eoSim

SurgTrac

User Guide

An innovation developed by eoSurgical

Contents

A) Unpack your eoSim

1. Place your eoSim on a hard surface at waist height
2. Undo the clasps and the box will open itself*
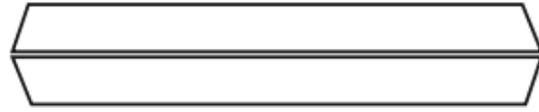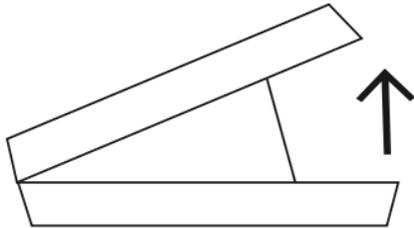
3. Go through the checklist to make sure everything is there
4. Take out your instruments, take the stickers out of the green box, and keep them nearby

5. Wrap the coloured stickers around the instruments. SurgTrac uses colour tracking algorithms to monitor the movement of your instruments. You will need to apply red and blue stickers longitudinally to your instruments. Do not cover the moving parts. Red = right and blue = left
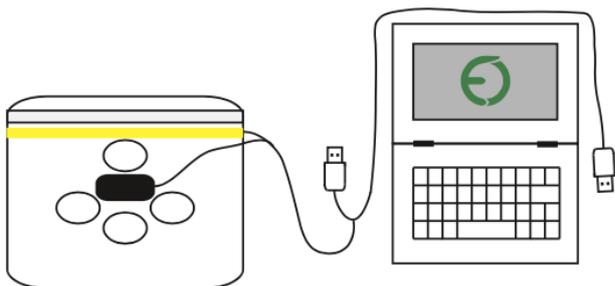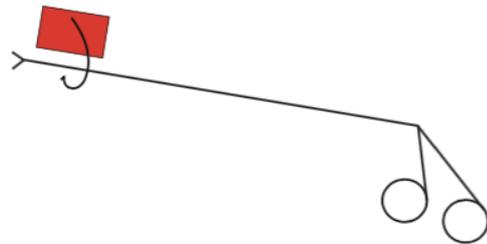
6. If using SurgTrac on a Computer, plug both the LED light USB and webcam USB cables into your

7. Place the selected practice model (e.g pegboard) onto the Velcro strips on the base of the eoSim uni
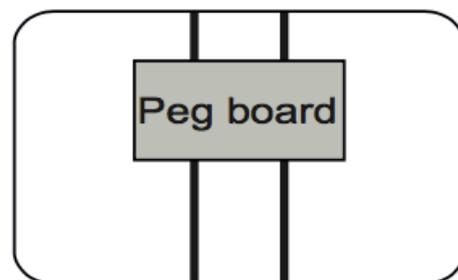
Safety: Take care when opening this trainer, spring loaded hinge can be dangerous.
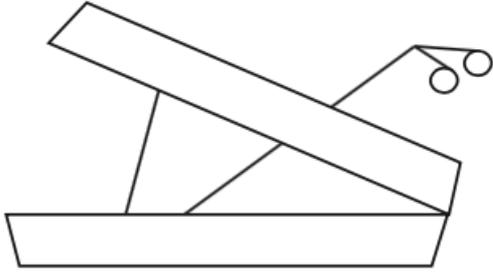
8. Insert instruments through the two ports on the front of the eoSim

Note: We recommend using the non-ratcheted grasper, scissors, and knot pusher in your dominant hand, and the ratcheted grasper in your non-dominant hand.

B) Set up account and profile

1. To create your account, go to: https://app.surgtrac.com/#/signup
2. Complete the relevant information on the page
3. To complete your account creation, scroll down to the bottom of the page and accept the Terms and Conditions
4. Click Create new account
5. After you click Create new account, you will be directed to your account's online dashboard
6. Under your profile picture, you will find a Product Key activation box, enter the product key from your email into this box to activate your account

Note: You cannot log in to the SurgTrac application on your computer until you have registered online.

C) Download and install SurgTrac software

eoSurgical will send you a download link for the SurgTrac software. Before installing SurgTrac, we recommend upgrading your computer, phone or tablet to the latest version of your Operating System (OS) to ensure optimal performance.

Note: The minimum spec required to run SurgTrac is: Intel i5 CPU, 4GB Ram.

