



# LEARNiNHG

A Newsletter of NHG Group Clinical Education

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## IN FOCUS



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## HappeniNHGS



Driving Medical Excellence: NHG Health Educator Recognition Up Nearly 28%



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**INSPIRING Professionals**  
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**Re INVENTING Healthcare**

NHG EDUCATION

WE WISH YOU A  
**MERRY**  
**CHRISTMAS**  
AND A HAPPY NEW YEAR



## Tan Tock Seng Hospital Conference:

# HuMeAINE Education in the Age of AI

At the recent Tan Tock Seng Hospital Conference (31 October 2025), Associate Professor Michelle Jong, Group Chief Clinical Education Officer, set the vision of Group Clinical Education (GCE) in NHG Health, with a bold vision: education must transform care, not just transmit knowledge. This vision is encapsulated by our signature initiative, HuMeAINE, defined by its twin pillars, i.e. HuMe (Humanistic Medicine), and AINE (AI-eNabled Education). HuMeAINE aims to prepare healthcare professionals for a future where technology augments practice, whilst preserving the core aspect of healthcare and humanity.

"It's not about technology making us smarter, but how we can leverage on technology to make clinicians wiser," said A/Prof Jong.

### HuMe: Holding On to What Matters in a Technology-Driven Era

As AI continues to reshape healthcare, the question looms large: What should we let AI change—and what should remain profoundly human? This was the starting point for Associate Professor Aaron Ang, Senior Consultant (Psychiatry), Tan Tock Seng Hospital (TTSH), who introduced HuMe.

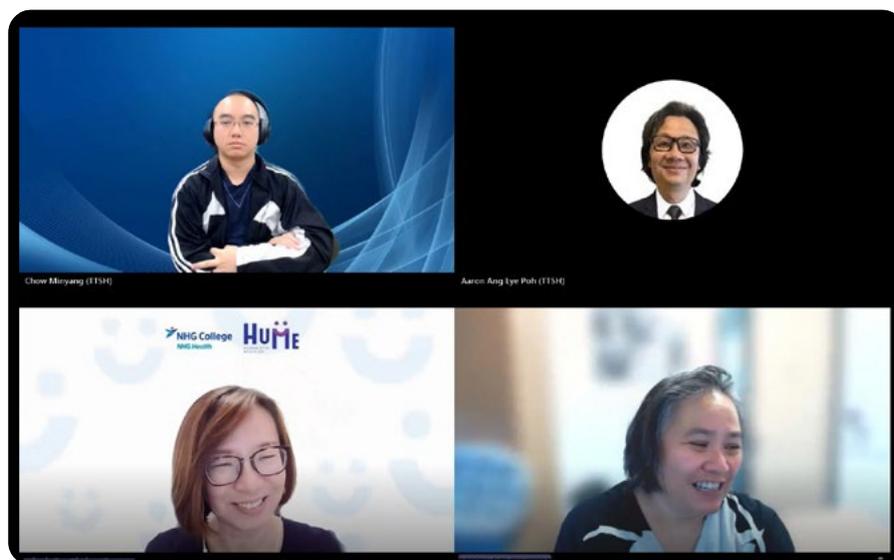
"Guided by this spirit, the HuMe Institute seeks to advance humanistic medicine that is empirically grounded, yet deeply humane, balancing scientific evidence with the lived experience of clinicians, patients, caregivers, as well as communities," explained A/Prof Ang, who is also the director of HuMe Institute (NHG College).

A/Prof Ang elaborated that HuMe was named after David Hume, whose philosophy reminds us that knowledge is shaped by observation and experience, not abstract reasoning alone. "Reason is the servant of the passions," A/Prof Ang quoted, emphasising that emotions—not logic alone—drive human behaviour. For healthcare, this means acknowledging that technical competence must be complemented by empathy and moral courage.

"We approach this using dialogic rather than didactic means... to cultivate both learners and teachers who recognise that humanistic medicine is not only about what we know, but how we come to know it," he said. This commitment to reflective practice sets HuMe apart from traditional models of medical education.

### Holding On to What Matters

For A/Prof Ang, HuMe is more than an academic exercise; it is a moral imperative.



