



AQUIFER

YOUR TRUSTED SOURCE
FOR CLINICAL LEARNING

2017-18 ANNUAL REPORT



MAKING AN IMPACT

2017-18 BY THE NUMBERS

TOTAL ANNUAL REACH

67,186

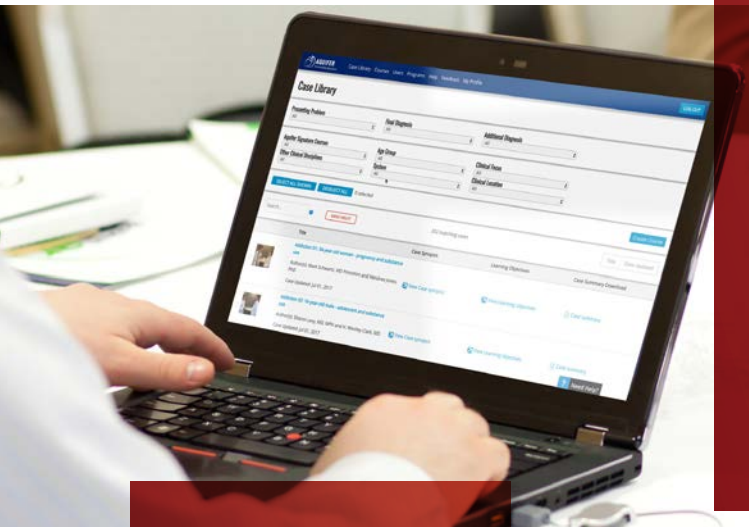
registered
students
used

1,387,429

Aquifer cases

Aquifer is a unique mission-driven non-profit organization dedicated to **delivering the best health care education** through collaborative development and research into **innovative, high-impact virtual teaching and learning methods**.

With **12 million virtual patient cases completed** since our founding in 2006, Aquifer is the leader in developing clinical learning tools for health professions education.



CURRENT PROGRAM USERS

Used in **95%** of U.S. allopathic medical schools,

66% of U.S. osteopathic medical schools, & a growing number of physician assistant, nursing, & international programs

ANNUAL SUBSCRIBERS

243

subscribing
programs

2017-18 ASSESSMENT USAGE

8,943

students completed

909 Aquifer exams





ADVANCING HEALTHCARE EDUCATION

DELIVERING ON OUR MISSION



Trusted Clinical Content

**13 NATIONAL
ORGANIZATION
PARTNERSHIPS**

**6 DISCIPLINE-SPECIFIC
COURSES**

**58 FREE CASES
COVERING 6 CRITICAL
TOPICS**

Our evidence-based, peer-reviewed, and pedagogically-sound courses are developed in collaboration with 13 leading national organization partners, by their members, to provide health care educators and students with the most informative and up-to-date content in clinical learning. Aquifer's discipline-specific courses provide the comprehensive curriculum coverage that educators trust.

Aquifer Addiction - Aquifer Family Medicine - Aquifer Geriatrics - Aquifer Internal Medicine
Aquifer Pediatrics - Aquifer Radiology

WISE-MD and WISE-OnCall are distributed by Aquifer on behalf of the NYU School of Medicine.

Free Interdisciplinary Courses on Key Topics

Aquifer offers five top-quality courses at no cost, to be used on their own or integrated with other courses to fit the needs of each program's curriculum.

Aquifer Diagnostic Excellence - Aquifer High Value Care - Aquifer Medical Home
Aquifer Oral Presentation Skills - Aquifer Culture in Health Care

New: Trauma-Informed Care Course

Aquifer is excited to deliver Trauma-Informed Care, developed in collaboration with the Office on Women's Health. The course is designed to improve patient care for individuals affected by trauma through educating a range of healthcare providers. Twelve cases are currently available with more in development.



Giving Back

**\$66,240 AWARDED IN
GRANTS THIS YEAR**

Supporting Academic Advancement Through National Partnerships

Aquifer is proud to provide many of our national organization partners with grants to fund organization initiatives and academic research projects. Working with our partners assures that our grant dollars support initiatives that advance our mission and serve the needs of educators and students around the country. Aquifer also funds individual research grants that align with our mission.

