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Between Medicine and Architecture in Mid-Century Türkiye: Ankara's Atatürk (Keçiören) Sanatorium*

*Türkiye'de Yirminci Yüzyılın Ortasında Tıp ve Mimarlık Arasında: Ankara'nın Atatürk (Keçiören) Sanatoryumu***

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Abstract

The purpose of this study is to situate Ankara's Atatürk (Keçiören) Sanatorium, an overlooked yet significant example of modern healthcare architectural heritage, within the broader healthcare infrastructure of mid-twentieth-century Türkiye. Architectural evaluations of sanatoria have mostly focused on their earlier phases (1850s–1930s), with limited attention paid to their transformation during the mid-twentieth century into multi-layered hospital complexes with intricate infrastructural networks shaped by new treatment methods and social agendas. The Atatürk Sanatorium provides an ideal case to address this gap. The study's methodology and approach were based on archival research (including periodicals, maps, photographs, and official records), visual documentation, and on-site architectural analysis, which enabled a comprehensive understanding of the sanatorium's phased and layered infrastructure along four respects: (1) therapeutic-hygienic architecture, (2) construction and retrofitting technologies, (3) surgical and pharmaceutical innovations, and (4) medico-social strategies and occupational therapy. Tuberculosis control efforts, which were a priority in Türkiye's healthcare policies, were reorganized in the mid-twentieth century. At a time when many parts of the world were moving away from conventional treatments, the construction of a new sanatorium was not incidental: the building became one of the region's designated tuberculosis control centers. The findings reveal that, in its new functional and symbolic role as a tuberculosis facility, the Atatürk Sanatorium faced the pressure to follow contemporary international treatment advances and adapt its architectural program accordingly. The conventional sanatorium model, based on long-term isolation, hygienic-dietetic

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regimes, therapeutic environments, and aseptic design principles, adapted to and incorporated technical retrofits, technological adaptations, and pharmaceutical advances in healthcare and sustainable anti-tuberculosis services. The originality and value of this research lies in positioning the Atatürk Sanatorium as a multi-layered infrastructure. By reading through its many layers, this study provides a nuanced historiography and a holistic understanding of sanatorium and healthcare architecture.

Keywords: Tuberculosis, Mid-Twentieth-Century Türkiye, Atatürk Sanatorium, Healthcare architecture, Health infrastructure, Keçiören, Ankara

Öz

Bu çalışmanın amacı, modern sağlık mirasının yeterince incelenmemiş ancak önemli bir örneği olan Ankara Atatürk (Keçiören) Sanatoryumu'nu, Türkiye'nin yirminci yüzyıl ortasında dönüşen sağlık altyapısı bağlamında konumlandırmaktadır. Sanatoryumlara ilişkin mimari değerlendirmeler büyük ölçüde erken dönemlerine (1850'ler–1930'lar) odaklanmış; buna karşılık bu yapıların yüzyıl ortasında yeni tedavi yöntemleri, değişen sağlık politikaları ve toplumsal gündemler doğrultusunda karmaşık ve çok katmanlı hastane komplekslerine dönüşümü görece sınırlı biçimde ele alınmıştır. Atatürk Sanatoryumu, literatürdeki bu boşluğu tartışmak için elverişli bir örnek sunmaktadır. Çalışmanın yöntemi ve yaklaşımı; süreli yayınlar, haritalar, fotoğraflar ve resmî belgeleri kapsayan arşiv araştırmasına, görsel belgeleme çalışmalarına ve yerinde yapılan mimari analize dayanmaktadır. Bu çok yönlü yöntemsel çerçeve, sanatoryumun aşamalı biçimde gelişen ve katmanlaşan altyapısını dört eksende incelemeyi mümkün kılmıştır: (1) terapötik-hijyenik mimari yaklaşımlar, (2) yapım ve güçlendirme teknolojileri, (3) cerrahi ve ilaç tedavisindeki yenilikler ve (4) tıbbi-sosyal stratejiler kapsamında iş uğraşı terapisi. Türkiye'de sağlık politikalarının öncelikli başlıklarından biri olan tüberkülozla mücadele, yüzyıl ortasında yeniden yapılandırılmıştır. Uluslararası ölçekte sanatoryum modelinin sorgulandığı ve geleneksel tedavilerden uzaklaşıldığı bir dönemde yeni bir sanatoryumun inşa edilmesi yapısal bir tercihi yansıtır. Atatürk Sanatoryumu'nun bölgedeki tüberküloz kontrol merkezlerinden biri olarak konumlandırılması, bu tercihin stratejik niteliğini göstermektedir. Bulgular, sanatoryumun üstlendiği yeni işlevsel ve temsili rol çerçevesinde, uluslararası tedavi gelişmelerini yakından takip etme ve mevcut yapısal düzenini bu doğrultuda uyarlama baskısıyla karşı karşıya kaldığını ortaya koymaktadır. Uzun süreli tecrit, hijyenik-diyetetik rejim ve terapötik çevre anlayışına dayanan geleneksel sanatoryum modeli; zamanla teknik güçlendirmeler, mekânsal uyarlamalar ve ilaç tedavisindeki ilerlemelerle bütünleşerek tüberkülozla mücadelede sürdürülebilir sağlık hizmetleri sunan kapsamlı bir hastane kompleksine evrilmiştir. Bu araştırmanın özgünlüğü, Atatürk Sanatoryumu'nu yalnızca bir sağlık yapısı olarak değil, çok katmanlı bir altyapı sistemi olarak ele almasına dayanmaktadır. Çalışma, bu katmanları bütüncül bir çerçevede okuyarak sanatoryum ve sağlık mimarisine ilişkin daha incelikli bir tarihsel kavrayış önermektedir.

Anahtar sözcükler: *Tüberküloz, Yirminci yüzyıl ortasında Türkiye, Atatürk Sanatoryumu, Sağlık mimarisi, Sağlık altyapısı, Keçiören, Ankara*

Introduction

Sanatoria were complex infrastructures that emerged and evolved during the late nineteenth and twentieth centuries in response to architectural, technological, and medical advances in tuberculosis care. They were both cultural landscapes of health and illness, woven from diverse experiences of medical modernization, and also spatial embodiments of health reforms in particular countries. While the original spatial model of rest therapy persisted for many decades, new formulations were developed in response to new medical ideas, which required an increasingly complex sanatorium architecture. In particular, low-tech spatial features, like balconies and galleries, were combined with high-tech surgical additions. Eventually, these approaches were phased out following the introduction of antibiotics. Nevertheless, the built environment retained its symbolic significance due to its therapeutic qualities (Adams, Schwartzman & Theodore, 2008, p. 912–913).