SurgTrac for PC installation

1. Log in to app.surgtrac.com, click the download link and select "SurgTrac Windows File" download on the File Download page

Download SurgTrac for your PC

You can download SurgTrac software by clicking the button below. Note that you need to use SurgTrac for PC/Mac/iOS in order to record tasks. This website is only meant to track your progress and manage your account.
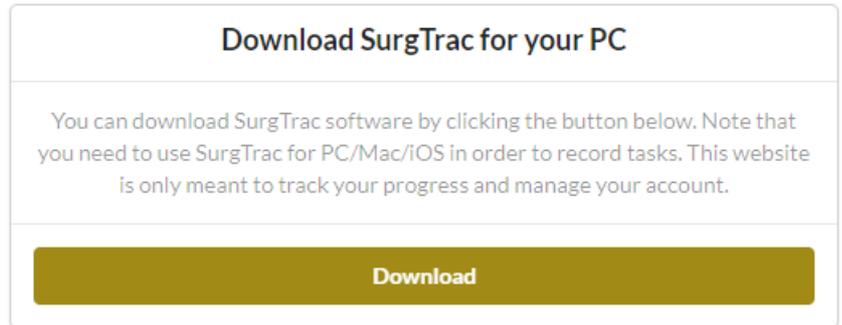
Download

2. Once the file has downloaded, click on Run to install, or double-click on the file SurgTrac.exe
3. When prompted: Do you want to allow this app to make changes to your PC? Click Yes
4. At the Welcome to SurgTrac set up screen, click Next
5. Click Install
6. Once successfully installed, click Finish
7. Launch SurgTrac

Note: A Windows Firewall pop up may appear, if this happens, tick the box to Allow Electron to communicate on Private networks, and then click on Allow access.

SurgTrac for Mac installation (OS X 10.10 or later only)

1. Log in to app.surgtrac.com, click the download link and select SurgTrac Mac File download on the File Download page

Download SurgTrac for your PC

You can download SurgTrac software by clicking the button below. Note that you need to use SurgTrac for PC/Mac/iOS in order to record tasks. This website is only meant to track your progress and manage your account.

Download

2. Double-click on the .dmg file. This should open a new window, with the SurgTrac icon
3. Drag the SurgTrac icon to your Applications folder, SurgTrac will install in this folder
4. If you receive a message saying "SurgTrac is an application downloaded from the internet. Are you sure you want to open it?", click Allow. (You can also change your settings by clicking System Preferences> Security & Privacy > General under Allow apps downloaded from choose Anywhere)
5. Launch SurgTrac from the Applications folder
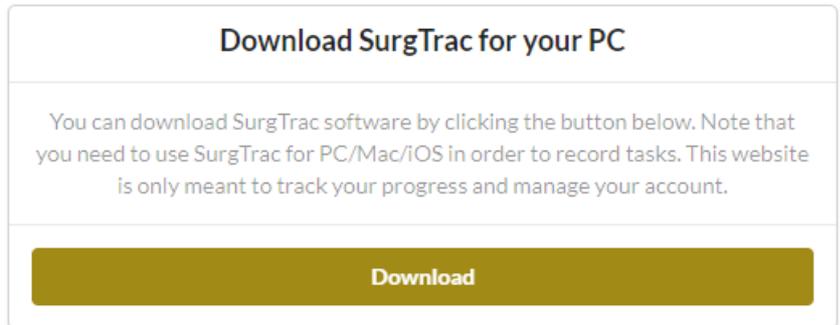
Note: If you receive a message saying "Do you want the application "SurgTrac.app" to accept incoming network connections? Click Allow.

D) Launch SurgTrac

1. Connect to the internet before launching SurgTrac for the first time (SurgTrac requires an internet connection during your first login to download your user information and to watch the instructional videos)
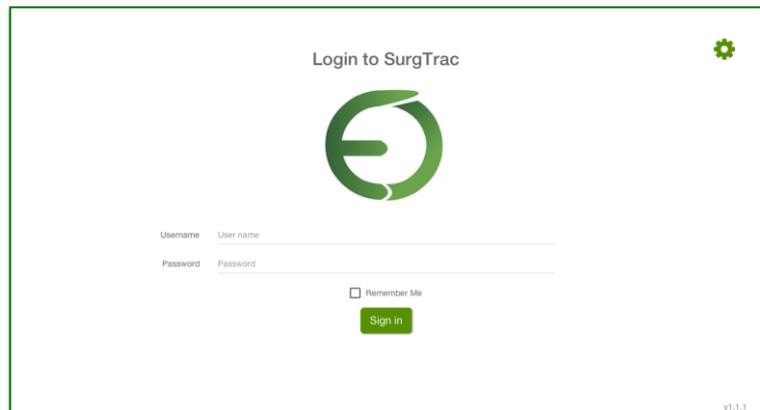
2. Open the SurgTrac application on your computer

