Medicine in Latvia: Renewal of Relations with the West

Phoebe Best-Devenish, BA, RN, CNOR, and Christopher K. Zarins, MD

Latvia, one of the three Baltic countries, is bordered on the south by Lithuania and on the north by Estonia. Before being incorporated into the Soviet Union during World War II, Latvia had enjoyed 20 fruitful years of independence, during which time it boasted the highest literacy rate in Europe, was a member of the League of Nations, and achieved admirable advances in economic and cultural development.

Latvia has a rich medical history, and until World War II, Riga, its capital, was a centre of medical activity. Its medical schools were attended by Western and Eastern Europeans alike. It was well suited for both medical treatments and training, but both the effects of the world war and the subsequent politics of the Cold War halted most progress. Except for isolated centres of excellence, found mostly in Riga, equipment remains at a World War II level.

It is only since the spread of perestroika and the changes in Eastern Europe that opportunities have increased for interchange between Latvia and the West. In June 1989, Dr Christopher Zarins and his brother Bertram Zarins, Chief of Sports Medicine at Massachusetts General Hospital, Boston, United States, travelled to Riga in their native Latvia for the first World Congress of Latvian Physicians, which created numerous opportunities for medical interchange and saw the Latvian flag being flown for the first time.

Dr Christopher Zarins has returned three times to demonstrate surgical techniques, and in September 1990, nurse Devenish also travelled to Latvia to observe and demonstrate operating-room (OR) nursing techniques.

Upon entering a Latvian OR, a number of differences are immediately and strikingly apparent. These are the result of both material deficiencies and conceptual differences. For example, preoperative scrubbing of the hands is performed using ordinary bars of soap with individual, reusable sterile brushes. Although great care is taken to ensure sterility of the brushes, the bar of soap is from an ordinary soap dish and used by everyone before and after the operation to wash blood off the gloves, which are resterilized and reused (see Figure 1). The hands are then rinsed in a communal bowl of strong bleach solution, the strength of which is considered sufficient to kill bacteria of any kind, to offset the communal character of the bowl, and to correct the shortcomings of the soap. Once washed and rinsed, the hands are considered to be clean, and the sterile field is draped bare-handed.

Gloves are only donned at this stage, probably to save them for the operation itself. Gloves, which come in medium and large sizes, are not readily available and must be rinsed, washed, powdered, and resterilized; they are reused until even the patches on them fall apart. However, the doctors perceive that their sterile technique is good and that there is little problem with infection, although the nurses who actually dress the wounds postoperatively may not agree.

Deficiencies are a way of life in Latvian medicine. Open-heart, major, and peripheral vascular surgeries are performed without the benefit of magnification loupes because none are available.

Sutures, especially the fine, delicate, vascular type, are in very short supply. The double-armed suture is retired frequently at the middle and reused until only a few centimetres of it remain. The delicate needle, clamped as it is in the teeth of a disproportionately large needle-holder, bears no resemblance in its final twisted and bent form to its original crescent shape, but there are few arterial tears.

An 82-year-old gentleman had his abdominal aortic aneurysm repaired under anaesthetic with one peripheral IV, manually monitored blood pressure, no suction, and no blood products. Remarkably, he did well, and two days postoperatively, he sat on the side of his bed, drinking tea and eating crackers with his wife. Most of our patients with high-tech monitoring do not recover so quickly, which makes one realize that sometimes we could make do with much less.

A quintuple coronary artery bypass, requiring 10 anastomoses, was successfully completed without the benefit of loupes, using and reusing only five double-armed sutures. At the University of
Chicago, at least 20 such sutures probably would be used. The patient left the ICU one day postoperatively.

There is nothing disposable, except the sponges that have been carefully formed by nurses into various shapes and sizes from a bolt of gauze. In addition, suction tubing is reused and IV needles are sharpened and reused. The electrocautery grounding pad is nothing more than a thin sheet of metal placed between wet layers of gauze and secured against a thigh or cuff by wrapped gauze. Furthermore, the cautery wand has only cautering, not cutting, capabilities.

Procedures such as dressing changes and insertion of urinary catheters, which normally require sterile techniques, are performed using clean techniques. In addition, OR gowns are tattered, with neither cuffs nor ties to keep them closed, and they frequently arrive from the sterilizer too damp for use. Because the sleeves of all surgical gowns are too short, gauze must be wrapped from the sleeve’s edge towards the wrist to meet the cuff of the glove (see Figure 2).

As mentioned above, sutures are used down to the last few centimetres, which is appropriate. However, if the needle remains in good condition and there are more than 10–12 cm of suture material remaining, it will be saved, reprocessed, and used on another patient. At the Institute of Thoracic and Vascular Surgery, one fine needle-holder is shared between paediatric and adult cardiac surgery. The vascular surgeons must use a general closure needle-holder for their vascular anastomoses.