Clockwise from bottom right: A/Prof Michelle Jong, Dr Winnie Teo (Moderator), Asst Prof Chow Minyang, and A/Prof Aaron Ang

"When we do not have power to dictate policy, we still have the capacity to shape conscience. When we cannot command, we can still convene. When we cannot force, we can still cultivate. This is the diplomacy of education—quiet, persistent, relational and moral," he said, adding that in an era where efficiency is highly prioritised, there should be more emphasis on values and wisdom to guide the progress.

A/Prof Ang shared that looking ahead, HuMe will explore shared decision-making, uncertainty in medicine, and what it means to practise with medical wisdom. These efforts will equip GCE to train clinicians who are not only technically competent but also ethically grounded and emotionally intelligent.

The aim of humanistic medicine, A/Prof Ang said, is to train future generations of clinicians who take up their roles "as a means to serve. They will bring with them

the values that elevate the human spirit, rather than diminish it"

### AINE: Rethinking Learning in the AI Era

Assistant Professor Chow Minyang, (Consultant, General Medicine, TTSH), tackled the other side of the coin: how teaching and learning must evolve as artificial intelligence enters the clinical space. AI now demonstrates diagnostic reasoning on par with human experts, raising existential questions for the profession.

Asst Prof Chow, who is also director of AINE, recounted a recent case where both an expert clinician and an AI system were tasked with solving a complex diagnosis. "What was very interesting was that the clinical reasoning of both the expert and the AI was very similar, with AI giving a very robust clinical diagnosis, because AI could remember every single thing that the patient was suffering from. This is really the

# “It's not about technology making us smarter, but how we can leverage on technology to make clinicians wiser...”

- A/Prof Jong

new frontier of medicine, where now AI may have clinical reasoning capability.”

The implications are profound. Bill Gates has predicted that AI could replace doctors and teachers within ten years. For Asst Prof Chow, this is not hyperbole but a call to rethink education: “If AI can diagnose patients, what are doctors for? This is something that we need to ask ourselves.”

## Outdated Pedagogy in the Age of Abundance

Despite living in an era of information abundance, medical education still behaves as if knowledge were scarce, he highlighted. “We have been teaching our students like we are in an information-scarce time, instead of getting learners to learn by themselves and get information by themselves. We still dump information at our learners. This needs to change.”

Reflecting on his own experience, he shared that the traditional (and current) pedagogy is outdated, new teaching pedagogies should tap on the learners' intrinsic motivation instead. “We are driven by grades, extrinsic motivation, but that kind of weakens our intrinsic curiosity and our motivation to want to learn more because we pursue that eureka moment, because we want to pursue that knowledge,” said Asst Prof Chow.

## AI and the Efficiency Trap

With AI entering the picture, a new set of challenges arises. Learners juggling dense curricula and clinical duties see AI as a workaround—a shortcut to efficiency. “AI can condense large amounts of text for them and make them take the easy way out,” said Asst Prof Chow, while cautioning that this convenience comes at a cost.

He cited integrity fears surfacing globally, from UK students copy-pasting AI outputs to local headlines where “NTU upholds

zero marks for students initially accused of using AI.”

“Such integrity fears really amplify that mistrust between educator and learner, and we do see that in headlines. Our students use AI covertly. The teachers tighten the control, and then it's a cat and mouse game with the students. Try to evade and the teachers try to catch, and this isn't the crux of education, and if education comes down to this cat and mouse game, we are missing the point,” Asst Prof Chow said.

## The Real Risk: Deskilling

Beyond integrity, educators fear something deeper: the erosion of productive struggle – conventional pathway for learners to acquire adaptive expertise, which without it, there are concerns that learners will be deskilled and never reach the attainment of expertise. “We are worried because productive struggle may be diminished, and our learners may be deskilled or never skilled,” he said.

Asst Prof Chow's critique of traditional pedagogy was blunt: “Education has always been lagging behind technological advances... preparing the professional of tomorrow using yesterday's content, yesterday's methods, and yesterday's assessments.”

To overcome this, Asst Prof Chow outlined three imperatives:

1

### Build trust between educators and learners

Trust is pedagogical currency. Without trust, learning does not happen.