2017-18 GRANT RECIPIENTS:



**50% OF EACH
AQUIFER GERIATRICS
SUBSCRIPTION SUPPORTS**



Investing in Quality & Innovation

AQUIFER IS **SUSTAINED**
BY **SUBSCRIPTIONS**

Subscription dollars from Aquifer's courses are invested in the continued development of innovative content and educational technology. Subscriptions fund the critical organization operations that make our courses sustainable—including content updates, maintenance, administration, and support for students and administrators. Aquifer thanks our subscribers for their support of our mission.



TRANSFORMATION THROUGH INNOVATION



Aquifer Sciences

**OPEN CURRICULUM
DATABASE LAUNCHED
THANKS TO CONTRIBUTORS
FROM 100+ ACADEMIC
INSTITUTIONS**

Building Bridges Between Basic & Clinical Sciences

The Aquifer Sciences Initiative aims to provide healthcare education programs with the teaching and learning resources they need to ensure all graduates seamlessly acquire and apply basic science foundational understanding to patient care. The new tools will promote cognitive integration and allow students to self-assess and grow their foundational understanding through safe practice in making clinical decisions. Phase One, the Aquifer Sciences Open Curriculum Database, is complete and publicly available at aquifersciences.org. Phase Two is in development, with 12 pilot schools working to develop virtual patient cases and integrated illness scripts to become part of Aquifer's library of teaching and learning tools.



Aqueduct Technology Development

**2,284 CUSTOM
COURSES CREATED
56,591 iOS APP SESSIONS**

Optimizing Online Teaching & Learning

Aqueduct, Aquifer's learning management system, launched in June of 2017. Since then, development work has continued to improve the user experience. The launch of the searchable Case Library, paired with Aqueduct's custom course feature, allows educators to discover new content, integrate cross-disciplinary cases, and build courses to fit the needs of their program. With the launch of our iOS app, students can now access cases anytime, anywhere—including working offline.



Assessing Clinical Decisions

**KEY FEATURES EXAM
LAUNCHED IN AQUEDUCT**

**NEW FORMATIVE
ASSESSMENT TOOL IN
DEVELOPMENT**

New Assessments Focus on Clinical Decision-Making

Aquifer's Key Features Exam—the first exam of its kind developed for medical students in the United States—migrated from its original platform to Aqueduct in October 2017 to improve the user experience. The exam takes a novel approach to evaluating clinical decision-making skills, and is designed as a supplemental assessment in the Internal Medicine clerkship. In November 2018, Aquifer announced an initiative to develop innovative formative assessment tools to deliver meaningful and rapid feedback to students to promote self-directed learning. The summative assessment tools for Family Medicine, Pediatrics, and Radiology will transition to this new format in the future. Our assessment teams developed and launched 280 new questions in support of current and future assessments in 2018.



Moving Forward: Learning That Matters

**MEANINGFUL
FEEDBACK FOR
TARGETED LEARNING**

Building an Innovative & Comprehensive Learning System

Looking ahead, Aquifer's strategic vision is a student-focused learning system that delivers meaningful feedback for comprehensive clinical learning and decision-making. Work is underway to bring our innovation initiatives together, creating a seamless integration of content and assessment.



PASSIONATE EDUCATORS BUILDING SOLUTIONS THROUGH

INTERDISCIPLINARY COLLABORATION



The Aquifer Educators Consortium is made up of talented educators who come together from across disciplines to push the boundaries of health professions education and create the learning resources that they—and their peers—need to provide consistent clinical education to students.



Experience, Expertise, & Perspective

The Aquifer Educators Consortium includes a series of unique interdisciplinary teams working together to consider major issues and changes in education, and build a cohesive approach to pedagogy, assessment, and teaching across Aquifer's courses.

Consortium members are expert healthcare educators from across the country—including award winners and leaders in national organizations—who possess the knowledge and skills needed to work collaboratively to create quality virtual case-based courses and assessments.