Anaesthetists combine a principle with a need — because anaesthetic supplies are limited, they give the least amount of anaesthetic that is safe for the patient and allows the procedure to be completed. This results in most patients waking as the last incisional sutures are placed. Even in the advanced medical centres, IVs and blood pressures are manually monitored because machinery is both inadequate and unreliable. There are no post anaesthesia recovery units (PACUs), so the patient recovers in a small area between the OR and the main hallway. This permits the anaesthetist to monitor both intra- and postoperative patients. Patients not requiring such care return immediately to their wards. Others in greater need may go to the ICU, which has trained personnel but not the resources to take advantage of their training.

However, in spite of shortages and frustrations faced in the practice of medicine, the knowledge base of doctors and nurses is sound. They know what they should do, and they have good judgement and high intellects. Their ingenuity is unparalleled and their thirst for more information unquenchable. They are aware of deficiencies in their libraries — both up-to-date texts and journals are lacking — and they are desperate for exchange and communication of ideas, methods, and techniques. In addition, they are eager for exposure to new equipment that they could easily learn how to use. They want to take advanced Western techniques and methods and adapt them to what will work in Latvia until such time as physical and material improvements can be made.

Western standards, which are lacking in Latvia, are acknowledged and appreciated for their level of achievement. As much as possible, Latvian doctors would like to emulate such standards in terms of practice, training, licensing procedures, and examinations. There are no Board-Certified Physicians or State-Board Licensed nurses; no one asked to see nurse Devenish’s license before she scrubbed on vascular procedures. Information about standardization has been requested, particularly the methods and processes for establishing such standards.

Impediments to medical advances are caused, as much as anything, by the political and economic system, which affects all social structures in Latvia. The political impact on the medical community is felt from the time doctors or nurses are examined until the end of their careers. Passing examinations and subsequent advances depend on the individual’s allegiance to the Communist Party rather than competence or quality of methods and techniques. Standardization is resisted, unless it is Moscow that establishes the standards. It would not be acceptable for a Russian to fail an objectively administered and applied standard set by one of its republics.

Economically, the ruble is worthless as exchange against all other currencies. Non-Russian airlines will not accept rubles in payment for tickets; wages and salaries are so low that it takes months or years to save enough rubles for an Aeroflot ticket to wherever seminars or conferences may be; and once the rubles are saved, the waiting list for the ticket reservation is at least one year. Most recently, Aeroflot tickets were no longer available for rubles and had to be purchased with Western currency. It is not permitted for rubles to be taken out of the country, so an individual has to be fortunate enough to be invited to such educational opportunities and financially supported throughout. It is not difficult to imagine how infrequently such opportunities arise. Conversely, those fortunate enough to be invited to Latvia to make educational contributions are generously and warmly received, and appreciation of these contributions is enormous.

Doctors and nurses are notoriously poorly paid, regardless of the level of specialization or years of experience. At best, living conditions are cramped; at worst, they are unimaginable for those of us accustomed to choosing how and where we live. For example, a vascular surgeon with 10 years’ experience lives with his wife and two sons in a tiny, one-room apartment in Riga. However, men and women continue to enter the medical field. The material rewards are few, but these committed people persist, whether it be for humanitarian reasons (this is what society needs them to do) or for more personal ones (some member of their family did not receive the treatment he or she needed and they do not want that to happen to others).

Their material needs are obvious, and although they know the principles, they need the exposure to advances in techniques and methods. What would seem a small investment from us is received with an appreciation that almost visibly ripples throughout the medical community; what is demonstrated or taught to
one person is reproduced many times over for others. Those most eager to learn realize the language barrier must be broken, and they work diligently towards that goal. In the meantime, efforts can be made that leap the barrier through visual rather than verbal diagrams or instructions.

The Latvians have a proud, generous, determined, and extremely resourceful medical community that functions well in spite of what it is dealt by an occupied, economically decimated society. Such resilience cannot be allowed to stand alone. Medical shipments, including emergency supplies sent during the recent political upheaval, are of great help. We must be as creative in our efforts to help and sustain them in their progress and development as they are ingenious in their use of our help.

ACKNOWLEDGMENT
This piece is offered in appreciation for what the authors have seen and learnt working with the Latvian medical profession, and they hope that it will begin to break down the communication barriers in a bid to satisfy the thirst for international interaction within the Latvian medical community.

Phoebe Best-Devenish, BA, RN, CNOR
Transplant Team
General Operating Room
University of Chicago Medical Center
5841 S. Maryland Avenue
Chicago, Illinois 60637, USA

Christopher K. Zarins, MD
Chief, Vascular Surgery
University of Chicago Medical Centre