Patients are Best Served by Medical Professionals Certified by Accredited Organizations

Worldwide, industries based on independent third-party certifications are superior to those that rely on self-regulation because impartial evaluations ensure that certified people, products, or systems have demonstrated their proficiency, quality, or safety. The best certifications demonstrate their adherence to quality standards by undergoing rigorous and routine accreditation review. Impartial standards and assessments assure that the people, products, processes, or systems being certified have demonstrated proficiency, quality, and safety. Certifications are especially important in healthcare as they increase the quality of care, improve patient safety, and save lives. Like many industries, the certification and testing fields are being challenged to meet new customer and market demands. Progressive, forward-thinking, and mission-based organizations like Inteleos will lead the charge to reinvent healthcare certifications for the 21st century.

To know if a healthcare provider is proficient, look at their certifications.

To know if a certification can be trusted, look at its accreditations.

Accredited Healthcare Certifications – Safety, Quality and Trust

Standards of practice are essential in healthcare. Independently assessing practitioners' ability to consistently meet established standards through certification and recertification is crucial to the delivery of quality patient care.

Accreditation of certification programs is also critical. Certification programs that are accredited under the ANSI National Accreditation Board (ANAB) ISO/IEC 17024:2012 standard is a designation of excellence, recognized worldwide by employers, industry leaders, hiring managers, and credential holders. The ISO/ANAB 17024 standard for the certification of individuals, "signals to an employer that the credential (certification) holder has undergone a valid, fair, and reliable assessment to verify that they have the necessary competencies to practice."[i]

Independent third-party accredited certifications, such as those offered by Inteleos, demonstrate up-to-date knowledge, credibility, and commitment to providing responsible patient care. For many, a healthcare certification is the highest level of validation they can earn in any area of clinical practice. Inteleos believes obtaining and maintaining a certification is the highest level of validation, and it is in the best interest of patient care particularly as medicine and technology are rapidly changing. The Inteleos third-party model gains its strength from independent subject matter experts who undertake a rigorous process for setting practice standards for the development and oversight of clinical certification programs."

Inteleos™

Inteleos™ is an independent non-profit, mission-based certification organization that delivers rigorous assessments and cultivates a global community of professionals dedicated to the highest standards in healthcare. Inteleos is the overarching governance and management organization for the American Registry for Diagnostic Medical Sonography® (ARDMS®) the Alliance for Physician Certification & Advancement™ (APCA™), and the Point-of-Care Ultrasound (POCUS) Certification Academy™.

Together the organizations certify a global network of healthcare professionals based on independent, third-party validation of practice standards. These standards establish globally recognized criteria for the highest quality patient care.

Comparing Accredited Certifications vs. Self-Regulation

The International Organization for Standardization (ISO) and the ANSI National Accreditation Board (ANAB) define accreditation as "a symbol of excellence, recognized worldwide by employers, industry leaders, hiring managers, and credential holders."[ii]

Independent Third-Party Certifications

- ✔ Assures an unbiased assessment of knowledge, skills, abilities, and processes.
- ✔ Independently validates standards within a profession and/or industry.
- ✔ Signals to an employer that the credential holder has undergone a valid, fair, and reliable assessment. [iii]
- ✔ Defines standards that are impartial, widely recognized, and respected.
- ✔ Independent authentication of a professional/service drives consumer and employer confidence.
- ✔ Promotes equitable access for all.
- ✔ The rigor, value and reputation of a certification defines its success.
- ✔ Processes developed, honed, and refined over time allow for rigor to be upheld while keeping the costs low.
- ✔ Provides an added layer of legal defensibility against invalid claims and reduces liability insurance.[iv]

Self-Regulation or Self-Evaluation

- ✘ Unintentional or intentional biases are highly probable.
- ✘ Multiple or competing standards lead to inconsistencies in quality, uniformity, and reliability.
- ✘ Industry self-preservation, increasing revenues or reducing costs are typically the primary drivers.
- ✘ The needs and success of the self-regulator often outweigh that of the consumer.
- ✘ The process to develop a fair and defensible assessment is complicated and expensive. Corners may be cut to reduce expenses, timelines, and overall costs.