3. Enter the same username and password you created on app.surgtrac.com to log in to SurgTrac on your computer (These two logins will always be the same)
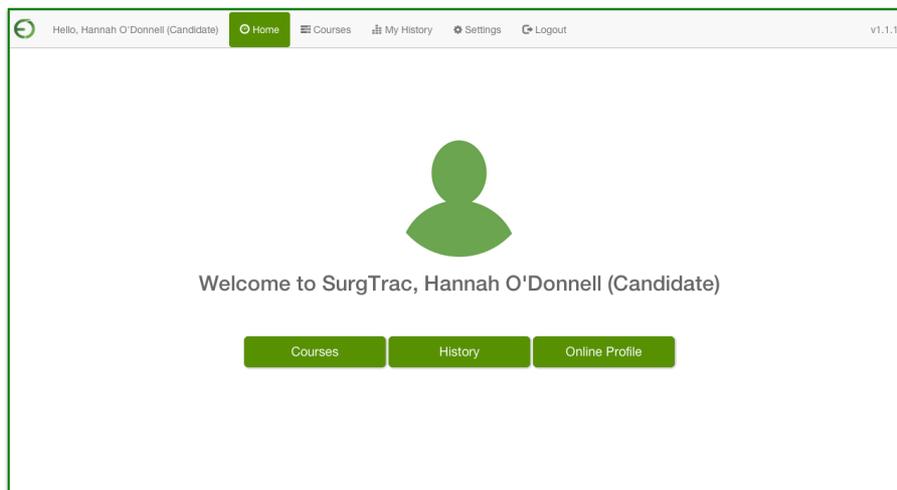
4. You will then be directed to your candidate dashboard.

E) Calibration of instruments

1. SurgTrac uses colour tracking algorithms to monitor the movement of your instruments. You will need to apply red and blue
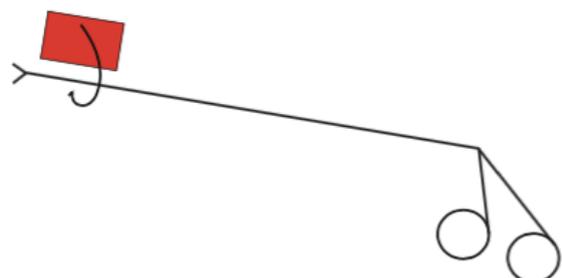
stickers longitudinally to your instruments. Red = right hand, blue = left hand. Make sure you do not cover the moving parts of the instruments

