

Report on educational observership program at the Adult Burn Center, Johns Hopkins Hospital

J. Bartková¹, J. Caffrey², M. Fisher²

¹ Department of Burns and Plastic Surgery, Faculty of Medicine, Institution Shared with University Hospital Brno, Masaryk University, Brno, Czech Republic

² The Johns Hopkins Burn Center, Department of Plastic and Reconstructive Surgery, Johns Hopkins University School of Medicine, Baltimore, MD, USA

Dear Sir,

I had the opportunity to participate in a one-month observership at the Johns Hopkins Adult Burn Center. Known for its innovative approaches and multidisciplinary care, the center is a leader in treating and rehabilitating adult burn patients as well as in providing a comprehensive learning experience.



Fig. 1. Author in front of Johns Hopkins Hospital building.

Historically, Johns Hopkins has pioneered numerous medical innovations, including the introduction of rubber gloves in surgery, the development of renal dialysis, and significant contributions to the evolution of cardiopulmonary resuscitation. Johns Hopkins was established on the principle that by pursuing big ideas and sharing what we learn, we can make the world a better place. The Johns Hopkins University is America's first research university. In 1893, Johns Hopkins University was one of the first medical schools to admit women. The Johns Hopkins Adult Burn Center was established in 1968 and is currently the only adult burn center in Maryland verified by the American Burn Association. It has 20 beds dedicated to burn care, including 10 intensive care unit beds. The center admits 300–400 burn patients annually, offering both inpatient and outpatient care, with more than 2,000 outpatients treated each year. The cases range from minor burns to severe, life-threatening injuries. The Burn Center is known for its comprehensive approach, ensuring patients not only receive expert medical and surgical care but also psychological, spiritual, and social support to help them recover more fully. The Burn Center's staff includes burn surgeons, critical care specialists, psychologists, specialized nurses, pharmacists, dieticians, phy-

sician assistants (PAs), and rehabilitation therapists. Their approach to care is holistic, focusing not only on medical treatments but also on psychological and social support to help patients recover faster. The center is also a leader in managing scars caused by burns, using pulse dye lasers as well as fractional CO₂ lasers to reduce scar thickness and improve skin elasticity, which is vital in improving both function and appearance after burns [1–3].

During my observership at Johns Hopkins Adult Burn Center, I had the opportunity to observe several advanced burn care techniques, including the use of biodegradable temporizing matrix (BTM). BTM is a synthetic skin substitute frequently used at Johns Hopkins for burn care and reconstructive surgeries. It plays a crucial role in dermal regeneration by providing a scaffold for tissue growth, promoting faster healing, and reducing scarring. At Johns Hopkins, the use of BTM has become a standard part of their approach to burn treatment, significantly improving patient recovery outcomes. However, in the Czech Republic, BTM was introduced for the first time this year, representing a significant advancement in the country's burn care practices. This contrast underscores the widespread adoption of BTM at Johns Hopkins compared to its recent introduction in the Czech medical field.



Fig. 2. Location of the Burn Center – view of the Johns Hopkins Bayview Medical Center.



Fig. 3. Entrance to the Burn Center.

In addition to advanced surgical technologies, the structure of care at Johns Hopkins relies heavily on a collaborative team of healthcare professionals. The care system in U.S. burn centers involves significant contributions from PAs and nurses. PAs, while supervised by physicians, have advanced training and a great deal of autonomy, particularly in

specialized fields, such as critical care. At Johns Hopkins, PAs assist doctors by taking patient histories, examining patients, and prescribing medications. In outpatient clinics, they handle wound care, perform minor procedures, and help monitor patient recovery. Nurses also play a vital role in burn care, often working with a high degree of independ-

ence compared to their counterparts in other countries, such as the Czech Republic. The collaboration between PAs and nurses ensures that patients receive prompt and effective care in both inpatient and outpatient settings.

One of the standout aspects of the Johns Hopkins Burn Center is its early rehabilitation program. The center's rehabilitation team, which includes physical and occupational therapists, works closely with surgeons, therapists, and psychologists to ensure that patients begin their recovery as soon as possible after their injuries. These therapists follow patients throughout their entire recovery process – first seeing them as inpatients and then continuing their care as outpatients. This seamless transition between inpatient and outpatient rehabilitation is crucial for preventing complications, maintaining functional outcomes, and reducing the need for further surgeries. The involvement of psychologists throughout this process is another key component, as burn patients often face significant emotional challenges during their recovery. This comprehensive and long-term follow-up model addresses both the physical and emotional well-being of burn patients.

Due to U.S. regulations, I was not allowed to participate directly in patient care or scrub in for surgeries as a foreign medical graduate. Despite this limitation, the experience was incredibly enriching. Through observation and discussions with the surgeons and staff, I gained a deep understanding of burn care, including surgical techniques, patient management, and rehabilitation methods. I also found it fascinating to compare the U.S. medical system with the system in the Czech Republic, particularly in terms of the structured training of residents and clinical fellows. In the U.S., residents and fellows are highly involved in surgeries, gaining practical experience early on under the guidance of experienced surgeons. The focus on mentorship in the U.S. was also par-

ticularly notable. Surgeons are not only teachers but active participants in guiding residents through each procedure, allowing them to develop their skills more quickly and confidently. This mentorship-driven system differs from the more hierarchical structure in the Czech Republic. The opportunity to observe this approach firsthand was invaluable, and I believe this experience will greatly influence my perspective on medical education going forward.

In conclusion, my observership at the Johns Hopkins Burn Center was an extraordinary experience that provided me with deep insights into the treatment of burn injuries and the complexities of patient care. The center's comprehensive approach, from acute management to long-term rehabilitation, combined with its use of innovative technologies and techniques, sets a global standard for burn care. I am grateful for the opportunity to learn from such an esteemed

team of professionals, and I believe that the insights I gained will significantly influence my future medical practice.

Authors' contribution to the manuscript

Júlia Bartková – conception and design, analysis and interpretation, writing the article

Julie Caffrey – critical revision of the article

Mark Fisher – critical revision of the article

Each author certifies that he/she has made a direct and substantial contribution to the work reported in the manuscript by participating in each of the following three areas: 1) conceiving and designing the study, or collecting the data, or analyzing and interpreting the data; 2) writing the manuscript or providing critical revisions that are important for the intellectual content; 3) approving the final version of the manuscript.

Disclosure

The authors have no conflicts of interest to disclose. The authors declare that this study has received no financial support. All procedures performed in this study involving human participants were in accordance with ethical standards of the institutional and/or national research committee and with the Helsinki Declaration and its later amendments or comparable ethical standards.

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*Júlia Bartková, MD, MBA, MPH
Department of Burns and Plastic
Surgery Faculty of Medicine
Institution Shared with University
Hospital Brno
Masaryk University
Jihlavská 20
625 00 Brno,
Czech Republic
bartkovaj@yahoo.com*

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