



Scaling Cataract Surgery Training Through High-fidelity Simulation:

The HelpMeSee Competency-based Approach to Building Global Surgical Capacity

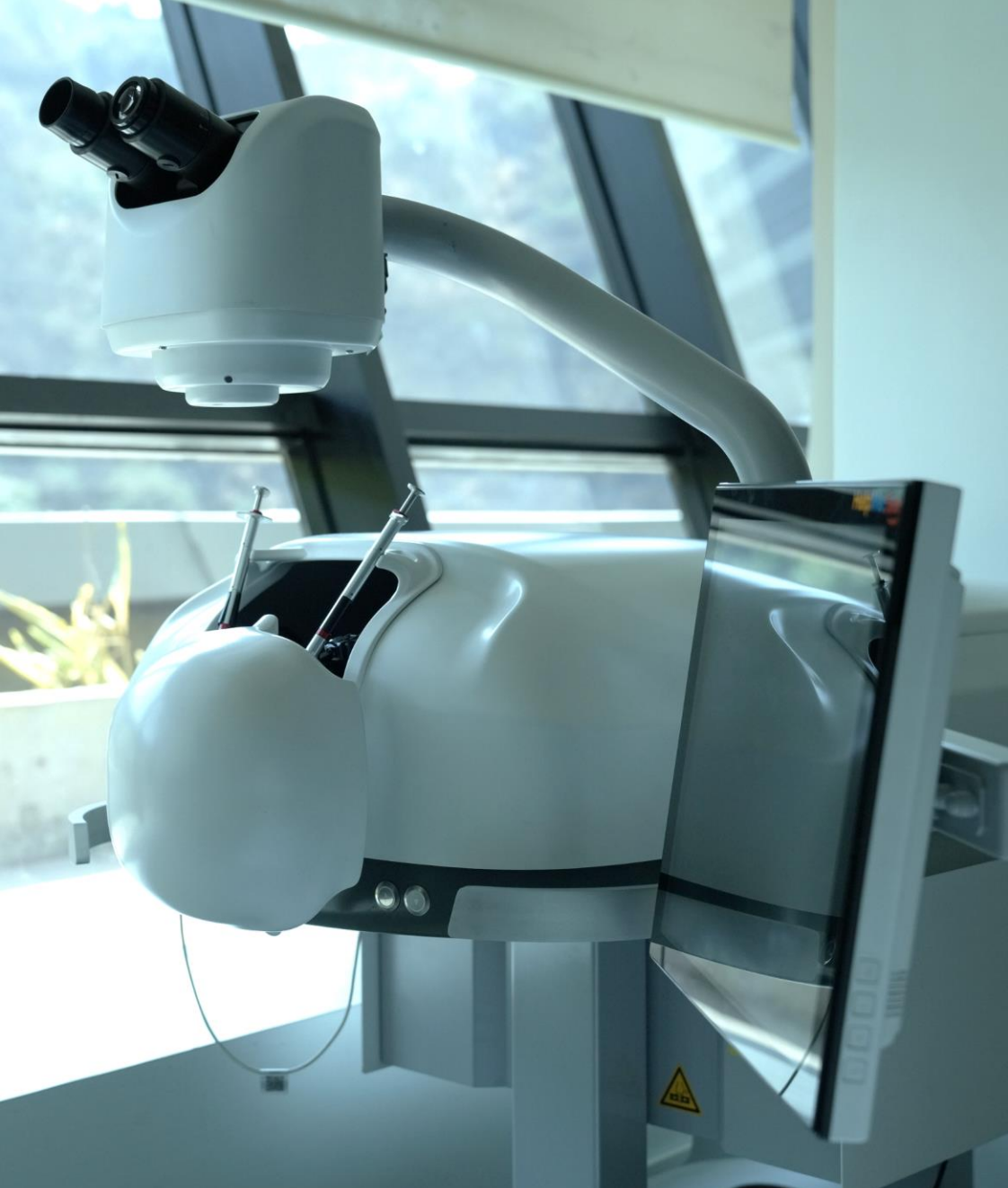


**SPLUNKIE CHANGE
AGENT AWARD 2024**
Harnessing Data for Positive Impact



**learning 2024
technologies**
Best of Virtual Environments





Advantages of Simulation-based Training



Surgical exposure can be limited by case availability, operating room access, and mentor capacity



Training experiences vary by site, instructor, patient mix, and opportunity to practice specific steps



Complex or rare complications are difficult to practice repeatedly before they occur in live surgery



Simulation creates a patient-safe environment for repetition, correction, and confidence-building

The HelpMeSee System



VR + Haptics

Immersive surgical simulation
with tactile feedback



Structured Curriculum

Progressive instructor-led skill
development for cataract specialists.