⁂ Inteleos™

Dangers of Self-Regulation & Self-Evaluation

Industries that rely on self-regulation or self-evaluation face many challenges. Even the most altruistic industries and noble self-regulation efforts often fail due to unintentional biases, confusing and inconsistent standards, and conflicting priorities of profit over safety. Self-regulation/evaluation programs can leave consumers open to risk when the industries fail to assure the safety and efficacy of the products, programs, or services under review. An online search of "industry self-regulation failures" quickly highlights the inherent dangers of self-regulation and provides countess examples of companies and industries that have failed in their self-regulation efforts.

Critical Diagnosis Missed	Boeing 737 MAX Crashes	Uber & Self-Driving Car Accident	Oil Industry, Safety Failures & Environmental Disasters
a pregnant mother in Portugal had three ultrasounds by an uncertified doctor who raised no concerns about the health of her baby. When the baby was born, he was missing the nose, eyes, and parts of his skull.[v]	Boeing 737 MAX Air Crashes in 2018 and 2019 now attributed to gaps in oversight of faulty flight software. In these disasters, 346 people lost their lives.[vi]	in 2018 that resulted in the death of an Arizona woman highlights numerous reasons why companies should not self-regulate.[vii]	highlighted by the Deepwater Horizon catastrophe in 2010, killing 11 and causing the worst oil spill in US history, "illustrates the importance of having multiple accountability frames in a complex regulatory regime."[viii]

The Essential Need for Independent Third-Party Certification
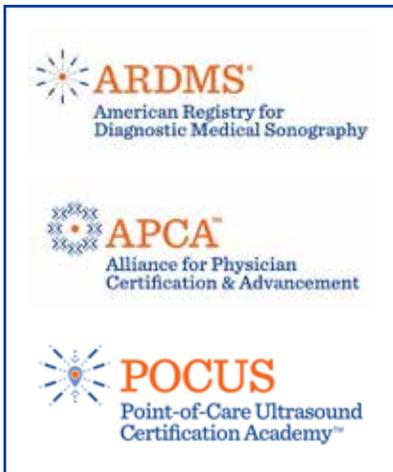
According to the Institute for Credentialing Excellence, a certification program "is designed to examine the knowledge, skills, and abilities required to perform a particular job, and, upon successfully passing a certification exam, to represent a declaration of a particular individual's professional competency." Third party and independent certification is an essential part of the healthcare infrastructure, assuring patients and employers that medical professionals have relevant and recent knowledge, skills, and abilities in their fields of practice and demonstrates they can deliver an elevated level of care.

Inteleos' Global Leadership Role in the Certification Industry

Inteleos is the non-profit governance and management organization for three Councils representing more than 117,000 certified medical professionals from more than 70 countries. Constituents consist of sonographers; physicians who specialize in and/or practice ultrasound, cardiovascular MR, cardiovascular CT, cardiovascular nuclear medicine, and vascular and endovascular medicine; and point-of-care ultrasound users in family medicine, emergency medicine, radiology, internal medicine, physician assistants, nurse practitioners, physical therapists, and midwives.

The American Registry for Diagnostic Medical Sonography® (ARDMS®) is a sonography professional organization and the original certifying body in the Inteleos family. Established in 1975, ARDMS® is the internationally recognized gold standard of excellence in sonography certification with more than 100,000 active Registrants worldwide. ARDMS offers 11 sonography certification examinations, four credentials, and one certificate program.

In 2016, ARDMS took the decisive step to further strengthen its standards and the certification processes for a growing diversity of health care practitioners. The organization expanded its structure and governance model, and the name was changed to Inteleos™.

To better serve the needs of the physician community, and as part of the 2016 restructure, Inteleos introduced the Alliance for Physician Certification & Advancement™ (APCA™). Today, the APCA Council is home to more than 17,000 physician Certificants from around the world and offers seven certification examinations and two certificate programs.

The Point-of-Care Ultrasound (POCUS) Certification Academy™ was established by Inteleos in 2017 to provide physicians and advanced-practice providers the opportunity to collaborate in the shared mission of improving global health and setting the standards of excellence in POCUS. Through the POCUS Council, practitioners have access to 13 specialty assessments, three certifications, and continual learning opportunities and community building around important topics relevant to POCUS.