Despite Ankara's status as Türkiye's capital city, the majority of the country's sanatoria were located in Istanbul during the first half of the twentieth century. Sanatoria that embodied the principles of twentieth-century modern architecture through their formal characteristics in Türkiye include privately operated institutions, such as those in Burgazada and Büyükada; state-sponsored projects of the early Republican period, including Heybeliada and Validebağ; and the Erenköy Sanatorium, operated by the Istanbul Tuberculosis Control Society (Avcı & Değirmencioğlu, 2024). All such complexes

gradually expanded with addition of smaller block-type pavilions. Izmir's Yamanlar Sanatorium complex is a distinct case as it started as a health camp with tents, although detached single pavilions and a separate dining unit were soon added along with a block-type building during the 1950s. Besides the Atatürk Sanatorium, another significant mid-century state-constructed example was the Süreyyapaşa Sanatorium Complex in Istanbul, which consisted of a large-scale block-type building. The Ballıdağ and Kirazlıyayla sanatorium complexes were conceived within a clearly articulated architectural program and subsequently realized through a comprehensive design scheme, reflecting the systematic planning of mid-twentieth-century healthcare architecture.

Tuberculosis remained a health issue even after the emergence of antibiotics, with debates continuing over the cost-effectiveness of sanatoria and their future use more generally. Meanwhile, many physicians continued to promote sanatoria as biomedical and social infrastructures that were crucial for monitoring antibiotic treatments, especially for patients with advanced tuberculosis, "uncooperative" patients and outpatients, or those who lacked financial resources and suitable conditions for home recovery (Goggins, 2025, p. 642–644).

While triumphalist narratives regarding antibiotics steered discussions on the relevance of sanatoria in more industrialized parts of the world, Türkiye saw continued investment in large-scale sanatorium complexes well into the mid-twentieth century. One such example is Ankara's Atatürk (Keçiören) Sanatorium, (currently known as the Ankara Atatürk Sanatorium Teaching and Research Hospital), inaugurated on May 19, 1953, on the Commemoration of Atatürk, Youth and Sports Day. The sanatorium was intended as a symbol of pride in the new republic's progress. Its functional layout, size, capacity, and comprehensive building program provides an iconic example of sanatorium design and modern architectural heritage. However, as the sole public sanatorium in Ankara, it has been largely neglected by medical and architectural historiography. Building on our earlier findings (Avcı et al., 2022),[1] we aim in this article to situate Atatürk Sanatorium within historical narratives, which also seems timely due to the Republic of Türkiye's recent centennial. Accordingly, this study investigates how Atatürk Sanatorium began and operated between medicine and architecture in the mid-twentieth century, a time of notable shifts in tuberculosis history. This period was significant not only for advances prompted by drug therapy internationally but also domestically for the shift in the bureaucratic center of tuberculosis control from Istanbul and Izmir to Ankara. In order to demonstrate the importance of the multifaceted and historically unexplored layers of Atatürk Sanatorium, this study focuses on its infrastructure in relation to contemporary medical advances and bureaucratic agendas, thereby contextualizing the reasons for its mid-century transformation.

In Türkiye, construction of sanatoria had three broad national trajectories, discussed in subsequent sections. First, each sanatorium was part of the country's national health infrastructure (Section titled "Health Infrastructure of Tuberculosis in Early- to Mid-twentieth-century Türkiye"). Hence, the construction of the Atatürk Sanatorium in Ankara was both a result and a catalyst of bureaucratic shifts in national health policies. Second, the construction of a local healthcare facility transformed the urban landscape and improved public health in Ankara, together with local administrative bodies, such as the Ankara Society for the Fight Against Tuberculosis (Sub-section "Bureaucratic Shifts and Localized Infrastructure").[2] Finally, the sanatorium reflects changes in contemporary architectural thought and practice, notably in its massive scale (Sub-section "A Jump in Scale"), which enabled it to serve many patients and accommodate new technologies.

Traditionally, sanatoria provided long-term convalescence in remote settings whereas tuberculosis hospitals offered surgical interventions in urban areas. However, this distinction became blurred as new therapies transformed sanatoria into hospital-like institutions requiring amenities for long-term patients, specialized treatment methods, and architectural strategies to prevent airborne transmission (Jensen, 1951). Though not officially a hospital, Atatürk Sanatorium had a comparable complexity comprised of *layers of infrastructure*. In this study, we define infrastructure as technical, technologi-

1 This study is a focused extension of a broader research project titled "Architecture of Convalescence: Mapping the Sanatorium Heritage of Turkey" supported by the Architects' Association 1927 (*Mimarlar Derneği 1927*) by Deniz Avcı and Cansu Değirmencioğlu as coordinators and Orçun Kepez as the advisor.

2 From here onwards "the Ankara Society".

cal, architectural, medical, and social arrangements that "function transparently to support a complex set of tasks distributed across different sites" (Goggins, 2025, p. 648) (Section "The Mid-Century Sanatorium"). As Atatürk Sanatorium expanded from a single U-shaped block into a massive complex, its therapeutic setup accreted many layers of healthcare infrastructure, which we analyze using Luxon's (2015) seven-layer framework: (1) low-tech care, (2) medical equipment, (3) access, (4) technology, (5) governance and organizational infrastructure, (6) staff structures, and (7) sustainable health care. In our four-part analysis, we identify a multi-layered network. At first, the Atatürk Sanatorium was a low-tech infrastructure designed for recovery through hygiene (air, sun, cleanliness), regulated nutrition, and rest (Sub-section "Architecture of Convalescence"). Second, continued construction and retrofitting technologies increased the efficiency of the sanatorium's buildings, such that they became self-sufficient healing machines (Sub-section "A Functioning Machine"). Third, innovations in surgical methods and, more importantly, pharmaceutical discoveries introduced new infrastructural layers that accelerated the sanatorium's transformation into a hospital complex (Sub-section "From Surgical to Medicinal Infrastructure"). Finally, debates over the cost-effectiveness of sanatoria, coupled with changing understandings of tuberculosis as a social disease, prompted institutions like Atatürk Sanatorium to develop new methods regarding prolonged anti-tuberculosis infrastructure. This included patient rehabilitation, social integration, and return to labor through occupational therapy (Sub-section "Prolonged Infrastructure).

This study employs a complementary methodology combining site-based analysis with archival research, drawing on a wide range of periodicals and visual materials, such as photographs, postcards, aerial imagery, maps, and documentary films. In addition to fieldwork at the site of the still-standing sanatorium, archival work was conducted at the Ankara Atatürk Sanatorium Training and Research Hospital, VEKAM Library and Archives, the Presidency of the Republic of Türkiye - Directorate of State Archives, and the Ministries of Health, and Culture and Tourism. Although the sanatorium's blueprints were not found, its development stages could be reconstructed from various contemporary periodicals, including *Savaş*, *Sıhhi Cidal* (later *Sıhhat*), and the monthly anti-tuberculosis journal *Yaşamak Yolu* (published by the Istanbul Society for the Fight Against Tuberculosis between 1929–1972), along with publications by the National Tuberculosis Association. On-site documentation enabled a comprehensive architectural analysis of the interconnected yet separate blocks built in successive phases. Informal conversations and unstructured interviews with its personnel provided further contemporary perspectives based on users' experiences of the space.