2

### Design structured friction to preserve productive struggle

Random hardship is to suffer for suffering's sake e.g. boot camp. But in education, we want our learners to “suffer” to gain skills and knowledge.

3

### Embrace intentional reskilling

Cognitive deskilling is default with all technology. However, cognitive reskilling—the skilling to the higher value task—has to be intentional.

As AI accelerates, Asst Prof Chow stressed that education must pivot from rote learning to cultivating wisdom, discernment, and resilience. The future of healthcare will not be defined



by who holds more information, but rather who can ask the right questions—and who can lead with trust and integrity in an age of intelligent machines.

### AI For More Humanism

During the Q&A session, A/Prof Jong reiterated that technology will transform healthcare education, but values must anchor that transformation.

“AI can free up time, which is a precious commodity for clinicians on the ground. It also has the ability to upskill and deliver pertinent knowledge when we need it. But the guiding principle of humanistic medicine is, if you can, should you? That’s very pertinent,” elaborated A/Prof Jong.

But the real challenge to the adoption and appropriate use of AI is cultural i.e. people, she stressed.

“Anybody works in a hospital, will know that the main problem is people. Dealing with people is everybody’s main challenge. The culture needs to shift so that (people understands that) AI is used as a tool for human flourishing,” said A/Prof Jong.

Echoing her, Asst Prof Chow said: “AI feels like a long, long sprint, and it’s tiring sometimes, but we need to, as A/Prof Jong previously mentioned, take the bull by its horns and lead it to where we want it to go. If not, we are at risk of being let down a path which no one wants to go.

## Medical Humanities, Humanistic Medicine, Are they the Same?



A/Prof Aaron Ang

Associate Professor Aaron Ang clarified the distinction between medical humanities and Humanistic Medicine (HuME), noting that while the two are often mistakenly assumed to be synonymous—given their shared references to “medicine”, “human”, or “humanistic”—their definitions and focus differ significantly. Medical humanities draw on arts and social sciences to enrich understanding of health and suffering, spanning three domains: aesthetic, functional, and transformative. And HuMe focuses squarely on the functional domain—making empathy, ethics, and communication clinically actionable.

“While science shows what we can do, the humanities help us consider what we should do, ensuring that the progress remains humane and centred on human flourishing,” noted A/Prof Ang. This is not about individual clinician’s growth and enrichment but about equipping clinicians to navigate complex care with wisdom and compassion.





**Mirror, Mirror  
on the Wall:**

# **Do Our Students Reflect at All?**

**What does it take to turn clinical experiences into lifelong learning? At the recent Group Clinical Education's EduRounds webinar, Assistant Professor Daniel Quek, Senior Consultant (Emergency Medicine), Tan Tock Seng Hospital (TTSH), and Assistant Dean at Nanyang Technological University Lee Kong Chian School of Medicine, posed a provocative question: "Do our students reflect at all?"**

## **Why Reflection Matters**

"Learning without reflection is really a waste, but reflection without learning is actually dangerous." This wisdom from Confucius framed the opening of Asst Prof Quek's talk.

"I'm a firm believer that reflection is a hallmark of a master clinician, or any expert. A habit of reflective practice, together with engagement in the community, has been key to my continued growth and learning," he said.

According to Asst Prof Quek, reflection is a deliberate process of critically analysing one's experiences, assumptions, and emotions to derive deeper meaning and apply that understanding to future, often complex situations. Reflection transforms experience into insight and sustains lifelong learning. It allows learners to question assumptions, process emotions, and adapt to complex, unpredictable situations—skills essential for healthcare professionals navigating real-world challenges.

He clarified that reflection is "not just introspection but involves questioning why we think the way we think and why we act the way we act."

In clinical practice, reflection enables higher-order thinking, including critiquing assumptions and examining perspectives. Through this level of reflection, learners experience transformative learning, adapting and growing in unfamiliar or challenging situations.

Asst Prof Quek's interest in reflection led him to make it his Master's thesis topic. His research focused on evaluating reflective thinking among undergraduate medical students during their emergency medicine (EM) posting—a context he knows well as a senior consultant in the Emergency Department (ED).

As an EM physician, Asst Prof Quek felt the ED is a fertile ground for reflection because of its "raw, uncurated experiences," where students often face their first resuscitation, break bad news, or witness death—all within a high-pressure, hands-on environment, where everything is fluid.