Realtime Feedback

Objective metrics track
competency and readiness



Unlimited Repetition

Builds precision, coordination,
and procedural flow

Current Courses Offered:

MSICS • Phacoemulsification • Supplementary

Posterior Capsular Rupture Management: A.) Anterior Vitrectomy (Limbal Approach) B.) Pars Plana Vitrectomy

Zonular Dialysis Management • Secondary IOL & Small Pupil Management • Suturing

Training Pathways & Global Reach

Global training centers and institutional partnerships support scalable adoption

Current metrics:

4,000+

Total trained to date

17

of centers

15

of countries served through current training locations

35

of simulators deployed



Leading The Way In Research

Phacoemulsification to manual small-incision cataract surgery: transfer of skills study in a simulated environment

Anton Quoc Dung Le, MD, Lars Christian Boberg-Ans, MD, Lars Konge, MD, PhD, Morten la Cour, MD, PhD, Dr. Med, FEBO, MPG, Tristan Bourcier, MD, PhD, Ann Sofia Skou Thomsen, MD, PhD



An objective evaluation of simulated surgical outcomes among surgical trainees using manual small-incision cataract surgery virtual reality simulator

Sankarananthan R, Senthil Prasad R, Tony Alex Koshy, Padam Dharani, Ashish Bacchav, Van Charles Lansingh, Chetan Ahiwalay, Balagiri K, Madhu Shekhar

Assessment of a high-fidelity, virtual reality-based, manual small-incision cataract surgery simulator: A face and content validity study

Akshay Gopinathan Nair, Chetan Ahiwalay, Ashish E Bacchav, Tejas Sheth, Van Charles Lansingh[†]

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Global trends and practice patterns in virtual reality simulation training for ophthalmic surgery: an international survey use of virtual reality simulation training around the world

Lea Dormegny^{1,2,3}, Rémi Yaici^{1,2}, Emilia Koestel^{1,2}, Sorchia Ni Dhubbghaill³, Chetan Ahiwalay⁴, Ashish Bacchav^{5,6}, Jean-Louis Bourges^{5,6}, Gauthier Dechriste^{1,2}, H. Burkhard Dick⁷, Helena Prior Filipe⁸, Elias Flockert⁹, David Gaucher^{1,2}, Van Charles Lansingh^{10,11,12,13}, Pamela Gonzalez¹¹, Bonnie An Henderson¹⁴, Salome Kuntz^{1,15}, Rindra Rafanomezantsoa^{10,16}, Jean-Marie Andre^{10,16}, Guillermo Rocha¹⁷, Antoine Rousseau¹⁸, Arnaud Sauer^{1,2}, Marion Schaeffer^{1,2}, Berthold Seitz⁹, Lauriana Solecki^{1,2}, Ann Sofia Skou Thomsen^{10,20,21}, Nabil Chakfe^{1,15}, Anne Lejay^{2,15} & Tristan Bourcier^{1,2}

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Validity evidence of a new virtual reality simulator for phacoemulsification training in cataract surgery

Rémi Yaici^{1,2,3,7,22}, Jérémie Poirot^{1,2,3}, Lea Dormegny^{1,2,3}, Nicole Neumann¹, Eugénie Bazaryan^{1,2,3}, Lauriana Solecki^{1,2,3}, Arnaud Sauer^{1,2,3}, David Gaucher^{1,2,3}, Anne Lejay^{1,3,4}, Ann Sofia Thomsen^{5,6}, Nabil Chakfe^{1,3,4} & Tristan Bourcier^{1,2,3}

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A validated test has been developed for assessment of manual small incision cataract surgery skills using virtual reality simulation

Daniel E. Hutter^{1,2}, Line Wingsted¹, Sanja Cejvanovic¹, Mads Forslund Jacobsen^{1,3}, Luis Ochoa¹, Karla Pamela González Daher¹, Morten la Cour¹, Lars Konge¹ & Ann Sofia Skou Thomsen^{1,2,3}

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Effectiveness of simulation-based training for manual small incision cataract surgery among novice surgeons: a randomized controlled trial

Akshay Gopinathan Nair^{1,2,3}, Chetan Ahiwalay^{1,2}, Ashish E. Bacchav^{1,2}, Tejas Sheth^{1,2}, Van Charles Lansingh^{1,2}, S. Swaroop Vedula^{1,2}, Venudhar Bhattach^{1,2}, Jagadeesh C. Reddy^{1,2}, Pravin K. Vadavalli^{1,2}, Smita Praveen^{1,2}, Nikhilesh Anil Wairagade^{1,2} & Jeff Petty^{1,2}

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Trainee Testimonials



Dr. Jay Daxini

Dr. Jay Daxini

Ruby Eye Hospital and
Lasik Center, India

"HelpMeSee's training was really helpful. It was immersive virtual, but it really simulated the real surgery. It helped me gain confidence before going into the operating theatre. I remember the story of my first cataract surgery, when I sat on the operating table my brain froze, I completely forgot the steps but my hands, they remembered the simulator!"

Dr. Jay Daxini first took the MSICS course in 2023 and he came back for phacoemulsification training in 2025



Dr. Danielle Beleho

Dr. Danielle Beleho

Ophthalmologist Magrabi ICO
Cameroon EyeInstitute

"I learned how to better control techniques and hand movements, even forces applied when performing the sclero-corneal tunnel. I've understood all the steps and I'm now more confident in tunneling. The instructors were very patient and interactive."

Thank you!

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