minutes per session managing their time study process compared to 8 weeks per year for organizations with manual or distributed procedures.

Data Quality and Asset Management

Beyond cost reporting, our top performers use time study data as a strategic asset to support initiatives to improve operational efficiency and workforce effectiveness. They capitalize on tools to enhance data contextualization and deploy interfaces that improve data quality and leverage often-ignored or unstructured datasets.

Business Rules and Regulatory Compliance

Our top performers are centralizing business rules on an enterprise level to better navigate complexity, ensure compliance and audit readiness, build business agility and decision consistency, improve process efficiency, and reduce costs.

Program Value Management

Increasingly our top-performing clients measure the success of their time study program by time-to-value and overall business impact. In less than 9 days, a top-performing organization can expect a significant time study sample, increasing the speed of generating actionable insights that drive improvements in reimbursement, operations, and workforce effectiveness.

> Let's explore in detail how these leaders take charge of their time studies to ensure results also drive organizational success.

Top Performer Dataset

Our research sample includes healthcare systems with fully mature processes that have achieved a participation rate in time studies of greater than 85 percent.

663,532
Hours studied.

1,742
Staff reporting time studies.

3,638
Total beds in organizations.

926
Types of unique work activities.

2022
Calendar year of period studied

Time Study Frequency
- 2 weeks/quarter (1)
- 1 week/month (2)

Ranked #1
All are ranked #1 in their state by the U.S. News & World Report Top 100 Best Hospitals

+6.7%
Percent average net operating margin for 2021 compared to the national average (-5.0% for top performers vs. -11.7% national)

82%
Average HealthGrades score (the national average is 70% percent)

PERFORMANCE METRICS DASHBOARD

Snapshot of Top-Level Performance Stats

Program Compliance

96%
Participation Rate
The percent of completed time studies out of expected time studies.

2.5
Days to Completion[2]
Median time to receive completed time studies after the last day of the study.

[2]Only two organizations were included due to one using optional time reporting schedules that does not allow their data to be measured in this way.

29%
Near Real-time Data Submission
Percentage of time studies submitted within the time study period.

94%
Time Studies Completed in 30 Days
Percentage of studies submitted and approved within one month.

Program Management

1:8
Reporter-to-Supporter Ratio
Average proportion of support staff allocated to manage a group of time study reporters.

2m19sec
Supporters Engagement
Average amount of time support staff member spends on Time Study platform per interaction.

3m9sec
Administrators Engagement
Average amount of time support staff member spends on Time Study platform per interaction.

20%
Supporters with Approval Workflow
Support staff member is required to review and approve the reporter's time data before it is considered completed.

84%
Platform Feature Utilization Rate
The number of reporting insights and feature usage across all clients.

User Engagement:
Time Reporters

71%
Annual Quarterly Participation Rate

Percentage of active users that engage with the platform every quarter.

1m47sec
Time Reporters Engagement

Average amount of time a reporter spends on Time Study platform per interaction.

91%
Reports Linked to Supporters

Average number of reporters with one or more supporters.

Alerts & Reminders

4.5days
First Reminder Sent

Sent before the start of the study period. This is an alert to notify users that a time period is coming soon.

9days
Final Reminder Sent

Sent following the end of the study period. Final alert sent to remind delinquent time study users to complete their time studies.

Data Quality

98%
Email Delivery Rate
Percentage of system emails that reach the recipient.

86%
Average Profile Completion Rate
Completeness of a user's profile information that is pertinent to reporting insights.

94%
Time Studies Complete in 30 days
The average percentage of time studies that were completed within thirty days.

Training & Support

11%
Participants Submitting Tickets
Percentage of users who needed assistance.

FIVE PILLARS OF TIME STUDIES

Analyzing the Drivers of High Performance

Analyzing the drivers of high performance.

Our research uncovered several key factors – or pillars – that most influence time study success for a cohort of top-performing organizations.

These high-performing hospitals achieve extraordinary results by administering their time studies to achieve timeliness, accuracy, and efficiency. Through the Time Study platform, we examined the data and results of this cohort's level of performance and identified the five pillars that are driving their success.