The three Councils, and the hundreds of volunteer subject matter experts who lead the organizations, are responsible for oversight of the development and administration of all assessments, including compliance programs, for specialties within the medical community.

Inteleos-developed certifications are recognized as the international standard in credentialing and are accredited by ANSI National Accreditation Board (ANAB) to the International Organization for Standardization (ISO) 17024 Standard for organizations that certify personnel. The certification programs Inteleos attained through mergers or acquisitions are in the process of earning accreditation. Inteleos, which was ARDMS at the time of the initial accreditation, was one of the first certification organizations to earn the 17024 standard.

Patient advocacy drives Inteleos to maintain its independent, nonprofit status for the integrity of certification programs. Inteleos functions under policies intended to demonstrate impartiality, high ethical standards, and validity of its certification assessments.

History, Reputation & Rigor Draw Organizations to Inteleos

Inteleos has expanded its ranks through the merger and acquisition of other organizations.

In 2016, the Council for Certification in Cardiovascular Imaging (CCCVI) merged under APCA. Nearly 15,000 physicians holding the Certification Board of Nuclear Cardiology™ (CNBC) and the Certification Board of Cardiovascular Computed Tomography™ (CBCCT) were welcomed into the APCA ranks. In 2020, APCA expanded its cardiovascular certification portfolio and launched the Cardiovascular Magnetic Resonance™ (CBCMR) certification.

In 2020, Inteleos and APCA acquired the American Board of Vascular Medicine (ABVM) certification examinations in vascular and endovascular medicine. The 1,200 physicians holding the Vascular Medicine Diplomate and Endovascular Medicine Diplomate designations officially became part of the APCA family.

Certifications Based on Proven and Validated Science

Developing a new medical specialty certification is an exacting and rigorous process that can take up to two years to complete. The process involves many steps from proposal and needs analysis, to examination development and benchmarking practice standards, to final examination delivery. Inteleos's standardized examination development[ix] is based on the science of psychometrics[x], the measurement of knowledge, abilities, and attitudes.

Benefits of Healthcare Certification

Inteleos is committed to developing certification programs sought after by healthcare professionals for their inherent value. Certification shows commitment to the profession, professional development, and advancement.

Healthcare Certifications[FN]:

Demonstrates proficiency	Represents the highest standard in the field

Communicates a commitment to patient care and safety

Increases career opportunities

Increases visibility and credibility

Reassures patients and employers of commitments to excellence

Patients receive better care, and more lives are saved by certified healthcare professionals

Personal Benefits

Both the intrinsic and market value of certification can be demonstrated statistically. Findings from a 2019 survey conducted by the Institute for Credentialing Excellence (ICE) demonstrate how credentialed professionals feel about certification.[xii]

Value

91% believed that certification was valuable in their profession.

85% believed that the requirements for certification were appropriate.

Increased knowledge

78%
believed that certification increased their knowledge beyond job experience.

84%
stated that certification provided them specialized knowledge, showing how their knowledge evolved through the certification process.

Better preparation for the profession

Most respondents felt that certification helped prepare them for their profession **(79%)**

and perform more effectively on the job **(72%)**

Inteleos™

Increased professional confidence

84%
Many credential holders felt that certification increased their professional confidence

84%
enhanced their confidence in professional interactions

83%
and kept them more strongly connected to the profession

Demonstrates competence, reflects commitment, and helps them stand out

88%
Most respondents felt that certification demonstrated their competence

88%
reflected their commitment to the profession

88%
helped them stand out from their peers

88%
and established their professional credibility

Belonging to a community of like-minded professionals

In recent years, being part of a community has taken on greater importance to people worldwide. A 2020 study by Brodeur Partners found people of all ages sought out communities for friendship, a sense of belonging and support[FN]. Communities comprised of certified healthcare professionals offer a place to exchange information, celebrate the profession and connect with others around a shared passion.[xiii]

Why Dedicated Professionals Seek & Maintain Certifications

ARDMS
American Registry for Diagnostic Medical Sonography

APCA
Alliance for Physician Certification & Advancement

ARDMS Sonography Registrants
Job/career eligibility or requirement

Salary or pay increase

Education and knowledge

APCA Physician Certificants
Professional recognition

Increased knowledge & skills

Employment (job, promotion)

Salary or pay increase

ICE Member Organizations Survey
Increased jobs and hiring

Increased compensation

Global portability of certificate

Employment Benefits

Certification for sonographers is required in Canada and in the U.S., requirements are regulated by individual states. Many hospitals in the U.S. require medical professionals to be licensed and/or certified for insurance reimbursement.