Health Infrastructure of Tuberculosis in Early- to Mid-twentieth-century Türkiye

Bureaucratic Shifts and Localized Infrastructure: The Ankara Society

Tuberculosis has long been recognized as an airborne disease exacerbated by poor living conditions. In particular, malnourishment, overwork, and unsanitary housing accelerate its spread and worsen its impact on the body. Although its bacteriological cause was identified by Robert Koch (1843–1910) in the late nineteenth century, the medical community continued to see emotional stress and "painful passions," as physician René Laennec (1781–1826) put it, as additional causal factors (Berthet, 1950, p. 149–150).

Türkiye's tuberculosis control efforts were launched in the late nineteenth century,[3] when Ottoman officials and doctors, who were closely following international developments like the discovery of tuberculin, sent medical delegations overseas and prepared detailed reports on prevention methods. An important milestone was the foundation of the League against Tuberculosis (Pulmonary Phthisis) of Constantinople [*Ligue contre la Tuberculose (Phitisie pulmonaire) de Constantinople*] in 1903, although its work was interrupted by the First World War. Another initiative emerged in 1918 under the name Ottoman Society for the Fight against Tubercu-

3 For comprehensive histories of tuberculosis care in Türkiye, see Aksu, M. (2007). *Tıp Tarihi Açısından Türkiye'de Verem Savaşı*. T.C. Ankara Üniversitesi Tıp Fakültesi; Delmaire, L. (2024). *«Le grand miracle turc» Problématisation et politiques de la tuberculose en Turquie (1945-1975).* [PhD diss.]. Institut d'études politiques de Paris; Ilikan, C. G. (2006). *Tuberculosis, Medicine and Politics: Public Health in the Early Republican Turkey* [Master's Thesis]. Boğaziçi University; Yıldırım, N., & Gürgan, M. (2012). *Türk Göğüs Hastalıkları Tarihi* (M. Metintaş, Ed.). Türk Toraks Derneği, Aves Yayıncılık.

losis [*Verem Mücadelesi Osmanlı Cemiyeti*]. In 1920, the society ceased its activities after Istanbul's occupation by the Allied Powers. The Izmir Society for the Fight Against Tuberculosis [*İzmir Veremle Mücadele Cemiyeti Hayriyesi*] was founded in February 1923, followed by equivalent societies in Balıkesir (1923) and Istanbul (1927). In January 1948, acknowledging that tuberculosis was a national problem, these voluntary societies united under the Turkish National Tuberculosis Association [*Türkiye Ulusal Verem Savaşı Derneği*], based in Ankara, with Dr. Tevfik Sağlam nominated as its first president. It became an internationally recognized initiative in 1949 as one of the founding members of the International Tuberculosis Association. In 1963, as part of its centralization efforts, the government passed Law No. 225 to establish the General Directorate of Tuberculosis Control [*Verem Savaşı Genel Müdürlüğü*] under the Ministry of Health and Social Welfare (SPTİGM, 1973, p. 53, 116).

During the mid-twentieth century, Türkiye witnessed other significant developments in tuberculosis control. In 1948, Heybeliada Sanatorium began using streptomycin on a group of patients (Aksüğür, 1953). The same year, Municipality Law No. 5237, enacted on July 1st, 1948, came into effect, which required that 10% of the revenue from places of entertainment be transferred to tuberculosis combat societies to be used for tuberculosis control. The Law for Tuberculosis Control (No. 5368, 11.04.1949) notably assigned to the Ministry of Health and Social Welfare responsibility for providing financial, material, and personnel assistance to tuberculosis societies (SPTİGM, 1973, p. 115). Meanwhile, the Central Institute of Hygiene in Ankara started producing a new type of Bacillus Calmette-Guerin (BCG) vaccine.[4]

The period following the Second World War was important for both the centralization of healthcare administration in Türkiye and the internationalization of tuberculosis control. For instance, cooperation between Turkish officials and the WHO resulted in the establishment of a Tuberculosis Control Development and Demonstration Center [*Verem Savaşı Olgunlaşma ve Gösteri Merkezi*] in Istanbul in 1951 ('Milletlerarası Verem Savaş Birliği Genel Sekreteri, Prof. Dr. Ettienne Bernard'ın Söylevi [XV. Enternasyonal Tüberküloz Konferansındaki]', 1959). A BCG vaccination campaign was launched on 22 December 1952, under an agreement between the Ministry of Health, World Health Organization (WHO), and the United Nations International Children's Emergency Fund (UNICEF). Another major development was the Ministry of Health's organization of anti-tuberculosis efforts into eight regions (Istanbul, Ankara, Izmir, Adana, Diyarbakır, Samsun, Gaziantep, and Trabzon) ('Bir Aylık Verem Savaşı Haberleri: Verem Savaşı Programı', 1952). The plan included the construction of fully fledged regional tuberculosis hospitals with 1,000–1,500 beds ('Bir Aylık Verem Savaşı Haberleri: Sağlık İşlerinde Elde Edilen Başarı', 1953), of which one was the Ankara Atatürk Sanatorium.

Atatürk Sanatorium was a product of Türkiye's postwar political and financial climate, in which expanding the number of sanatoria became increasingly urgent as troops from returning military units spread the disease in their immediate surroundings (Yıldırım & Gürgan, 2012, p. 60). In response, local sanatoria and tuberculosis societies across the country began forming a network, thereby becoming components of a nationwide public health infrastructure.

The Ankara Society was founded on May 25, 1946, and became a member of the National Tuberculosis Association in 1948 (SPTİGM, 1973, p. 112). While its presidents included three governors, Nevzat Tandoğan (1946–1947), İzzettin Çapar (1947–1948), Avni Doğan (1946–1950), the society's most influential figure was Nusret Karasu, who became president in 1950 (Kahya & Ataç, 2004).[5] The society initially operated from a single room in the Turkish Red Crescent Headquarters in Yenişehir ('Bir Aylık Verem Savaşı Haberleri: Ankara Verem Savaş Derneğinin Faaliyeti', 1952; 'Ulusal Verem Savaşı Derneği Sayfaları: Yurdumuzda Mevcut Verem Savaşı Derneklerini Tanıtıyoruz', 1952). Then, from May 15, 1946, to September 9, 1949, its headquarters was lo-

4 For architectural-historical studies on the Institute, see Cengizkan, A. (2019). *Modernin Saati. 20. Yüzyılda Modernleşme ve Demokratikleşme Pratiğinde Mimarlar, Kamusal Mekan ve Konut Mimarlığı.* Arkadaş, p. 71–91; Kılınç, K. (2018). 'Welcome to Europe': A Bridge East of Architectural History. *Architectural Histories*, 6(1); Tunç, U. (2024). *Spaces of Healthcare and Hospitals in the Late Ottoman Empire and Early Turkish Republic* [PhD diss.]. Koç University, p. 165–179.