Time studies have many purposes in healthcare settings. The most frequent use is for cost reporting, Medicaid and Medicare reimbursement, and grant compliance. In addition to conducting time studies, our top performers also maintain enterprise data that must comply with internal policies and procedures.

Monitoring and assessing compliance data ensures organizations stay audit-ready and avoid consequences for noncompliance from strategic misalignment to fines, penalties, and exclusion from federal programs such as Medicare and Medicaid.
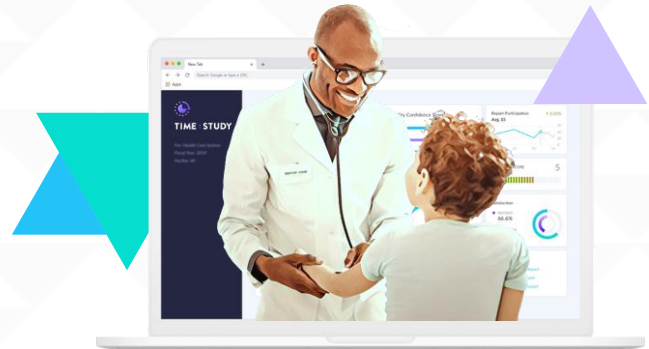
Additionally, documenting the rules for reporting and using historical time study data is vital for building enterprise data assets that may provide value to other business areas.

In Medicare and Medicaid reimbursement processes, top-performing organizations utilize time studies to secure substantial reimbursements, which requires accurate and complete tracking. Top Performers use this monetary incentive to modernize their time study systems and build reliable financial returns. Unfortunately, many organizations have not updated their processes to consistently earn back these costs, and as a result, they forfeit millions of dollars in potential revenue.
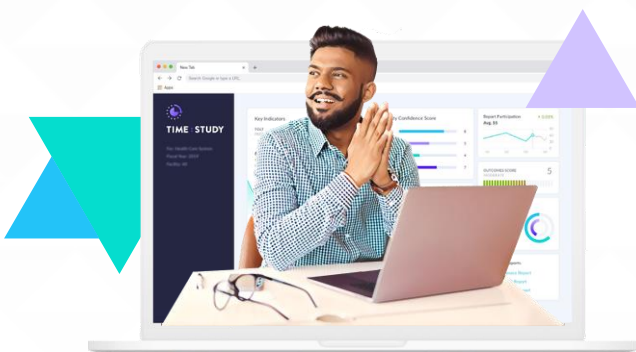
1. High Participation Rates

The single most important factor in improving time studies is to maximize participation by time reporters. These are busy professionals with demanding work environments, so it can be a tall order. Even when mandatory, time studies can get overlooked or done in a way that is not sufficiently granular to provide an accurate picture of what work the reporter is doing.

Our study cohort has **achieved a 96 percent participation rate, with the highest being 100 percent**. From our work in this space, this level of performance is an Olympic level – if time studies were a competitive sport. The good news is that this result is achievable for any organization.

Lower the Friction of Reporting: Intuitive and Accessible

Top performers ameliorate reporting friction by shortening the time required to participate, and enabling reporters to intuitively submit wherever they are in the facility.

On average **a session on Time Study takes 1m 25sec.** The reporter simply opens the page, confirms or allocates their time in pre-populated categories, and then submits it. The process is easy to complete and the workflow and user interface are intuitive.

Finally, **the cloud-based platform** can be accessed on a variety of devices, including computers, smartphones, and tablets. In busy hospital settings, clinical and administrative hospital staff have the freedom to report promptly and when and where it is convenient.
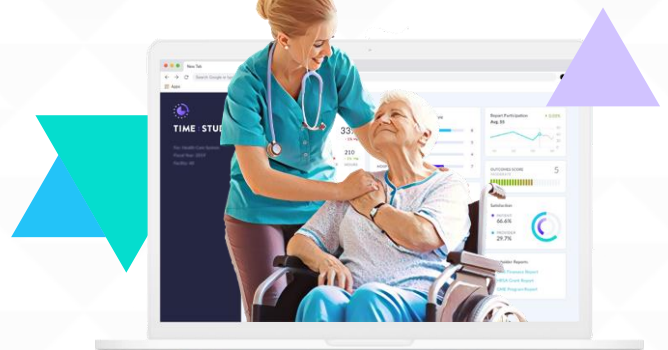
Onboarding and Support

The foundations of success start before the first time study is ready to go. Our cohort builds their programs from the beginning with clear guidelines and expectations for time study reporters.