Even when not required, there are still important professional benefits to certification. In three surveys of members of credentialing institutions, respondents identified benefits such as increased pay, leadership roles and advancement opportunities as benefits from earning professional credentials/certificates.[xiv]

Inteleos

Barriers to Certification

Identified barriers to certification include:

- **Lack of access** to education and training

- **Cost** and employers' lack of financial support for certification

- **Test Anxiety**

- **Examination delivery** (access to learning resources, online examination delivery platforms, etc…)

- **Requirements for maintenance** of certification, including recertification

- **Global barriers:** varying structures of health care organization and delivery, awareness/lack of awareness of patient care concerns

Breaking Down Barriers to Certification

Lack of Education and Training

For many, the inability to obtain essential education and training is the biggest barrier to seeking certification. Inteleos is working to change that by integrating education into select assessment programs, developing preferred education provider networks, and piloting programs to give midwives and skilled birth attendants in specific low-resource areas the skills, knowledge, and technology to save lives.

Cost and Lack of Employer Financial Support for Certification

In global constituent surveys Inteleos asked questions about the difficulties of obtaining certification. Many responses came down to cost and lack of employer financial support. Inteleos continually reviews the cost structure of certification and strives to deliver a program that delivers real value for the price.

95% of international physicians paid for their own APCA/ARDMS certification(s) while 70% of U.S. physicians reported the same.

In North America

85% of ARDMS Registrants pay for their own credentialing while internationally 92% of Registrants pay for themselves.

Test Anxiety

Examination processes for certifications take many forms – multiple choice examinations, scenario-based assessments, mobile-app quizzes and much more. Inteleos believes that investing in and implementing examination methodologies that mirror real-life healthcare practice is crucial. By working continually to align the examination experience with what healthcare providers would encounter in the practice setting, Inteleos can better assess the knowledge, skills, and abilities of providers.

Examination Delivery

Inteleos is consistently researching, exploring, and integrating new examination methods. New generations of test takers are driving a move to practical testing methods, which matches the organization's path to integrate new technologies.

- In 2020 the organization launched online proctoring, allowing examination takers to take their examination from home or office to address the inability to gather in person examination centers during the COVID-19 pandemic.
- The organization has invested in exploration of simulation and how to integrate it into future exams. Inteleos is now piloting the use of simulation for examinations and looking at how to marry that with education for a credential.
- Inteleos is exploring avenues with educational organizations to meet the needs of our members facing barriers to examination preparation.
- Mobile apps for recertification assessment delivery are under exploration by Inteleos.
- In 2017 Inteleos launched the Point-of-Care Ultrasound Certification Academy, offering web-based, on-demand assessments that can be taken on the participants own device.

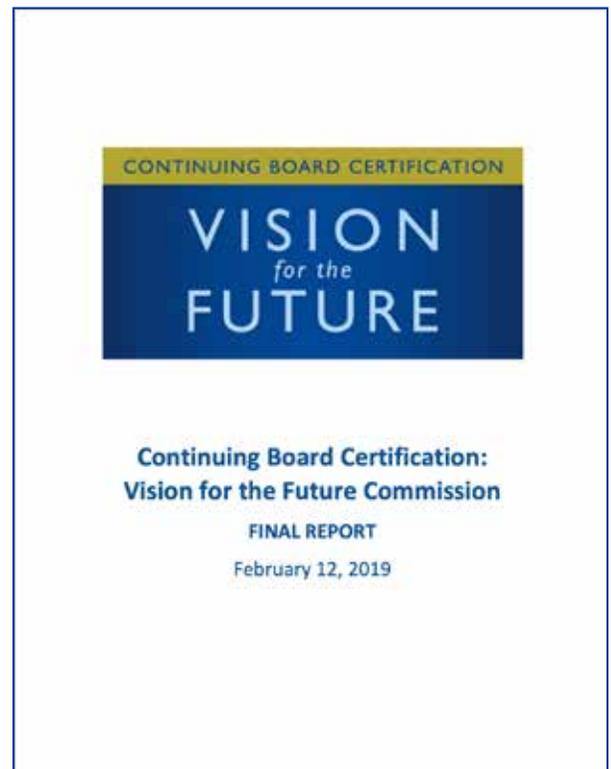## Reimagining Recertification - Continuing Competency