2. In the SurgTrac software, go to Settings
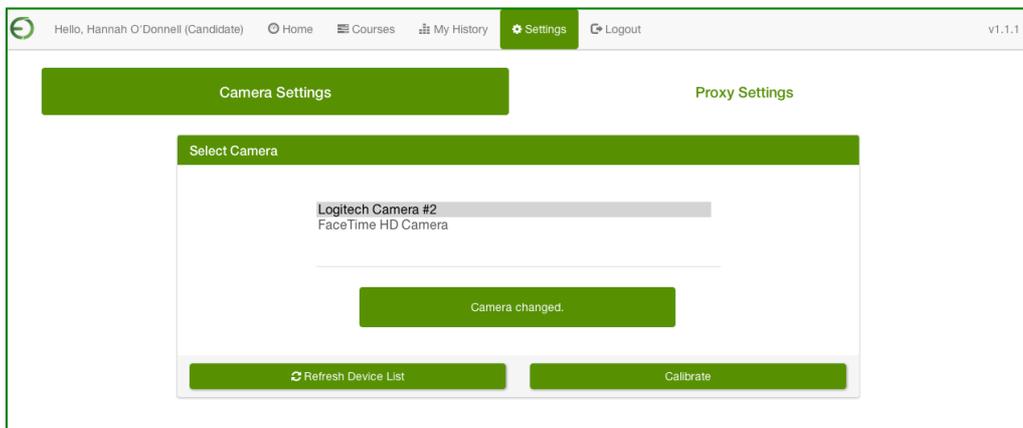
3. Select Camera settings > Logitech camera
4. Click Calibrate to ensure lighting and tracking settings are working
5. You should see a small '+' hovering above each red and blue sticker on the instruments
6. Move the instruments to put both '+' into each black circle in turn. The black circle will turn from yellow to green when both '+' are in the circle
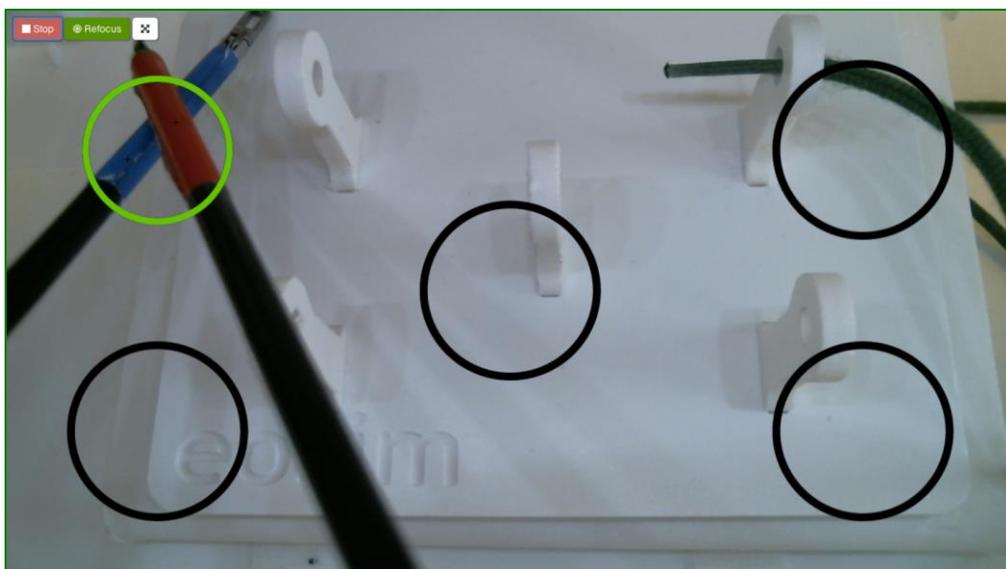
7. Wait until the circle turns green before moving onto the next circle
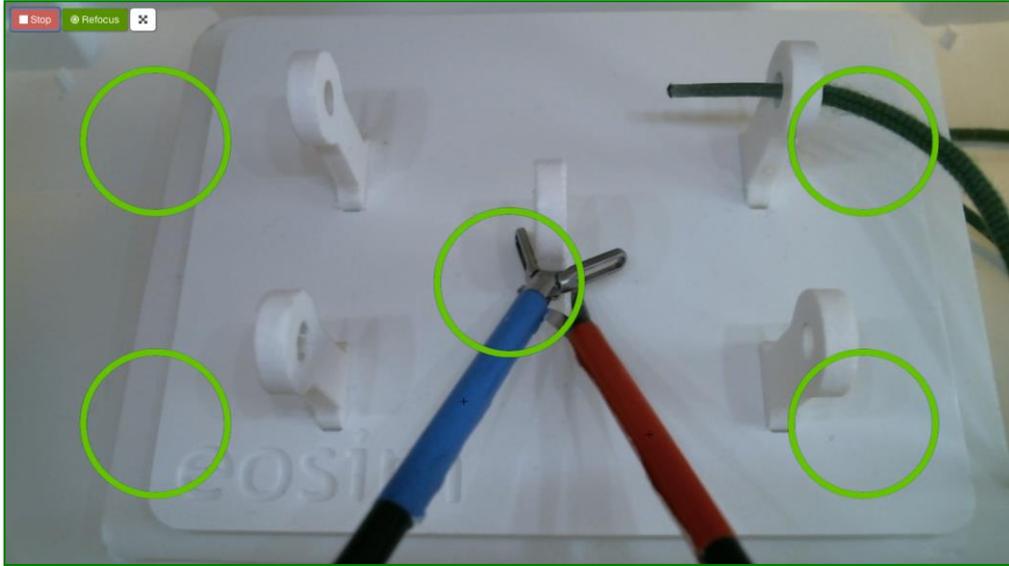
8. Calibration on is complete when all the circles are green

Note: the camera must be fixed in place to use SurgTrac correctly. If using a moveable camera, please ensure it is locked in place before beginning the activity.

F) Proxy Settings

If you are using SurgTrac on a laptop that accesses the internet via a proxy server, you will need to update the Proxy server settings, found under the Settings tab. Please consult with your IT department for details of the settings required for your institution.