5 Professor Dr. Nusret Karasu was also President of the National Tuberculosis Association between 1976–1984 and the founding chair of the Physiology Department at the Faculty of Medicine at Ankara University.

cated in the Ministry of Health's Tuberculosis Dispensary until the completion of its own facility ('Ulusal Verem Savaşı Derneği Sayfaları: Yurdumuzda Mevcut Verem Savaşı Derneklerini Tanıtıyoruz', 1952) on Hisar Street in Ulus, Ankara (Kahya & Ataç, 2004). In August 1953, the society warned that, even with 300 beds, Keçiören's new sanatorium might not be sufficient for the growing number of tuberculosis cases ('Ankara Veremle Savaş Derneği 1952 Yılı Çalışma Raporu', 1953; S.P.B., 1962b).

The society's efforts included building dispensaries and conducting widespread vaccination campaigns. In 1950, it attributed the marked decline in tuberculosis mortality rates in Türkiye to its own preventive efforts: In 1962, the society's vaccination campaigns for tuberculin and BCG reached 198,000 and 28,000 people, respectively (S.P.B., 1963). Despite these efforts, however, a study conducted by the Refik Saydam Central Institute of Hygiene showed that 5% of Ankara residents were still infected with tuberculosis (S.P.B., 1962c).

A Jump in Scale: Construction and Expansion of Atatürk Sanatorium

In mid-twentieth-century Türkiye, it was considered both a medical necessity and indicator of national progress to build healthcare facilities, which in turn shaped new forms of attachments to the state. In particular, inauguration ceremonies, with speeches from politicians, hospital administrators, and board members, became integral to mid-century state-building projects, as was the case elsewhere (Street, 2012, p. 49–50). The construction of Atatürk Sanatorium reflects a shift in the administrative center of Türkiye's tuberculosis struggle from Istanbul to the capital city and the resultant prominence of Ankara's health bureaucracy. The building is therefore important for revealing Türkiye's mid-century health agenda and changing medical geography, and stands out in public debates as a symbol of the state's improved tuberculosis control efforts.

Atatürk Sanatorium in Keçiören, the capital's first public sanatorium, evolved from a single pavilion planned in the mid-1940s into a multi-block complex by the 1960s, with over a thousand beds. Its development became intertwined with national public health agendas during the 1950s and international aid during the 1960s. In 1972, as the institution expanded, it was renamed the Atatürk Center for Chest Diseases and Thoracic Surgery (Erdoğan, 2018, p. 494–496). In this section, we trace its spatial development from early ideas in the 1930s through successive building campaigns in the 1950s and 1960s.

Based on the available sources, the earliest mention of a sanatorium in Keçiören was on February 10, 1930. A newspaper article titled "Keçiören vineyards are getting more festive day by day," and with a subtitle "The charming Ankara resort will be enriched with modern infrastructure" ('Keçiören Bağları Günden Güne Şenleniyor: Ankaranın Bu Şirin Sayfiyesi Asrî Tesisatla Zenginleştirilecek', 1930). To emphasize the area's healing environment, the article noted that there had been a Greek (Rum) sanatorium in Keçiören before republic was founded, and that the Children's Protection Society (*Himaye-i Etfal*)[6] had chosen the area for its facilities (Figure 1). In 1931, reports confirmed the construction of a large, "state-of-the-art" tuberculosis sanatorium within Keçiören's vineyards, selected for having suitable dry air for treating pulmonary tuberculosis and being remote from residential areas ('Sıhhat İşleri – Ankara'da Sanatoryom', 1932). The media celebrated the idea of having a sanatorium in the area, supported by the claim that Mustafa Kemal Atatürk, the Republic of Türkiye's founding president, had visited Keçiören several times to enjoy its views and fresh air. Reportedly, he opted for a healthcare facility despite having initially wished to build a house there to shape Ankara's urban development.[7]

In 1945, the Ministry of Health and Social Welfare allocated a considerable budget for the construction of a modern sanatorium in Keçiören (T.C. Başbakanlık Muamelât Umum Müdürlüğü, 1945). This "modern 100-bed pavilion," following the most recent Western designs, was to serve as a paradigm for other healthcare centers in

6 The Children's Protection Society (*Himaye-i Etfal*) was founded in 1917 in Istanbul. In 1921, the society regrouped in a small room of *Hakimiyet-i Milli* Printing House in Ankara, later renting a house in the Hacımusa neighborhood. In 1925, it moved to a small vineyard house in Keçiören (Erdoğan, 2018, p. 396–397).

7 When Prime Minister Recep Peker (1946–1947) first proposed a sanatorium in Keçiören, the Minister of Health Dr. Behçet Uz opposed this because of the number of residential neighborhoods developing in the area (Ilgaz, 1959).