Onboarding addresses participation, the importance of process, and executive sponsorship, which we cover in detail below in the Business Rules and Regulatory Compliance section. New reporters learn activity categorization and how to access the system and submit data in compliance with guidelines.

While straightforward, this training cements priorities and expectations from the outset. The software platform streamlines process and ensures that time study requirements are honored rather than ignored.

The last piece of the puzzle is providing ongoing support from an individual who administers and oversees the process.

If a question or problem arises, the administrator serves as a familiar face and direct line of communication rather than a generic "support line."

Training, onboarding, and support procedures significantly impact participation, process efficiency, and program engagement rates. Among our top performers, there was one support request per year for every 10 time study participants.

In 2022, **only 11% of top performing active participants submitted a support ticket.** Additionally, participants received quick resolutions to their questions or issues, with our average resolution time for Tier 1/2 tickets of less than one business day.

Automated Alerts and Escalation

The last piece of the puzzle to achieving extremely high participation rates for time study reporters is timely and actionable reminders. In manual processes, this is a challenge because administrators must chase after or prod busy professionals to complete the time study entries. This can be awkward for everyone involved.

Timely and actionable communications are critical factors for increasing process efficiency. The leading causes of low participation include the need for more information regarding the importance of time studies, burdensome time reporting workflows, and unclear communications about reporting requirements and consequences for non-compliance (where applicable).

The keys to a successful communication plan are clarity, timing, and action. To reduce administrative overhead, all time study communications should be concise and provide the right information and clear direction to the right person at the right time.

Top performers have a strategy for automatically distributing four types of communications, which facilitate the successful completion of time studies:

- **Help** - Training, onboarding, and support
- **Compliance** - Timely information to ensure that program requirements are met
- **Time Reporting** - Actionable time reporting alerts
- **Supplemental Data Requests** - Actionable validation and approval tasks

Having a system in place that automatically alerts time study reporters when tasks are overdue and deadlines are approaching is vital. For collecting time study information, the Time Study platform can automatically distribute four reporting alerts: notice, available, warning, and final.

- **Notice 4.5 days before the start of the time study period.**
  Give participants advanced notice about an upcoming time study and the intended submission deadline.

- **Available sent on the first day of the time study period.**
  Notify participants they can begin submitting or confirming their time study information.

- **Warning sent 4 days after the end date of the time study period**.
  Alert participants they have an overdue time study to complete.

- **Final sent 9 days after the end date of the time study period.**
  Give participants a final warning to complete an overdue time study before the stated deadline date.

2. Process Efficiency and Administrative Oversight

While high participation yields more accurate, complete, and timely data, the flip side is optimizing the effort required to capture that information. If having a rock-solid process in place requires dozens of employees to manage, then the cost may outweigh the benefit. That's why, to be effective, high-performing time studies rely on streamlined workflows and systems.

Supporters and Program Administrators

An efficient workflow is foundational to a successful time study program. There are several moving pieces to successfully conducting a time study, from defining business rules to identifying participants, documenting work activities, and enforcing reporting standards. Supporters are essential to this process as they are accountable for facilitating the completion of time studies for an assigned group of participants. For example, a supporter can document observed time, review time studies, monitor completion rates, approve time studies and request supplemental information from their assigned group. Our findings suggest that designating accountable supporters is strongly associated with higher compliance.

Across our top performers, **an average 91% of reporters are linked to one or more support staff**. When looking at the supporter-to-reporter ratio, we see a range across our top performers. On average, the ratio stands at one supporter for every eight reporters.

We see support staff supporting anywhere from one reporter to 113 reporters, depending on their role in the process and level of accountability.

Additionally, deploying an accountability system provides a foundation for improved data governance. Our top performers are increasingly extending the supporter-to-reporter relationship by implementing approval workflows. During the 2021 and 2022 fiscal years, 20% of reporters in top-performing organizations were linked to a support staff member that is also required to review and approve their time data.