"The emergency department is a very hands-on posting where

clinical contact time is at a premium. Students encounter many novel experiences, which we try to prepare them for, but never fully can," he said, adding that these intense encounters push learners beyond habitual action into deeper thinking.

Asst Prof Quek shared that his study revealed encouraging results. In just three weeks, students showed significant improvement in reflection and critical reflection, even though their scores for habitual action and understanding remained unchanged. This suggests that authentic clinical exposure can catalyse higher-order thinking.

One student shared, "Getting taught different methods of doing a procedure or approaching a patient by different mentors actually makes me think about what is most suitable for me."

Another reflected on the broader impact: "I think it is important to reflect in any posting or learning experience, because it helps me learn beyond what is lived through and reflect on personal areas of improvement in other non-academic aspects, such as character and patient interaction."



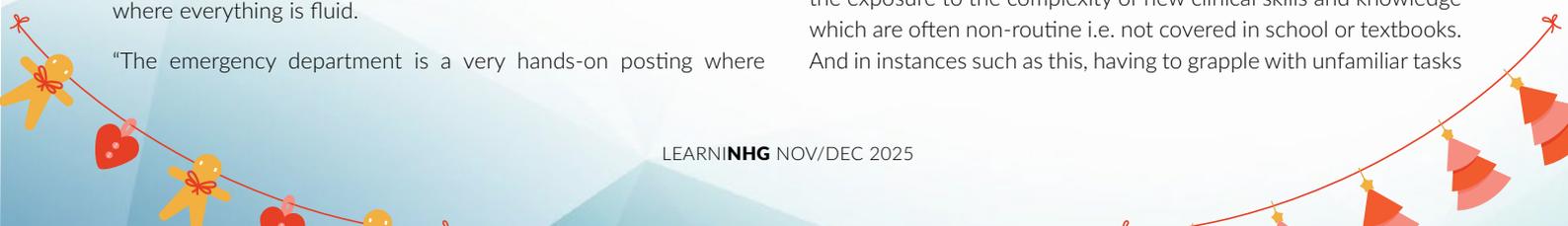
## **Barriers to Reflection**

Even when reflection was encouraged, it was often squeezed into the margins of the day, said Asst Prof Quek.

He shared various soundbites from different students which cited time, physical exhaustion, and cognitive overload as top barriers: "Sometimes things are moving so very quickly. I don't have time to reflect during the shift," a student shared, highlighting how performance pressure often overrides the pause to reflect.

Other barriers include exhaustion: after long hours in the ED, the students were too tired to process their experiences; competing priorities—assignments, co-curricular activities—added to the strain, leaving little mental space for reflection.

Beyond time and fatigue, Asst Prof Quek realised another barrier: the exposure to the complexity of new clinical skills and knowledge which are often non-routine i.e. not covered in school or textbooks. And in instances such as this, having to grapple with unfamiliar tasks





and cognitive overload as a student, reflection becomes secondary to survival.

"(And) Sometimes they just want to quickly absorb that book knowledge and move on without really doing that thinking of why they think that way, or why knowledge is constructed in that fashion," said Asst Prof Quek.

He believes that deeper reflection will only occur when the learner realises that habitual action does not seem to be able to completely frame or solve the problems that he/she is faced with.

Reflection is a learned skill, he said, and added that without scaffolding, learners may not recognise its relevance or know how to apply it meaningfully.

"To foster reflection, we must schedule it intentionally," said Asst Prof Quek. Whether it's a few minutes at the end of a shift, a weekly journaling prompt, or a structured debrief, time must be carved out—not left to chance.

He proposed a simple yet powerful framework—the Three T's:

### Time

#### Reflection needs space

"Sometimes less is more," Asst Prof Quek advised. Instead of cramming schedules with maximum clinical hours, educators should build intentional white space for reflection—whether through short debriefs, guided journaling, or structured discussion sessions.

### Tools

#### Many students do not know how to start reflecting

Many students do not know how to start reflecting. Providing scaffolds—such as guided forms, digital prompts, or even AI-enabled aids—can lower the barrier to entry. These tools help learners move beyond descriptive accounts to deeper analysis of their experiences.