G) Courses and modules

1. Click on the Courses tab and select a course (e.g SurgTrac Core)

2. You will be directed to the course page (e.g. SurgTrac Core)
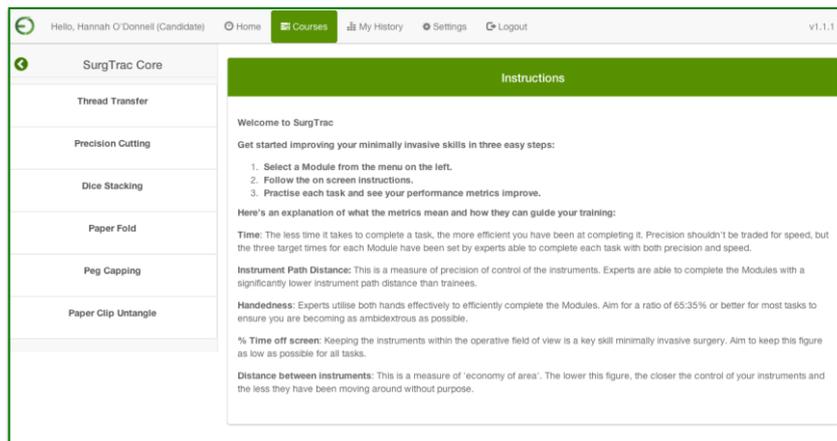
3. Choose a module (e.g. Thread Transfer)

4. Click Watch video online to open app.surgtrac.com in your browser where you will be able to find videos for all available tasks
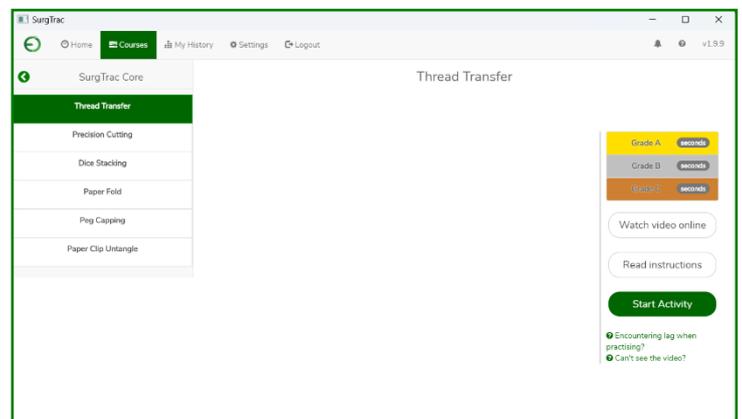
5. Click Start Activity

6. Wait for the countdown timer in the top right of the screen to turn white
7. Start activity!
8. When finished, press the space bar to end, or click the STOP button in the top left corner

9. Have a look at your metrics and review your feedback to understand how to improve your skills. Your metrics are automatically uploaded online and a video of your activity is saved under My History