Of our top performers, 84% of support staff regularly engaged with insights that support an efficient workflow. The availability and quick access to insights or relevant action items correlates to shorter session durations. Supporters **spend an average of 2 minutes and 50 seconds per session** on the Time Study platform.

3. Data Asset Management

Our top performers see their time study data as less a burden and more a strategic asset that supports initiatives and resolves challenges in finance, operations, and workforce planning. Healthcare data has become one of the industry's most valuable assets, and interoperability is one of healthcare systems' greatest challenges. Time studies conducted in silos lead to less knowledge-sharing across teams and limited opportunities to scale productive practices and build enterprise data assets.

Top performers are increasingly finding solutions to improve their time studies to support data contextualization, enable intelligent workflow automation, conduct more complex, individualized time studies, deploy data interfaces that improve data quality, and leverage often-ignored or unstructured datasets.

To fully maximize time study data, organizations must enable tools that manage data quality across the enterprise.

Accuracy	How closely does the information documented reflect the real-world?
Reliability & Validity	Is the data accurate and consistent? Does the data appropriately measure what you've intended to measure? Is the data contradictory to other trusted sources?
Completeness	Is all required information documented (including data that supports IT security, compliance monitoring and enables data contextualization)?
Relevance	Is the data collected relevant to the intention for conducting the study?
Timeliness	How close to 'real time' was the data collected?

Accuracy

Recall bias, the misclassification of information due to biased memory retrieval, is a consideration when completing time studies. Regarding periodic time studies, participants may experience recall bias when attempting to remember how their time was spent well after the activity passed.

On an enterprise scale, patterns of small errors lead to significant miscalculations, which can impact reimbursement levels over time and also compromise the organization's ability to use time study data to drive improvements. Our top performers exemplify real-time, or near-real-time, reporting practices to mitigate the risk of recall bias. Recall bias can result in data that is up to 40% inaccurate.

Reliability and Validity

Effective time studies hinge on reliable and valid data feeding into the system. While data reporting and other activity is being recorded, it's also important to validate data about your reporters and organization. Some examples of reporter user profile data include:

- **Email address and mobile number**
- **Accurate activity sets**
- **Staff salary information**
- **Calendar information**

These sources can streamline the time study process dramatically. Salary information, for example, is needed for generating metrics for the CMS Annual Cost Report. For those who have done this manually, they will attest to how labor-intensive this process can be. **If that time study reporter's salary is accurately noted in their profile, then the Time Study platform can automate complex reimbursement allocation calculations.**

Each of these data points as well as others can be made available automatically by interfacing Time Study with other enterprise software systems. Employment and other participant details are found in the HR system while scheduling and encounters can be accessed from an EHR system or other scheduling software. These data interfaces make the information instantly available and ensure that the reports are accurate – plus they eliminate manual data input which can lead to errors and increased reporting overhead. For example, our top-performing cohort has an email deliverability rate of greater than 98%, which indicates the source participant contact data is very high-quality and enables automated communication workflows.

Completeness

Data completeness procedures ensure that all required information is documented, including data that supports compliance monitoring and enables long-term data contextualization.

For example, maintaining complete participant profile data is key to conducting more complex time studies and generating actionable and predictive insights– a key factor to maximizing your organization's return on investment. As a result, our top-performing clients have an average participant profile completion rate of 86%.

Of our top-performing clients, 33% enabled a user (participant) provisioning data interface in 2022. The automated exchange of participant information with an established source of truth is crucial in reducing the time administrators spend on data and process management. For example, administrators with user provisioning interfaces spent half the time on the time study platform per session and one-fifth of the time for the 2022 calendar year (compared to organizations that have not enabled participant provisioning interfaces).

Relevance

Data quality is dependent on a clear purpose. Establishing data relevance guarantees that time study data can serve the business goals and avoid collecting irrelevant data, which can compromise the organization's ability to gather valued insights and increase the study's time and costs.

For example, across the enterprise, multiple stakeholders and external parties may determine the work activities to be studied.

If relevance is not considered on an enterprise level, organizations that conduct time studies to serve multiple intentions may result in workflows that require participants to respond to numerous requests for data and may result in process inefficiencies and low-quality datasets.