### Teacher

#### Reflection thrives in dialogue

Asst Prof Quek emphasised that, "If I'm journaling and nobody bothers to give me any value input, I'm in my own echo chamber." He clarified that while it is ideal to have a formal teacher to validate and deepen the learner's reflection; fellow peers, near peers, and even patients can also play that role in facilitating that dialogue.

He highlighted that educators play a vital role in validating, challenging, and deepening reflection.

## Lowering the Barrier to Reflection Using AI?

"How about using Gen AI to facilitate reflection?" asked a participant.

Asst Prof Quek acknowledged AI's potential but expressed concerns that AI-generated reflections may end up being descriptive, resting on the superficial level, lacking deeper levels of reflection.

Assistant Professor Chow Minyang, Director of AINE (AI-eNabled Education), NHG Health, chimed in and shared that generative (Gen) AI can be used to augment reflective practice and helps to pinpoint areas (of reflection) that one may not have thought of or is aware of.

Dr Mucheli Sharavan, Senior Consultant (Infectious Diseases), National Centre for Infectious Diseases, and a member of the AINE team, added that while LLMs reduce the barrier to perform reflections or even reflection in action, they are also capable of "easily faking the low and the medium levels of reflective practice".

"I think it just requires humans to be involved in the loop to be able to assess whether there's deep reflection happening or not, which again is labour intensive," he shared.

While Asst Prof Quek echoed that the human touch remains irreplaceable in nurturing authenticity and depth in reflections, he urged educators not to remove AI from the equation, but to work synergistically with AI, rather than prohibit students from using it.

"Even if they tell you they're not (using AI), they probably are," he said.

Authenticity is vital for higher-order reflections, and Asst Prof Quek acknowledged that sometimes AI makes it difficult for educators to discern what is generated versus what is authentic.

An approach which Asst Prof Quek found helpful is to ask his learners to share very specific examples.

"Because if it's something that they personally encountered and experienced, it will come through in the description, whereas LLM may not be able to hallucinate that as easily, so that harkens back to the importance of authenticity. It's so authentic that it's very hard to fake," he shared.

"AI cannot replace the human feedback and dialogue that make reflection meaningful," said Asst Prof Quek. "Reflection is meant to be personal and transformative—not a polished output generated by an algorithm."

"Perhaps we should integrate the use of Gen AI as a learning aid to help students generate reflective drafts, receive feedback, critically appraise, move up the value chain, and do deeper reflections," he suggested.

"It's not just about what we do—it's about who we become," said Asst Prof Quek in closing.

"Ultimately, we want everyone to see the value of reflective practice—to enhance personal growth and career progression.

"So let's foster reflection—not just as an educational strategy, but as a way of being."



“

AI cannot replace the human feedback and dialogue that make reflection meaningful... Reflection is **meant to be personal and transformative** – not a polished output generated by an algorithm.”

- Asst Prof Quek on the importance of the human element in reflection



From left: Asst Prof Daniel Quek, and A/Prof Faith Chia

NHGHealth

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**15 & 16 APRIL 2026**  
Centre for Healthcare Innovation (CHI)

Brought to you by:  
Group Clinical Education, NHG College & LKCMedicine



## Driving Medical Excellence:

# NHG Health Educator Recognition Up Nearly 28%



**Recognition Soars: 76 NHG Health Clinical Educators Awarded at NUSMedACE 2025, Up 31%**

On 28 October 2025, 76 clinical educators and departments from NHG Health were recognised for their outstanding contributions to teaching and training medical students from the National University of Singapore Yong Loo Lin School of Medicine (NUS Medicine), at the annual NUS Medicine Appreciation for Clinical Educators (NUSMedACE) Awards.

This year a new award category – the “Admin Impact Award”, was introduced to recognise administrative staff who work tirelessly behind the scenes to ensure a seamless and enriching learning experience for students.

### Our Commitment to Nurturing the Professionals For Tomorrow's Healthcare

In her opening address, Associate Professor Faith Chia, Cluster Education Director (Pre-Professional Education), NHG Health, congratulated all recipients and expressed appreciation for their dedication: “I would like to extend my congratulations to all 76 award recipients and departments this year, and express our appreciation, not just to all of you, but to all of your colleagues who helped in creating this learning environment, and exhibited a strong commitment and excellence in training and mentoring our students.