What is Recertification

The strength of any recertification program is to ensure that Certificants are committed to continual learning and staying relevant in their fields. Recertification programs establish the requirements a certification holder must meet to maintain certification. The basic goal of recertification, especially in healthcare, is to ensure that a person holding a certification and representing themselves as proficient, can prove they continue to meet the standards represented by the certification.

Why Recertification Programs Have Failed

Many certification organizations have done a poor job delivering programs to help people stay current once they are certified.

Concerns about recertification are particularly true for physicians, whether applied to Board specialties or independent third-party recertification. In 2000 the American Board of Medical Specialties ratified a process of certification term limits of six to 10 years and adopted recertification. In 2016, after much criticism from members on recertification, the American Board of Anesthesiology retracted their 10-year recertification requirement for more frequent, online reviews. A number of other medical specialties and individuals have pushed back against similar approaches including a number of legal actions challenging the need for recertification. In 2019 ABMS published its Continuing Board Certification: Vision for the Future Commission report that called for more frequent assessments across all ABMS specialties.[xvi]

CONTINUING BOARD CERTIFICATION

VISION for the **FUTURE**

Continuing Board Certification:
Vision for the Future Commission
FINAL REPORT
February 12, 2019

How Inteleos is Changing the Recertification Paradigm

Inteleos is working hard to redefine recertification and build programs from which Certificants can obtain real value. The organization is investing in innovations such as simulation, augmented reality, and cognitive learning science applications to deliver experiences that reinforce and expand skills, knowledge, and abilities on a routine basis. Simultaneously, Inteleos is leveraging best practices in customer experience, agile management and approaches enabling healthcare professionals to realize their full potential.
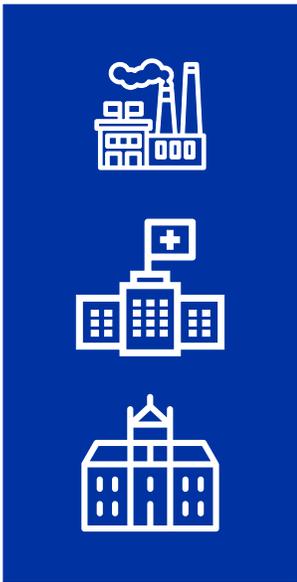
Efficacy of Well-Designed Recertification Programs

Efficacy, quite simply, is the ability to produce an effect. Therefore, the efficacy of a given situation, experiment, training, etc. is its effectiveness—generally, to produce a result. Inteleos believes that effective recertification efforts are those that can produce valid, measurable results wherein practitioners' demonstrate relevant knowledge, skills and abilities. Recertification should be more than re-verification of initial knowledge needed to gain certification in the first place; it should also take into account practical, on-the-job abilities as well as demonstrating knowledge of new research and technology. Additionally, the ability to think through difficult cases and make decisions based on evidence is also important in the evolution of a field.

Inteleos is developing recertification approaches that have personalized elements and are based on mastery-learning. Mastery learning is that which "learners must demonstrate a minimum level of proficiency before completing a given educational unit. Mastery learning approaches aim for uniform achievement of key objectives by allowing learning time to vary and as such are a course-level analogue to broader competency-based curricular strategies."[xvii] Assessments will offer educational opportunities as certificants verify continued competency through the ability to retake questions they have answered incorrectly, until a certain level of mastery is accomplished. Inteleos is investing in development of more robust educational opportunities through content delivery and additional formats for recertification. These approaches will help ensure efficacy through continued education and assessments.