Top performers centralize their business rules and participant profile data to streamline workflows and activities. This approach enables dynamic studies that can collect relevant work activity data appropriate for the organization's purpose and participant.

For example, for organizations that conduct multiple types of time studies for various reasons, work activities may be documented on a granular level, then aggregated into broader categories of work to meet reporting requirements. Across our top-performing clients, the median number of activities studied is 20. These activities are then translated into a diverse range of broader categories, including those required for cost reporting (allowable, non-allowable, other), transplant, administrative, GME, research, patient care, and other relevant classifications of work activities.

Timeliness – Real-Time and Near-Real Time Reporting

To improve data quality, many of our top performers receive time study data in real-time or near the time that work is performed. For organizations following a predefined time study schedule, top performers receive 29% of their time study data on a real-time basis, with the median time to receive completed time studies at 2.5 days of the first day of the study.

So, what is the impact? There are patterns of small errors that lead to miscalculations which can impact reimbursement levels over time and also compromise the organization's ability to use time study data to drive improvements. Reporters tend to report their time spent inaccurately either in time spent or time allocation across activities..

As mentioned in the prior section, the ability to send timely reminders via automated notifications to reporters can drive process improvements for timely submissions. Additionally, organizations using manual processes and "homegrown" solutions can't track this type of data. With this data in hand, however, a time study administrator can make it a priority to encourage more timely submissions resulting in increased reimbursement.

4. Business Rules and Regulatory Compliance

To avoid unpleasant surprises in the event of an audit, all top performers use systems to ensure that they are compliant with applicable laws, regulations, and directives. This is particularly relevant for time studies conducted for cost reporting, reimbursement, or grant compliance.

With the Time Study platform, users have a complete audit trail of all activities. This amounts to hundreds of thousands of micro-records of time on the system, the person entering the data, and any subsequent changes being automatically recorded.

In addition to conducting time studies, our top performers also maintain data across the enterprise to comply with time study data internal policies and procedures. Monitoring and assessing compliance enables organizations to ensure audit readiness and avoid consequences for noncompliance, which presents issues from strategic misalignment to fines, penalties, and exclusion from federal programs such as Medicare and Medicaid. Additionally, documenting the rules for reporting and using historical time study data is vital for building enterprise data assets that may provide value to other business areas.

When using this system, the first stage in audit readiness is documenting the business rules and regulations that govern their time study programs. These business rules outline the organization's intention and any constraints for collecting, managing, securing, and storing time study data.

Business Rules

Our journey with clients often begins with documenting business rules and regulations. These outline the organization's intention and any constraints for collecting, managing, securing, and storing time study data.

The following are the primary business rules our top performers maintain.

Business Rule Category	Purpose
Data Governance and Information Security	Ensure information security and compliance with internal and external policies and procedures.
Administrative and Program Oversight	Identify and enforce data ownership and data governance roles.
Participant Information	Identify relevant participant information, including their area of business, role, or expected service level during the time of the study.
Categorization of Work Activities	Provide context and definitions for work activities, as well as assign major categories of work and relevant reimbursement and financial codes.
Time Reporting Workflow	Define the workflow and process for conducting the study, and the type of time study, cadence, and documentation standards.
Data Validation and Approval	Identify the requirements and procedures for validating and approving time study data.
Communication Plans	Document and execute the strategy for automatic distribution of communications that facilitate the accurate completion of time studies.
Reporting and Insights	Define the appropriate context for generating standard reports and actionable insights.

5. Program Value Management

Our relationship with our clients is generally triggered by their need to identify a solution that improves participation rates and empowers stakeholders to produce more effective time studies. For example, most hospital clients must complete time studies for annual cost reports submitted to Medicare and Medicaid. Additionally, given recent projections of the widening gaps in healthcare profit, our top-performing clients seek cost-effective and scalable solutions to conduct routine time studies and more quickly identify operational inefficiencies and waste.

Increasingly our top-performing clients measure the success of their time study program by time-to-value and overall business impact. They are realizing greater reimbursement, less revenue leakage, reduced cost of time study programs, improved operational cost efficiency, reduced waste, and increased workforce retention rates.