“It is really through seniors like all of you that our students are nurtured to become competent and compassionate doctors, and thus ensure that our patients receive the best care that we can give them.”

A/Prof Chia also took the opportunity to reaffirm NHG Health's commitment to foster a learning healthcare community, build future ready professionals, and lead healthcare transformation through education.

“Thank you to Professor Lau Tang Ching, and all our colleagues at NUSMedicine. We look forward to continuing our strong partnership. Thank you,” she concluded.

### The Importance of the Human Touch in an AI Era

In a video address, Professor Chong Yap Seng, Dean of NUSMedicine highlighted the importance of human touch and oversight in a complex time when health and healthcare are pervaded by AI (artificial intelligence).



A/Prof Faith Chia giving her welcome address



Prof Lau Tang Ching (right) presenting to Clin Prof Low Cheng Hock the Dean's Award for Teaching Excellence

“Medicine is a profession of actions and relationships that are best performed by humans and not easily supplanted by artificial intelligence, at least not by human oversight,” he said.

“For now, educators, you play the most important role in training our students to become doctors of tomorrow. While the science





**“ For now, educators, you play the most important role in training our students to become doctors of tomorrow. While the science and tools of our professional evolve, the essence of what it takes to be a great doctor remains the ability to think with clarity, to act with purpose, and to care with empathy.”**

- Prof Chong Yap Seng, Dean, NUSMedicine

and tools of our professional evolve, the essence of what it takes to be a great doctor remains the ability to think with clarity, to act with purpose, and to care with empathy.”

Prof Chong stressed that clinical educators play a critical role in bridging the gap between classroom learning and the realities of patient care.

“Through your case-based discussions, you help our students synthesise data and apply principles in real life context. You bring alive the longitudinal cause of patient care, helping patients see connections across diseases,” he said.

**25% Increase in NHG Health Clinical Educators Honoured at NTU LKCMedicine Special Recognition Awards 2025**

Thirty-six NHG Health clinical educators and departments were honoured at the annual Nanyang Technological University Lee Kong Chian Medicine (LKCMedicine) Special Recognition Awards, held on 17 November 2025.

This marks a 25 per cent increase in clinicians and departments from NHG Health who were recognised for going above and beyond to mentor the next generation of healthcare professionals.

Professor Kwek Tong Kiat, Vice-Dean (Clinical Affairs) at LKCMedicine, who graced the event commended the strong turnout, and expressed his gratitude to all NHG Health clinical educators – both awardees and non-awardees, for their teaching efforts.

“The school is very appreciative of the partnership that we have, with the (healthcare) clusters delivering the teaching to our students. I think the scores speak for themselves... and I think the scores are outstanding,” Prof Kwek shared. “And our students have expressed a lot of appreciation for the effort that has been put in.”

He also gave a special shout out to all the non-medical and support staff awardees, recognising their role in delivering quality training to the students.



“You are exemplars of professionalism, compassion and holistic care. Your dedication underpins our strategic vision, and your presence is the bridge between what medicine is and what it can be. Thank you for walking beside our students. I hope you continue to empower, challenge and inspire them to become the best doctors and healthcare leaders they can be.”

**Education Amid Healthcare Transformation**

Closing the ceremony, Professor Lau Tang Ching, Vice Dean (Education) of NUS Medicine, expressed his delight at seeing many younger-generation educators among the awardees. He underscored the growing importance of education as Singapore’s healthcare faces two major shifts: HealthierSG and AI integration.

He urged the clinical educators to continue their work in education; through equipping junior and future healthcare professionals with the skills and knowledge, helping learners improve doctor-patient communications to ensure that patient care goals are met, and to empower patients through education.

Prof Lau believes that AI will help healthcare in many ways, and encouraged clinical educators to leverage on AI to enable HealthierSG to be a success.

“(Then) our next five to ten, or maybe twenty years will be a time well spent,” he said.

[Click here to view this year's NUSMedACE awardees](#)

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Prof Kwek Tong Kiat,  
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LKCMedicineg



[Click here to view this year's LKCMedicine Special Recognition Award recipients](#)