Building Alliances Results in Creative Possibilities

Inteleos has outstanding alliances for exam, certificate, and certification development and delivery. The organization works with more than 600 volunteers as well as with organizations such as the American Board of Medical Specialties (ABMS) for the vascular medicine examination, surgery, cardiology, and other exams. Certification aligns with curricula, accreditation, and a huge network of specializations, all intertwined and all trying to improve health care.

As Inteleos expands its base, the need for alliances also expands. Global certification, for instance, requires an education component for medical professionals. Therefore, the organization is exploring relationships with groups that have multinational capabilities and looking at international alliances with other certification communities to increase Inteleos' reach.

Some barriers to recertification, as previously mentioned, might be addressed through education providers. Additionally, large medical conglomerates that oversee hospitals and medical facilities have a stake in employing and retaining high quality certified professionals and as such they should be part of the solution. The organization would like to start an ongoing dialogue with like-minded organizations to explore creative possibilities for increasing recertification.

The ultimate goal is for all people to have access to the validated skills of proficient healthcare providers. As a global healthcare organization, Inteleos will continue to bolster the mission and work tirelessly towards assuring that all individuals can get the highest quality healthcare possible.

[i] "Accreditation Program for Personnel Certification Bodies under ISO/IEC 17024." © 2020. https://anab.ansi.org/credentialing/personnel-certification#:~:text=The%20ANSI%20National%20Accreditation%20Board,hiring%20managers%2C%20and%20credential%20holders

[ii] "Accreditation Program for Personnel Certification Bodies under ISO/IEC 17024." © 2020. https://anab.ansi.org/credentialing/personnel-certification#:~:text=The%20ANSI%20National%20Accreditation%20Board,hiring%20managers%2C%20and%20credential%20holders

[iii] Ibid.

[iiv] Ibid.

[v] Portuguese doctor suspended after baby born without a face. BBC News 24 October 2019. https://www.bbc.com/news/world-europe-50166857

[vi] The Extra-Rational Horror of Self-Regulation. HeinOnline. https://heinonline.org/HOL/LandingPage?handle=hein.journals/rcatorbg42&div=47&id=&page=

[vii] Who's Regulating Self-Driving Cars? Often, No One. Wired November 27, 2019. https://www.wired.com/story/regulating-self-driving-cars-no-one/

[viii] The challenge of accountability in complex regulatory networks: The case of the Deepwater Horizon oil spill. https://www.uvm.edu/giee/pubpdfs/Mills_2015_Regulation%20and%20Governance.pdf

[ix] A brief overview of the ARDMS process of credential development can be found at: https://www.ardms.org/discover-ardms/exam-development-scoring-and-security/examination-development-process/

[x] What is Psychometrics? Published by the Psychometric Society at https://www.psychometricsociety.org/what-psychometrics

[xi] Institute for Credentialing Excellence. Value of Certification Statement 2020. https://www.credentialingexcellence.org/p/cm/ld/fid=672

[xii] The Institute for Credentialing Excellence (ICE) Value of Certification survey, "Benefits of Credentialing." The ICE 2019 survey was based on self-reported data from credential holders. The final report reflects data from 9,407 respondents based on their affiliation with one of the six participating credentialing organizations (out of which four were healthcare related). The sampling is sufficiently diverse to give confidence in the use of this sample for data analysis. RSRCH19 Value of Certification Report https://www.credentialingexcellence.org/p/bl/et/blogid=5&blogaid=545

[xiii] Brodeur: your research is referenced in the "Belonging to a community section". Can you please add reference data here?

[xiv] Ibid – footnote 6.

[xv] Doctor's group will scrap 10-year recertification exam." The Washington Post, September 9, 2015. https://www.washingtonpost.com/national/health-science/doctors-group-will-scrap-10-year-re-certification-exam/2015/09/09/23154a48-571f-11e5-abe9-27d53f250b11_story.html

[xvi] Continuing Board Certification: Vision for the Future Commission (Commission) final report to the American Board of Medical Specialties (ABMS) Board of Directors. https://visioninitiative.org/

[xvii] Lineberry, M., Park, Y.S., Cook, D.A., & Yudkowsky, R. (2015, November). Making the case for mastery learning assessments: Key issues in validation and justification. Academic Medicine, 90(11). (p. 1445).