

Internet for Internists

Web Technologies in Medicine: New Horizons in Virtual Communication

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The rapid pace of medical advances makes it essential to get up-to-date medical information out to physicians, particularly internists, who are playing an increasing role in medical care. However, the sheer size of Russia has made this extremely difficult. For one thing, it is rare for lectures to be offered locally. For another, foreign medical journals, distributed by paid subscription, are rarely affordable to doctors in Russia. Textbooks, especially in cardiology and internal medicine, quickly become outdated.

So how can we bring the latest achievements in medicine to the physicians of Russia? And how can we establish communications between noted experts and leading researchers on the one hand, and practicing physicians on the other?

This is where the Internet is coming to the rescue, with its unique capabilities for interactive multilateral communication. A series of interactive lectures, Internet Sessions, was envisioned as the place where the best of traditional Russian medical education meets modern information technology. The unique feature of these sessions is that any Internet user can attend these lectures interactively, by receiving streaming video and viewing slides simultaneously, and can submit questions or even communicate live. During these seminars, doctors from various specialties receive authoritative information on topics in internal medicine, learn about cutting-edge medical and scientific discoveries, and pose questions to the lecturers online.

The Nationwide Russian Internet Sessions series began in 2001, when the first sessions were conducted in Yaroslavl. These early sessions were a runaway success. Notable scientists from Russia and other CIS countries held workshops on topics of current interest and then answered questions from physicians across the nation. Since those first sessions, doctors from a wide variety of countries have joined in, including physicians from Germany, Austria, Israel, Canada, and the USA. With every year, the Internet Sessions audience, comprised primarily but not exclusively of physicians, has grown. The Internet Sessions audiences now include physicians from various specialties who hail from over 120 cities in Russia and the CIS. Regular attendees include groups from Omsk, Khabarovsk, Irkutsk, Vladivostok, Makhachkala, Samara, Kursk, Smolensk, Arkhangelsk, and other Russian cities, as well as from Ukraine, Belarus, and Kazakhstan. For

many attendees, these Internet Sessions are now a traditional, highly anticipated event.

The Session's regular lecturers are noted experts in Russia. From Internet Sessions' home city of Moscow, they include Professor Rafael Oganov, President of the Society of Cardiology of the Russian Federation and Academician of the Russian Academy of Medical Sciences (RAMS); Professor Vladimir Ivashkin, RAMS Academician; Professor Leo Bokeria, RAMS Academician; and Professors Zhanna Kobalava, Fayil Ageyev, Vyacheslav Mareyev, Sergey Gilyarevskiy, Yuri Grinshtein, Sergey Martsevich, Oxana Drapkina, Yuri Bunin, and Igor Mayev. Professors Suleyman Mamayev (Makhachkala), Alexander Simakov (Samara), and Olga Miller (Novosibirsk) also participate on a regular basis.

Professor Vladimir Ivashkin, RAMS Academician. Broadcasting from the Moscow television VIDOX 3D studio .

The Internet Sessions project has expanded beyond Russia to include leading European experts as well. For instance, on October 19, 2010, www.internist.ru aired a live webcast of a medical research symposium entitled, "A New Era in the Treatment of Atherosclerosis," simultaneously broadcast from studios in Amsterdam (Netherlands) and Moscow (Russia). The event attracted both organized groups and individual internists from 60 cities in Russia, Ukraine, Belarus, Uzbekistan, Kazakhstan, Eastern Europe, and Israel, with more than 3,000 attendees altogether.

Broadcasting from the Moscow studios were Vladimir Kukharchuk, President of the National Atherosclerosis Society (NAS) and RAMS associate member; Professor Vladimir Ivashkin, President of the RAMS Interagency Scientific Council on Internal Medicine and RAMS Academician; Professor Andrey Susekov; Igor Sergiyenko, Doctor of Medical Sciences and Executive Director of NAS; and Professor Gennady Konovalov. In the Amsterdam studios, Professor John Kastelein, a world-famous expert in the field of atherosclerosis and lipid-lowering therapy and Chairman of the Department of Vascular Medicine of the Academic Medical Center, University of Amsterdam, led a workshop entitled "Atherosclerosis: Past, Present, and Future."

Prof. John Kastelein and Prof. Oxana Drapkina broadcasting from Amsterdam.

In his workshop, Professor Kastelein emphasized the critical nature of the problem of atherosclerosis today, and he discussed the use of lipid-lowering therapy and new drugs. He also noted the role of low-density lipoproteins (LDL) in the development of cardiovascular emergencies. Despite the success of lipid-lowering therapy, 30 to 60 % of European patients do not reach target levels of LDL. Combination therapy with an inhibitor of intestinal cholesterol absorption was shown to be potentially more effective in lowering LDL than statin monotherapy. In addition, the studies conducted by Professor Kastelein's research team demonstrated that this method can decrease the cholesterol contained in chylomicrons, decrease the atherogenicity of the remnant particles, improve postprandial endothelial dysfunction, and decrease the fat load to the liver, thereby improving the course of non-alcoholic steatohepatitis (NASH). At the same time, this combination has a good safety profile.

Professor Kastelein also discussed the use of niacin in patients with mixed dyslipidemia. Niacin is attractive because it reduces LDL and triglycerides while also increasing high-density lipoproteins (HDL). However, the use of niacin is limited because of its side effect, flushing (reddening of the face). Professor Kastelein then discussed the use of a new drug, a combination of extended-release niacin and an antagonist of specific prostaglandin DP1 receptors located in cutaneous vessels. The randomized placebo-controlled clinical study Professor Kastelein presented showed that this combination causes fewer cases of medium and severe flushing compared to niacin monotherapy. The lipid efficacy of the new drug was high and fit the "rule of 20": it raised HDL by approximately 20 % and lowered LDL and triglycerides by approximately 20 %; in absolute numbers its efficacy even exceeded that of niacin monotherapy. Other important lipid parameters also improved with the use of this drug: Apo A1 levels increased by 11.2 %, Apo B decreased by 16.4 %, and Lp (a) decreased by 17.6 %; these are important in patients with diabetes mellitus and metabolic syndrome.