70+ CONSORTIUM MEMBERS

4 ACADEMIC DIRECTORS

16 ACADEMIC COUNCIL MEMBERS

3 CROSS-DISCIPLINARY WORKING GROUPS

8 COURSE BOARDS

Building Tools & Community

The Consortium creates Aquifer's course content, from developing new content and teaching tools to writing and editing virtual patient cases and assessment questions. The result is evidence-based, peer-reviewed, pedagogically sound content that educators and learners can trust.

CREATING 100% OF AQUIFER'S CONTENT

But beyond the content, the Consortium provides direct strategic leadership to define the Aquifer pedagogy, inform technology development, and address emerging concepts and issues. Consortium members represent Aquifer within their national organizations, acting as ambassadors at national meetings to connect with other users and often presenting their work to the academic community.



Congratulations

We're proud of our Consortium and all of their impressive achievements! In addition to many academic presentations and publications, Aquifer congratulates our members who were recognized by their national organizations this year:

National Award Winners:

- David Harris
IAMSE Early Career Award for Excellence in Teaching & Innovation
- Andrew Olson
CDIM Early Career Medical Student Educator Award
- Amit Shah
AGS Mid-Career Clinician Educator of the Year Award

Currently elected to a national leadership position:

- AAIM/CDIM:
James Nixon
Shobhina Chheda
Katherine Chretien
- IAMSE: Ann Poznanski
- AGS: Mandi Sehgal



The Educators Consortium is the reason that Aquifer's course content is the most informative, up-to-date, and trusted source of clinical learning in healthcare education.



AQUIFER EDUCATORS CONSORTIUM

Thanks to all of the Aquifer Educators Consortium members who gave their time and talents to working with Aquifer this year.

ACADEMIC DIRECTORS

Alexander Chessman
Valerie Lang
Stephen Scott
Sherilyn Smith

AQUIFER DIAGNOSTIC EXCELLENCE

Kathleen Lane
Andrew Olson
Lucia Ponor

AQUIFER FAMILY MEDICINE

David Anthony
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Tomoko Sairenji
Martha Seagrave
John Waits
Nancy Weigle
Jordan White

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Laura Perry
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Ravishankar Ramaswamy
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Mandi Sehgal
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STUDENT ENGAGEMENT LEAD

Katherine Chretien

CORE EPA LEAD

Carrie Phillipi

AQUIFER ADDICTION

Joseph Skrajewski

Wellspring

The Aquifer Annual Meeting

The Aquifer Educators Consortium gathers each year for several days of intensive interdisciplinary collaboration and brainstorming, professional development, and hands-on course development work. This year's meeting focused on student engagement, interprofessional collaboration, continuous course improvement, and initial work on the curriculum mapping and assessment redesign.



Student Engagement: Race & Culture Project

This project began in 2017 with the goal of improving the way race and culture are presented and taught in Aquifer cases. Led by Dr. Stephen Scott and Dr. Katherine Chretien, a group of fourth-year medical students created a structured guide for reviewing Aquifer cases to identify key areas for improvement. Phase Two of the project, completed in 2018, included a second group of students using the guide to review cases in Aquifer Family Medicine, Internal Medicine, Geriatrics, and Pediatrics and making recommendations for improving the cases.

The Phase One work was presented at AAMC's 2018 Learn Serve Lead meeting, and will be published in an upcoming edition of *Academic Medicine*. The Phase Two students (pictured above) presented their work at Wellspring to an engaged and receptive Aquifer Educators Consortium.



THANK YOU SHOU LING

One of our original virtual course developers, Dr. Shou Ling Leong, stepped down from the Aquifer Family Medicine board in October 2018. As one of the key innovators of the family medicine course, her work led to **3,217,061 CASE COMPLETIONS** to date. Shou Ling continues her work at Penn State as the newly appointed Assistant Dean of Pathways Innovation.



CONSORTIUM AT WORK: THE MOST UP-TO-DATE CONTENT

326

Academic Contributors reviewed, edited, & updated

123 cases & 170 questions

CONSORTIUM AT WORK: ACADEMIC OUTREACH

10 national meetings attended

15 Aquifer-related academic presentations



2017-18 Academic Contributors

The Aquifer Educators Consortium is supported by a talented group of educators and students who write, review, and edit virtual patient cases and assessment questions, and develop the Aquifer Sciences Initiative.

Case Reviewers

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