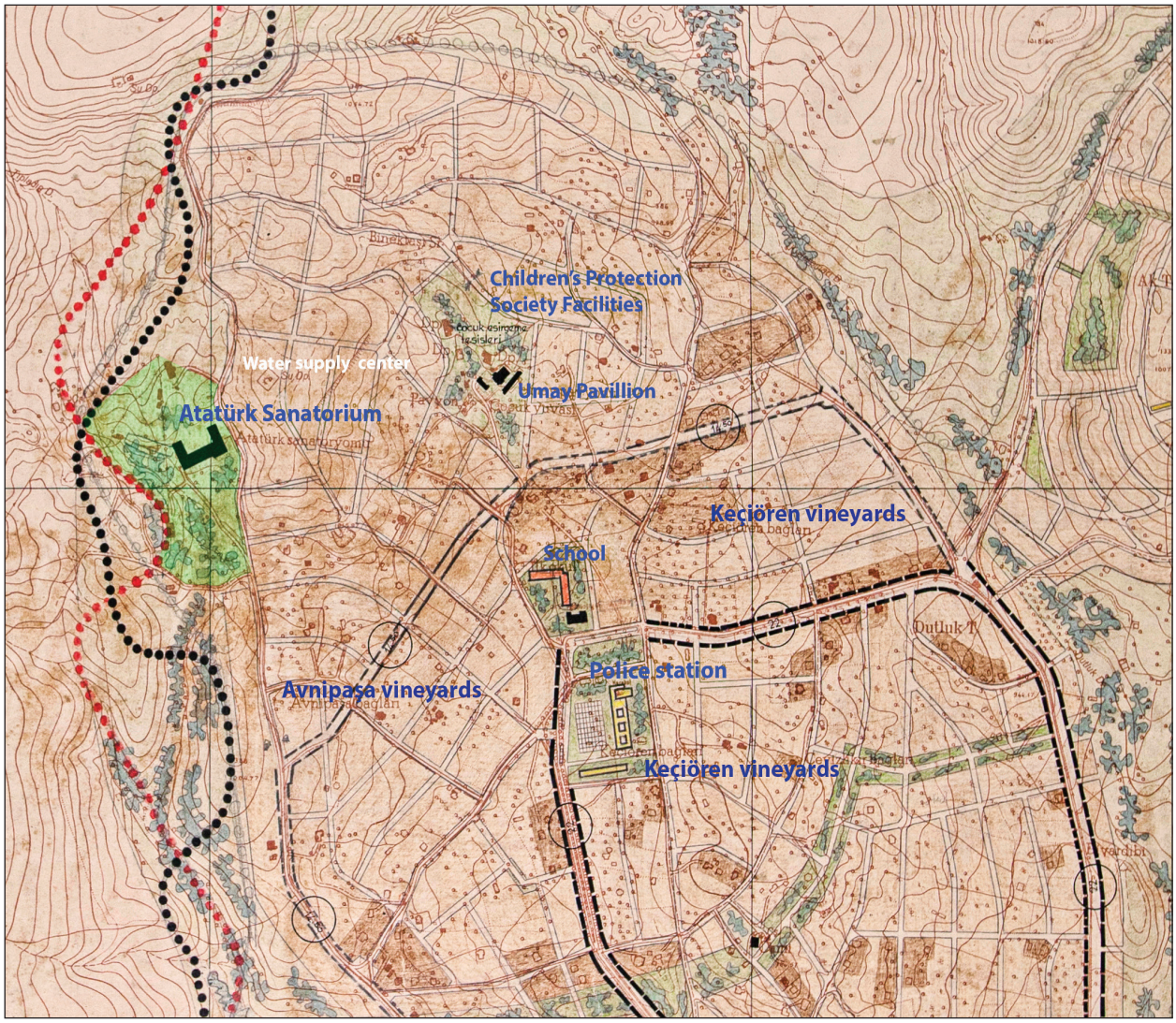


Figure 1. Atatürk Sanatorium in R. Uybadin – N. Yücel Ankara zoning plan boards, 1953–1957.
Source: VEKAM Library and Archive, Ankara Map and Plan Collection, Inventory No: H297.

Türkiye ('1,5 Milyon Lira Harcanarak Keçiören'de Modern Bir Sanatoryum Yapılacak', 1945). A 1947 state document signed by President İnönü reserved several state-owned plots for a new sanatorium (T.C. Başbakanlık Muamelât Umum Müdürlüğü, 1947). On June 2, 1949, Minister of Health and Social Welfare Dr. Kemali Bayizit affirmed the construction budget ('Dr. Kemali Bayizit'in Demeci', 1949). News reports about this new sanatorium reappeared in the media later in 1952, announcing its approaching inauguration (pavilion 1, Figure 2, 3A and 3C). This state-of-the-art tuberculosis facility, initially with 245 beds, was to be named after Atatürk ('Bir Aylık Verem Savaşı Haberleri: Keçiören Verem Hastahanesi', 1952).

Atatürk Sanatorium was inaugurated (pavilion 1, Figure 3B and 3D), as already mentioned, in 1953 on a national holiday, which celebrated Atatürk's legacy and republican ideals of youth and regeneration ('Bir Aylık Verem Savaşı Haberleri: Atatürk Sanatoryumu Merasimle Açıldı', 1953; Ilgaz, 1959). During the opening ceremony,



Figure 2. Chronological expansion of Atatürk Sanatorium.
Source: Technical AutoCAD drawings of the buildings are superimposed on multiple Google Earth views and combined into a single chart, with the pavilions and complex expansion marked in chronological order, as identified and prepared by the Authors, 2025.

Minister of Health Dr. Ekrem Hayri Üstündağ acknowledged several contributors: Dr. Rüştü Çapçı from Numune Hospital, who had contributed to the spatial planning; Dr. Osman Kâzım Okman, Chief Physician of the new sanatorium (active 1952–1964); and the anonymous designer, a master architect, working within the Ministry of Health ('Bir Aylık Verem Savaşı Haberleri: Atatürk Sanatoryumu Merasimle Açıldı', 1953, p. 10–11).[8] This inauguration marked a milestone for the area, with the surrounding area coming to be known simply as Sanatorium (Erdoğan, 2018, p. 494–496). As was common for Türkiye's public sanatoria, treatment was essentially free, though a small number of private rooms were available for a modest fee ('Ankarada Atatürk Sanatoryomu', 1956; Ilgaz, 1959).

The sanatorium began service while several pavilions were still under construction (pavilion 2, Figure 2, 3B and 3D). The remaining construction work, which had been tendered to contractor Sabri Kazmi Öze for completion on August 1, 1954, was delayed by a year due to challenges in importing materials such as steel (T.C. Devlet Şurası Üçüncü Daire, 1955). Completion of this new pavilion increased the number of beds to 330, along with a rehabilitation unit, thoracic surgery rooms, and laboratories capable of performing comprehensive examinations for

8 Several projects from a sanatorium competition organized by the Social Insurance Institution (Yonat et al., 1951) showed parallels with sanatorium precedents that could offer clues to the Atatürk Sanatorium's architect(s). However, none can be directly associated with Atatürk Sanatorium. While these formal and spatial similarities do not permit such attribution, they nevertheless highlight recurring strategies within the Turkish sanatorium typology.