The Moscow/Amsterdam broadcast was accompanied by an interactive discussion between the audience and the lecturers via simultaneous interpreting services. There were more than 80 questions, in both Russian and English, from medical specialists. The entire event was recorded and can be seen at <http://www.internist.ru/sessions/video/2010-10-19/>.

Traditionally, during an Internet Session, a live Internet discussion is arranged with the cities participating in the Session, in which participants discuss the most pressing issues in internal medicine and review difficult clinical cases.

Internet Sessions are held 4 times per year, in March, May, September and December. For 2010, the Internet Sessions were held on **March 2, May 11, September 7 and December 7**. The number of participants ranged from **4,500**

to **11,900** people from Russia, the CIS, and other foreign countries. This included 22 to 37 group connections recorded from Russia and the CIS (the ports for group attendance were not arranged in advance), as well as individual connections from **78** cities were registered.

Presentation with the simultaneous demonstration of slides in the VIDOX virtual (3D) studio. Broadcast via www.internist.ru

Below is a detailed description of the 24th Internet Sessions conducted on December 7, 2010. As usual, the discussion was open to the public at www.internist.ru. There were more than 8,000 participants.

By tradition, the session was opened by the scientific advisor of the Internet Sessions, RAMS Academician Vladimir Ivashkin. This time, Ivashkin's lecture focused on a review of clinical observations of sepsis patients. Professor Sergey Boytsov also held a workshop that covered issues related to the diagnosis of early subclinical stages of atherosclerosis, risk prognosis for patients with cardiovascular conditions, and the pros and cons of various risk stratification systems.

Professor Vladimir Ivashkin, RAMS Academician.

In the Cardiology panel presentation, two reports from regular participants were presented. Andrey Susekov, Doctor of Medical Sciences and a regular Internet Session lecturer, focused on several issues related to the prevention and treatment of atherosclerosis, such as efficient achievement of target cholesterol levels. Professor Oxana Drapkina discussed the management of patients with arterial hypertension and concomitant liver disease. Professor Olga Miller's lecture concentrated on specific features of treatment for paroxysmal atrial fibrillation in patients with chronic heart failure.

Professor Sergey Boytsov.

Professors Oxana Drapkina and Olga Miller.

Next, Professor Andrey Ovchinnikov gave a report covering the management of patients with upper respiratory tract infections.

The next panel presentation was on topics in gastroenterology and hepatology. Professor Ara Reyzis gave a lecture on drug-induced liver injuries and options for their treatment. A presentation by Yelena Poluektova, Candidate of Medical Sciences, focused on the diagnosis and treatment of functional gastrointestinal diseases. Another regular Internet Session lecturer, Associate Professor Tatyana Lapina, gave two lectures. The first covered issues in the long-term therapy of gastroesophageal reflux disease. The second focused on the components of the protective barrier in the gastric mucosa, in particular, the role of nitric oxide in the formation and maintenance of the protective layer. The topic of molecular and cellular mechanisms for gastroduodenal mucosa cytoprotection was also by Professor Alexey Kononov, RAMS Associate Member. Yuri Kucheryavyy, Candidate of Medical Sciences, gave a lecture on novel approaches to the treatment of gastroesophageal reflux disease.

Yelena Poluektova, Candidate of Medical Sciences, and Associate Professor Tatyana Lapina.

In the Endocrinology panel presentation, reports were presented on two of the most pressing issues in the field, thyroid function impairment and metabolic syndrome. Professor Valentin Fadeyev's lecture on tactics for managing patients with impaired thyroid status was followed by a significant number of questions from the audience and a lively discussion.

Professor Valentin Fadeyev.

In the final panel presentation of the session, there were lectures by Anton Solovyov, Candidate of Medical Sciences, on new options for the therapy of arthropathic psoriasis, and by Professor Vyacheslav Ardashev on the course of septic endocarditis.

Professor Vyacheslav Ardashev.

Internet Session lectures are recorded and are now available for viewing at your convenience. These videos, as well as photos of the lecturers, news, a schedule of upcoming events, and all the information you need to connect to Internet Sessions can be found at www.internist.ru. The next Russia-Wide Educational Internet Session, the 25th, is scheduled for March 1, 2011.

To meet the need for more frequent and longer broadcasts that permit more detailed discussions of various disease states, Internet Sessions has expanded.

Besides its quarterly sessions, Internet Sessions now offers interactive regional roundtables and internist panels, which have been in great demand. Another Internet Sessions project, “News in Evidence-Based Cardiology” hosted by Professor Sergey Gilyarevskiy, is also very popular. Every Wednesday at 7 PM Moscow Time, Gilyarevskiy hosts his live webcasts in the form of scientific discussions. Anyone can join in, ask questions, and hear his expert opinion.

In addition to the quarterly sessions and the programs noted above, a new Internet communications project is being started that will focus on the young physician. This new project, “School of the Young Cardiologist,” is being initiated under the guidance of Rafael Oganov, President of the Society of Cardiology of the Russian Federation and RAMS Academician. Since it is not easy for a young physician to find funds to attend major conferences in Moscow or abroad, the School of the Young Cardiologist events are designed to unite the active, keen young medical community and provide talented young cardiologists with an opportunity to publicize the results of their research. The first event under this project is scheduled for broadcast on March 15. You can find the syllabus and how to connect at www.internist.ru.

WE HOPE TO SEE YOU AT AN INTERNET SESSION SOON!