From the last day of a predefined time study period, the average time-to-value in which a top-performing administrator can expect a significant time study sample is within 9 days. Within 30 days, a top-performing administrator can see 94% of expected time studies completed.

Closing Thoughts

This report aims to leverage our vast dataset of healthcare time studies to discover new best practices for improving your time study programs. Our mission is to provide tools that address your complex time reporting needs, streamline your workflows, and transform your data into real-time insights of time spent (at work), with minimal disruption to your optimal workflow. As a result, many top U.S. hospitals have selected Time Study as their preferred cloud solution for conducting and reporting time studies.

Let's Keep in Touch

Time Study is the leading platform for conducting time studies in healthcare. Our software collects time data in real-time for accurate results and detailed reporting. Many of the top U.S. hospitals use our application to make remarkable improvements in workforce effectiveness, operational efficiency, financial performance, and compliance.

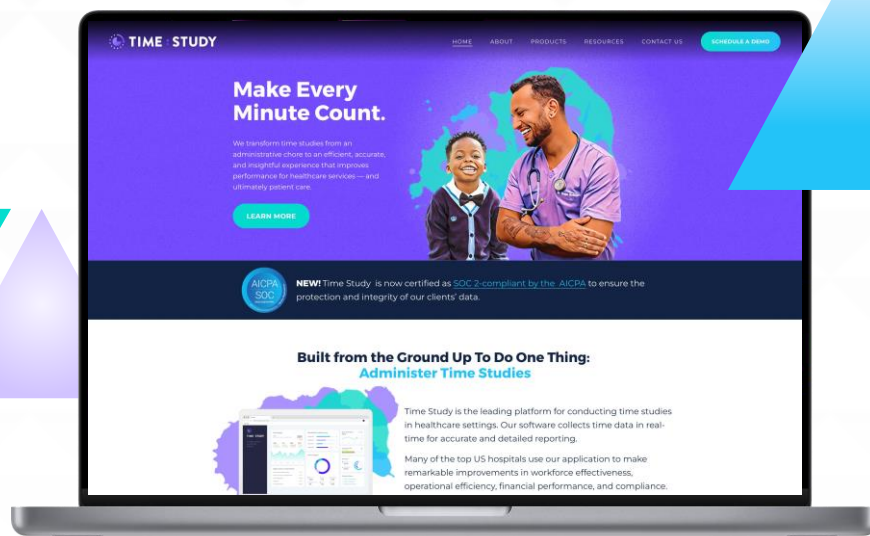## To learn more, contact us at:

timestudy.com

info@timestudy.com

linkedin.com/company/timestudycom

twitter.com/timestudy

facebook.com/timestudycom

Glossary of Key Terms

Administrators

Administrators are responsible for governing the time study program and ensuring that the data collected can be successfully used to support the organization with finance, workforce, and operational effectiveness initiatives. In addition, they oversee the workflows that lead to the successful collection of time studies, including determining participants, activities, and reporting cadence.

Business Rules

Business rules describe the operational procedures, definitions and constraints that govern how the organization's time-study data should be collected, validated, interpreted and stored.

Completed Time Studies

Completed time studies are defined as time studies that are submitted and approved by the deadline date.

Optional Periods

An optional period is an alternative time period that may be offered if a person is not able to participate during a required time period. Of note, due to the flexibility of optional periods that allow persons to complete time studies outside of a required time period, there are some cases in which it is appropriate to provide a benchmark finding inclusive of top performers with optional periods and a separate benchmark metric without those top performers with optional periods.

Reporters

A person that is responsible for reporting how their time was spent during a given time study period.

Required Period

A designated time period of moments, days or weeks, when a person is responsible for recording how their time was spent.

Supporters

A person or group that facilitates an assigned group of reporters in their completion of time studies during time study collection periods. Supporters may also be responsible for their own time studies during required time study collection periods.

Top Performers

Top performers are a sample of Time Study clients who have achieved an 85% participation rate or higher for the 2021 fiscal year and 2022 fiscal year.

Time Studies

The recording and collection of a person's working time to determine the activities of time a person completes within their work day.