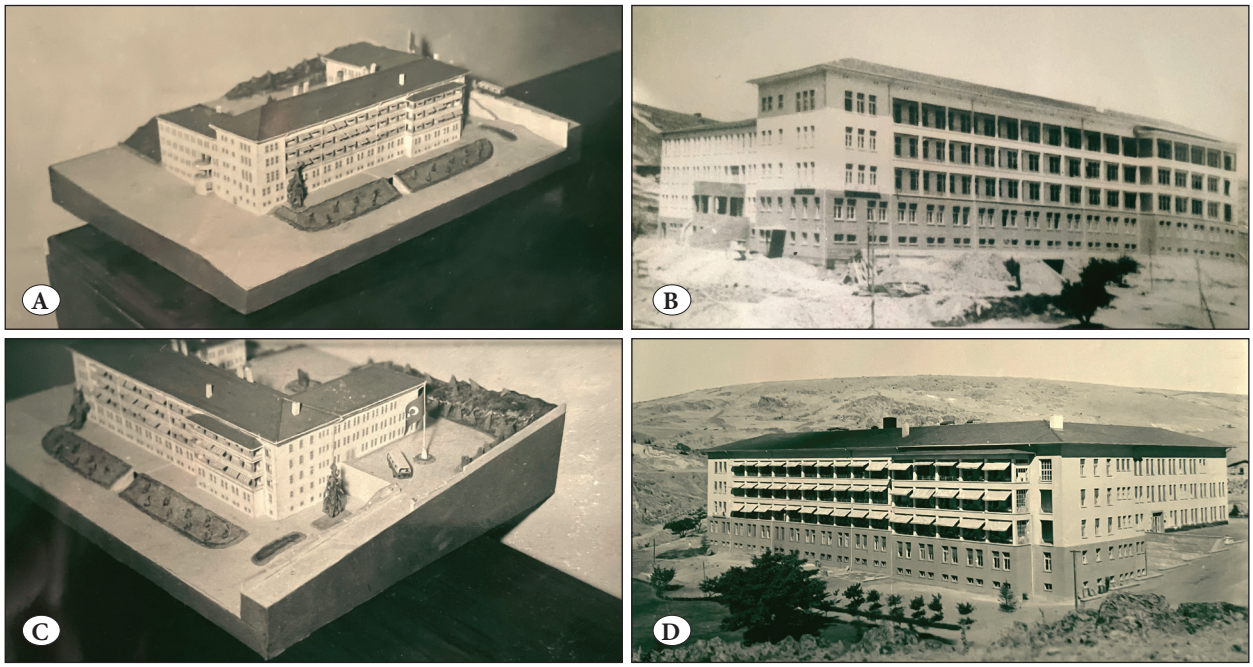


Figure 3A. Atatürk Sanatorium's first and second pavilions, as shown in the architectural model.
Source: Archives of Ankara Atatürk Sanatorium Education and Research Hospital (ASERH).[9]
Figure 3B. Atatürk Sanatorium's first and second pavilions, showing the completed U-shaped block.
Source: ASERH.
Figure 3C. Atatürk Sanatorium's first and second pavilions: a close-up from the architectural model, also illustrating how the building sits within the steep landscape.
Source: ASERH.
Figure 3D. Atatürk Sanatorium's first and second pavilions, showing the completed U-shaped block, photograph illustrating how the building sits within the steep landscape.
Source: ASERH.

pulmonary diseases (Ilgaz, 1959). The first two pavilions were built to form a U-shaped layout, as is clearly visible in the 1957 Uybadin-Yücel Plan (Figure 1, 3C and 3D).[10]

In 1957, a new 200-bed pediatric pavilion was begun (pavilion 3, Figure 4A)[11] after a benefactor named Halil Aktar provided financial support for its construction (S.P.B., 1961a). A documentary film prepared by the General Directorate of Press-Broadcasting and Tourism Film Publication[12] shows its groundbreaking ceremony (GDPT, 1960). It took place in the summer of 1959, attended by President Celâl Bayar and Minister of Health Lütfi Kırdar ('Atatürk Sanatoryumu 200 Yataklı Çocuk Pavyonu Temeli Atıldı', 1959), while Halil Aktar was accompanied by a child with tuberculosis who expressed gratitude to the politicians, the doctors, and Aktar himself (GDPT, 1960) (Figure 4B).

Meanwhile, in 1959, the Chief Physician Enver Bozyakalı (active 1955–1978) began working on plans for a new

9 From here onwards, ASERH.
10 A competition was held in 1954 to address Ankara's postwar rapid urban growth and expansion. Nihat Yücel and Raşit Uybadin's winning proposal was implemented in 1957 (Yücel, 1992).
11 This pavilion was initially planned as a preventorium located on the slopes of Keçiören ('Çeşitli Verem Savaşı Haberleri: Ankara Veremle Savaş Derneği Bir Prevantoryum Yaptıracak', 1957), built at a distance from the first sanatorium block since preventoria aimed to isolate those at risk but not yet infected.
12 From here onwards (GDPT).



Figure 4A. The pavilion under construction, filmed during the construction ceremony of the Halil Aktar Pediatric Tuberculosis Pavilion.

Source: General Directorate of Press-Broadcasting and Tourism Film Publication (GDPT, 1960).

Figure 4B. A tubercular child delivering a speech at the construction ceremony of the Halil Aktar Pediatric Tuberculosis Pavilion.

Source: GDPT, 1960.

surgical pavilion and another dedicated to pulmonary diseases other than tuberculosis. With these additions, the complex was to become a 1500-bed central institution (Ilgaz, 1959) that would ideally relieve the burden on Istanbul and even shift the center of tuberculosis control to the capital city.

The expansion of the sanatorium during the 1960s had more than national significance as it was linked to the internationalization of tuberculosis control efforts and Türkiye's involvement in international aid networks of the time. Institutions like AID (US Foreign Aid) and WHO played a growing role in financing medical infrastructure across the Global South, while also employing the notion of health as a tool of diplomacy, modernization, and ideological alignment. Türkiye, as a strategic NATO member and U.S. ally, was a target for such efforts.[13] Atatürk Sanatorium was therefore not just a public health facility but a display of development diplomacy and, in a sense, a built expression of American-backed modernization. It showcased not only Türkiye's expanding health infrastructure but also the country's architectural and ideological repositioning within a wider transatlantic framework of influence and soft power.

The 250-bed Halil Aktar Children's (Pediatric) Tuberculosis Pavilion, which was inaugurated on March 25, 1961 (pavilion 3, Figure 5A), began a period marked by foreign aid. The institution admitted children aged up to 14 years who were suffering from any tuberculosis-related illness. It incorporated classrooms, playrooms, and workshop studios (GDPT, 1962). By the end of 1961, the pediatric ward was fully operational (S.P.B., 1961b) and featured on the front cover of the health advice magazine *Yaşamak Yolu* (S.P.B., 1961a) (Figure 5B).

With financial assistance from AID, a brand-new pavilion was also built and opened on April 22, 1962 (S.P.B., 1962a) (pavilion 4, Figure 6A, 6B, 7A and 7B). At the inauguration ceremony, Minister of Health Dr. Suat Seren symbolically accepted medical aid, equipment, and furniture from the vice president of AID (GDPT, 1960). By 1963, Atatürk Sanatorium had grown into a fully functioning 1,050-bed complex with modern laboratories (GDPT, 1962) (Figure 8A and 8B), while staff numbers reached nearly 500, including doctors, nurses, laboratory technicians, and technical personnel. The new pavilion extended the U-shaped block formed by pavilions 1 and 2. This direct connection of pavilions was not incidental, as sanatorium administrators of the time considered

13 On Turkey-US Relations after WWII, see Güvenç, S., & Özel, S. (2022). US-Turkey Relations since World War II: From Alliance to Transactionalism. In G. M. Tezcür (Ed.), *The Oxford Handbook of Turkish Politics* (p. 523–544). Oxford University Press.