10. To practice the activity again click Repeat Exercise

H) Reviewing your metrics and videos on SurgTrac

1. Click My History to review your data and videos. Choose a course (e.g. SurgTrac Core)

1. Select an activity (e.g. Thread Transfer)
2. Select a date and time you would like to review
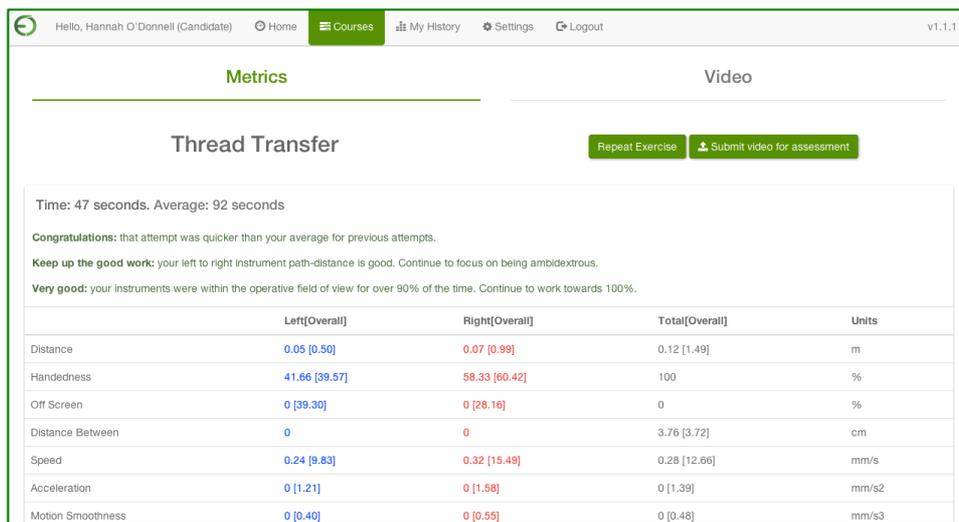
3. To review your metrics, select the Metrics tab
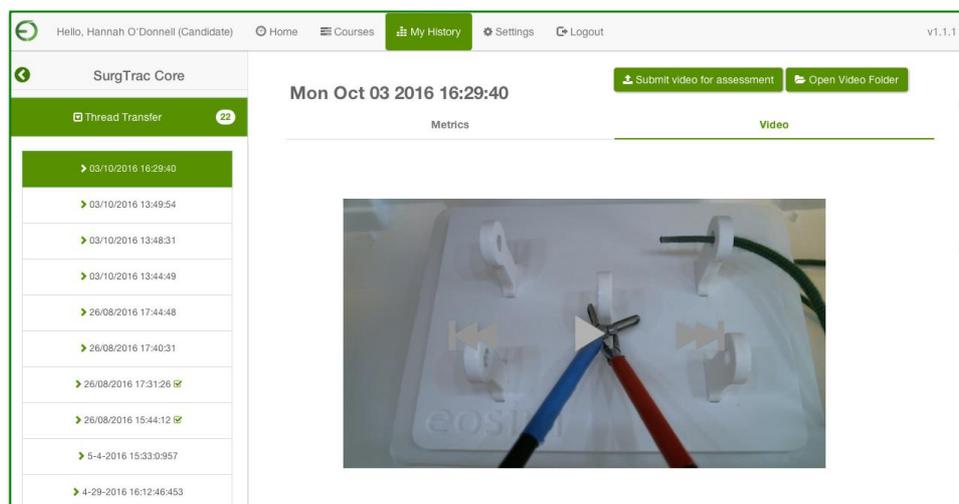
4. To view your video, select the Video tab

5. All your SurgTrac videos are stored on your computer. Click on Open Video Folder to review/copy them

I) Submitting modules to your assessor

1. After completing an activity on the SurgTrac software, click Submit video for assessment. This will upload the video online and create a link for your faculty to review

2. If you would like to submit an older module for assessment, go to My History > select your course (e.g. SurgTrac Core) > select the module (e.g. Thread Transfer) > select the specific date and time of the module > Submit video for assessment

3. If you would like to delete a submission, go to My History > select your course > select the module > select the specific date and time of the module > Delete Submission

Note: You can only submit 5 submissions per module (e.g. 5 submissions for the Thread Transfer module) and you must submit the videos for submission from the software.

J) Reviewing your metrics and videos online

1. Go to www.SurgTrac.com
2. To view all of your activity data, click the All Candidate Activity tab
3. To view the modules you have submitted to be assessed, click the Assessment Candidate Activity tab on the dashboard page. You can review a specific module by scrolling down to the module name (e.g. Thread Transfer), identifying the time and date you wish to view, and then click on View. This will bring you to a new page where you can watch the video you submitted and see whether it has been graded or not
4. Click the eoSurgical logo to return to the dashboard
5. To view your graded modules, click on the Graded Candidate Activity tab

K) What do the metrics mean?

Time: The less time it takes to complete a task, the more efficient you have been at completing it. Precision shouldn't be traded for speed, but the three target times for each Module have been set by experts able to complete each task with both precision and speed.

Instrument Path Distance: This is a measure of precision of control of the instruments. Experts are able to complete the Modules with a significantly lower instrument path distance than trainees.

Handedness: Experts utilise both hands effectively, to efficiently complete the Modules. Aim for a ratio of 65:35% or better for most tasks to ensure you are becoming as ambidextrous as possible.

% Time off screen: Keeping the instruments within the operative field of view is a key skill minimally invasive surgery. Aim to keep this figure as low as possible for all tasks.

Distance between instruments: This is a measure of 'economy of area'. The lower this figure, the closer the control of your instruments and the less they have been moving around without purpose.

Speed, Acceleration & Motion Smoothness: Studies are yet to conclusively demonstrate the value of these. But SurgTrac is a tool which will allow academics to help elucidate this.

L) Contact us

If you have any questions, please get in touch with us:

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