CHEST Challenge Turns Twenty

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KEY WORDS: CHEST Challenge; education; edutainment; fellows

Over the past 20 years, the CHEST Challenge has provided our professional community with education and entertainment or “edutainment.” Pulmonary, critical care, and sleep medicine fellows from around the country compete for a spot in the finals at the annual scientific meeting. Participants are rewarded appropriately for their knowledge and skills; they and their training programs earn national recognition. The process combines a fun albeit competitive experience and memorable learning.

To date, the CHEST Challenge has engaged >4,000 North American participating fellows and has awarded 210 CHEST event travel stipends, 351 full scholarships (registration, hotel, airfare) to attend the annual meeting, 405 free board review live or on-demand courses, and >$180,000 in direct cash support to fellowships.

The Origin of CHEST Challenge

In 2001, William Kelly, a pulmonary fellow, wanted fellows everywhere to compete and play together; he made a website mock-up and established the game rules. But even with approximately 60 fewer training programs back then, production would be a daunting task. So, he turned to his mentor Lisa Moores for her educational expertise and support. Together with their clinician-educator colleagues on the Affiliate Network (later known as the Training & Transitions Committee) they operationalized this dream. Since then, a growing family of passionate educators and CHEST staff have added their support and innovation over these two decades. Their combined effort has made this educational project possible, maintained quality, and resulted in continued iterative improvement.

Although some professional societies have added knowledge competitions and games, the CHEST Challenge stands out (Fig 1). Beyond its high production and entertainment value and direct financial support to fellowship training programs, there is its (1) egalitarian participation, (2) robust knowledge enhancement, (3) clinical skills reinforcement, and (4) deliberate team building. These are delivered through three distinct phases:

Social Media Challenges

Every winter since 2018, CHEST (via Twitter, @accpchest) invites trainees to complete and post weekly tasks. This starts the fun and camaraderie early, boosts college engagement months before the annual meeting, and showcases players’ creativity and their local communities through >2.2 million social media impressions (views). Such personal connection can be restorative, and the back-and-forth comments attempt to replicate and reinforce conversations at our annual meeting.

Online Knowledge Assessment Quiz

During a 4-week spring window, fellows are invited to participate in the CHEST Challenge online quiz. Any pulmonary, critical care, or sleep fellow may choose to play by opting in when most convenient to do so. Peer-
reviewed, difficult board-examination-style questions provide a challenging 1-hour test for trainees. A training program’s ranking is calculated with the use of the average of the top two trainee scores. Therefore, a fellow can ever increase only the team score by playing, which encourages participation. All data are confidential. Program Directors do not see player scores, and program rankings are never released. No one even knows a program participated unless listed, alphabetically, as a top ten institution.

Fellows from the top three programs receive complimentary registration to the annual scientific meeting, airfare, and lodging, where they compete in the live CHEST Challenge Championship event. An additional 24 top programs win complete CHEST board review courses. This financial support is critical, because internal surveys of fellows identify travel funding as the leading factor that limits meeting attendance.

**Live CHEST Challenge Championship**

These three finalist teams (nine players) enjoy the highest reward, that of participating in the live CHEST Challenge Championship. The gameshow is performed live in front of a highly engaged audience and broadcast worldwide. Live gamification with a JEOPARDY! format has been implemented in multiple venues as an innovative gaming platform for education with high player satisfaction. Unique CHEST features include an opening video montage paying tribute to the players and host city, the varied formats and delivery of questions, and, most of all, embedded physical activities that spotlight and judge critical clinician procedural and interpersonal skills. Effective edutainment and fair competition require quality assurance. The Training & Transitions Committee ensures rigorous peer review with scientific literature references and extensive content planning. Gameboard questions must pass through a murder board in which many items are eliminated or fine-tuned or replaced entirely.

**Clinical Skills Reinforcement and Simulation**

In 2010, the CHEST Challenge added high-fidelity simulation testing (“skills challenges”) to integrate procedural and communication skills that are essential to our profession. That pilot program demonstrated the power of CHEST faculty and procedure checklists in providing fair and reliable assessments that are consistent with the simulation literature. Yet, it was also a learning environment with very high learner satisfaction. Skills challenges were filmed in advance and then embedded in the final game with a surprise reveal of winners and points earned. However, in 2017, the stakes were raised because players performed them live during the championship game. The nail-biting drama amplified the already high energy in the room, moving the edutainment factor up several notches. In 2020, the...
CHEST Challenge Championship was held as a virtual event for the first time because of the COVID-19 pandemic. Skills challenges were conducted remotely with teams at their home institutions, and judging was performed in real time via a video-conferencing platform.

Continuing to Innovate
For two decades, the CHEST Challenge has added elements to enhance its educational value and interactivity. These include “Bluff the Fellow,” where players must decide if a master in our field is telling the truth or has been asked to fib, and “Double Twist,” where one team can risk twice the points by completing a skills challenge faster than another team. In addition, our competition has spun off into live events in Spain, India, and China.

The camaraderie and networking built on fun learning in an atmosphere of academic recognition have made the CHEST Challenge Championship a favorite event of the annual meeting. Whether the reader has been or will be a player, players’ faculty, member of the production team, or a cheering spectator, we want to thank you for being part of this ongoing story and family. The best is yet to come! See images, videos, and additional data at chestchallenge20th.com.

References