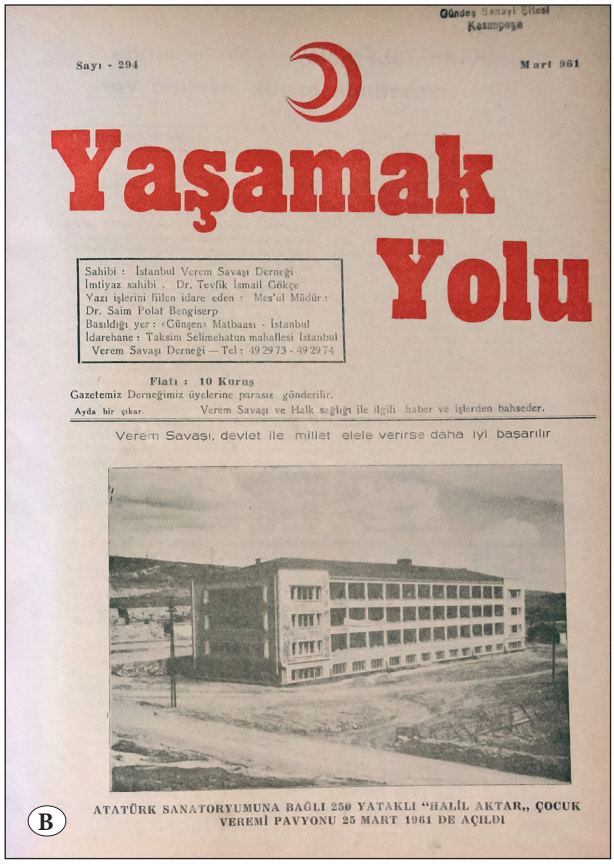


Figure 5A. Completed Halil Aktar pediatric tuberculosis (third) pavilion.
Source: VEKAM Library and Archive, Ankara Photograph, Postcard, and Engraving Collection (VEKAM),[14] Inventory no: 3016_12.
Figure 5B. Completed Halil Aktar pediatric tuberculosis (third) pavilion, as featured on the front cover of the health advice magazine *Yaşamak Yolu.*
Source: Yaşamak Yolu, March 1961, Cover.





Figure 6A. The fourth pavilion in construction.
Source: VEKAM, Photograph Collection, Inventory no: 3016_09.
Figure 6B. The fourth pavilion with the initial phase of construction completed.
Source: ASERH.

such a layout more efficient for circulation, service, and staffing (Gökçe, 1957, p. 370). Moreover, both buildings incorporated the latest construction technologies. For example, construction photographs suggest a modern reinforced concrete frame (Figure 6A).

During the mid-1960s, several smaller ancillary pavilions were added to the sanatorium. A groundbreaking ceremony for a low-cost, single-story pavilion took place on August 1, 1965 (S.P.B., 1965b) (pavilion 5, Figure 9A and 9B). That same year, a new 100-bed pavilion with a cinema and library was announced through the efforts of the Atatürk Sanatorium Rehabilitation Association

14 From here onwards (VEKAM, Photograph Collection).



Figure 7A. The fourth pavilion and its connection to the second pavilion of the U-shaped block.
Source: Sanatorium Heritage Turkey (SHTR).[15]
Figure 7B. The second pavilion of the U-shaped block, featuring a rounded, projecting grand entrance.
Source: SHTR.

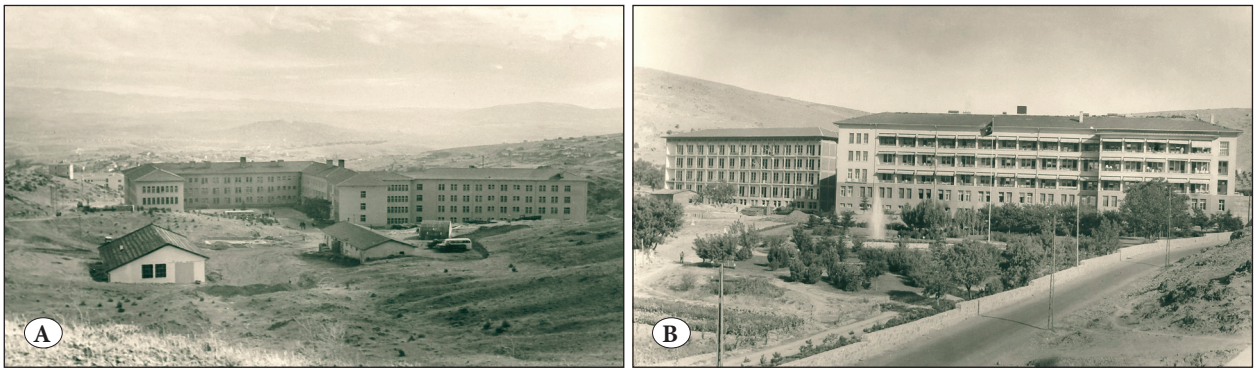


Figure 8A. The completed block comprising the first, second, and fourth pavilions, viewed from the north-facing façade.
Source: VEKAM, Photograph Collection, Inventory no: 3016_57.
Figure 8B. The completed block comprising the first, second, and fourth pavilions, viewed from the south-facing façade.
Source: VEKAM, Photograph Collection, Inventory no: 3016_60.

(ATASAY), with its completion planned for 1966 (S.P.B., 1965a). The location of pavilion 6 is unclear, although it may have been either an extension of the northeastern wing attached to the U-shaped block or a separate block built on the northwestern edge of the site (pavilion 6, Figure 2). By the mid-1960s, the sanatorium complex had expanded to a considerable size and complexity, as was proudly displayed on postcards and distributed photographs (Figure 10). The detailed chronology of Atatürk Sanatorium complex reveals how localized infrastructure developed at the intersection of national discourses and medical concerns (Table 1).

The Mid-century Sanatorium: An Intricate Network of Multi-layered Infrastructure

Sanatoria, which traditionally were usually located in remote, natural settings, provided long-term convalescence structured around rest, air, and regulated living. Tuberculosis hospitals, by contrast, tended to be part of general hospitals in more urban or accessible areas, accepting more advanced-stage patients, and offering surgical interventions over shorter stays. However, this distinction blurred over time as new diagnostic techniques, surgical procedures, and antibiotic therapies transformed the institutional boundaries of sanatoria, which gradually took

15 From here onwards (SHTR).

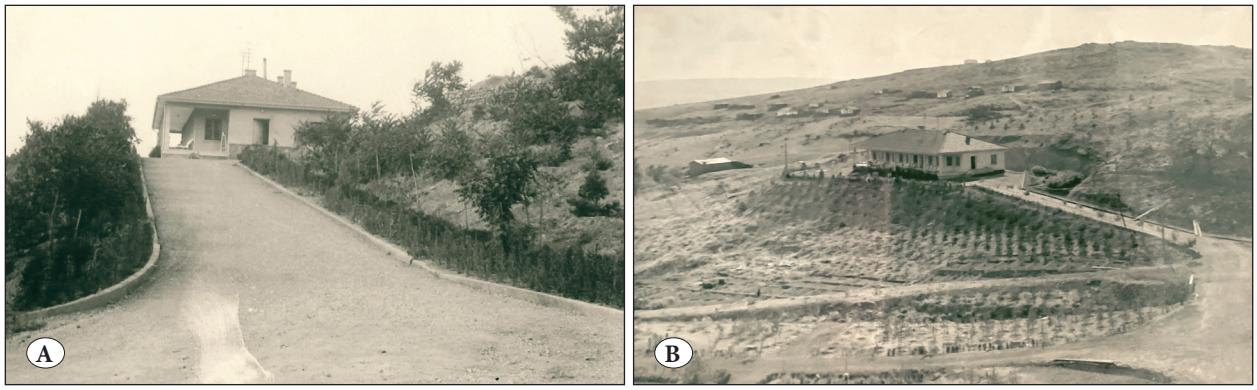


Figure 9A. A close-up of the fifth pavilion and the pathway leading up to it.
Source: VEKAM, Photograph Collection, Inventory no: 3016_42.
Figure 9B. A distant view of the fifth pavilion.
Source: ASERH.



Figure 10. The completed Sanatorium complex. At the back left, the sanatorium block (pavilions 1, 2, and 4). At the front right, the Halil Aktar pediatric tuberculosis pavilion (3).
Source: ASERH.

on the complexity of hospitals. While modeled on general hospital structures, these incorporated more specific spatial and functional adjustments. In a 1951 article, U.S. hospital architect Peter N. Jensen identified three key distinct characteristics of tuberculosis hospitals: inclusion of additional amenities for long-term patients (e.g., auditoriums, canteens, barber shops, and occupational therapy rooms); adherence to specialized tuberculosis treatment methods; and implementation of architectural strategies to prevent airborne transmission (Jensen, 1951).

Although Atatürk Sanatorium was not officially termed a hospital in the 1950s, it functioned with comparable complexity. Like its contemporaries, it must be understood as an infrastructure, denoting "a system of interruptions which operates along a continual flow" (Lungu, 2011, p. 46–47). In healthcare contexts, infrastructure includes the "equipment, access, information technology (IT), systems and processes, sustainability initiatives and staff" which facilitate patient experience, safety, equity and sustainability (Luxon, 2015, p. 4). This view can be seen from the earliest press references to the sanatorium, which framed it as "*asrî tesisat* [modern infrastructure]," expected to enrich "the charming resort of Ankara" ('Keçiören Bağları Günden Güne Şenleniyor: Ankaranın Bu Şirin Sayfiyesi Asrî Tesisatla Zenginleştirilecek', 1930).

In the following subsections, we draw on our analysis of archival documentation from Atatürk Sanatorium and Luxon's (2015) infrastructure framework to identify and examine four distinct yet interconnected infrastructural elements: low-tech care, technical and medical, and clinical service, and rehabilitation.

Architecture of Convalescence: Low-tech Care Infrastructure

First developed in Europe, the classic sanatorium model prioritized open-air rest, nutritious meals, and environ-

Table 1. *Chronological Expansion of Atatürk Sanatorium.*

Date	Construction Steps	People	Beds
1947	Groundbreaking of the first pavilion.		
1950	Structural frame of first pavilion completed.		
1953	First pavilion completed, water line installed.	Chief Physician: Osman Kazım Okman.	
19 May 1953	Inauguration of first pavilion.	Design by Ministry of Health architect; program coordinated by Dr. Rüştü Çapçı (from Numune Hospital)	245-250
1955	Second pavilion's construction begun (rehab units, labs, surgery).	Contractor: Sabri Kazmi Öze.	330*
1957	Groundbreaking of Halil Aktar Pediatric Pavilion; Yücel-Uybadin Plan incorporates U-shaped block.	Chief Physician: Enver Bozyakalı.	200*
1958	Second pavilion completed.		+140 = 390
1959	Fourth pavilion announced (for pulmonary illnesses and surgery).		
1960		Dr. Berke's (Norway) lectures.	
March 1961	Halil Aktar Pavilion inaugurated.		+250 = 640
22 April 1962	Fourth pavilion inaugurated (financial and medical support from AID).		+400 = 1050
1 August 1965	Foundation of one-story building; plan to expand to 1500 beds (by Bozyakalı).		
1966	ATASAY Pavilion completed.		+100 = 1150
*Planned capacity			

mental control (Daniel, 2011; Eylers, 2014; McBride, 1998). Also known as the hygienic-dietary regimen, these rest-based programs and their low-tech spatial requirements remained central to tuberculosis care well into the early antibiotic era. They were not immediately replaced by chemotherapies and surgical interventions, but instead formed part of a layered therapeutic approach. This continuity is evident in Atatürk Sanatorium, where low-tech treatment forms remained relevant, particularly the provision of fresh air. In the Turkish context, this core principle of international sanatorium design was also rooted in the longstanding cultural practice of a change of air (*tebdil-i hava*), which encouraged retreats to natural environments for convalescence and healing. The earliest tuberculosis facilities began in breezy summer resorts near Istanbul, long associated with *tebdil-i hava* (Besim Ömer, 1904). Over time, the therapy was formalized into the hygienic-dietary regimen promoted by specialists like Tevfik İsmail Gökçe, Chief Physician of Heybeliada Sanatorium (Tevfik İsmail, 1933).[16]

The selection of Keçiören for Ankara's main sanatorium followed a similar logic. By the early 1930s, the area had become widely recognized for its therapeutic microclimate, with letters from locals noting its long-standing

16 For a detailed institutional account of the development of the hygienic-dietary regimen at Heybeliada, see Gökçe, T. İ. (1957). *Heybeliada Sanatoryomu Kuruluş ve Gelişimi 1924-1955.* İsmail Akgün Matbaası. See also the annotated republication of the monograph prepared by Fatih Artvinli, Cem Hakan Başaran and Tuna Pektaş: Gökçe, T. İ. (2021). *Heybeliada Sanatoryumu Kuruluş ve Gelişimi (1924-1955)* (F. Artvinli, C. H. Başaran, & T. Pektaş, Eds.). İstanbul Tüberkuloz Vakfı. Artvinli has also published an oral history interview with a former Erenköy Sanatorium nurse, significant for staff perspectives on sanatorium care: Artvinli, F. (2017). Verem Savaşı Hemşire Okulu, Erenköy Sanatoryumu ve Dispanserler: Muazzez Yazıcıoğlu ile Bir Sözlü Tarih Çalışması. *Yeni Tıp Araştırmaları*, *23*, 57–89.

reputation as a traditional site of recovery for the frail ('Kari Mektupları', 1930). One newspaper article put it vividly: "By day, gentle breezes are never absent from the Keçiören hills; by night, it is cool, and it offers an unforgettable beauty overlooking all of Ankara's lights from above" (N.B., 1935). In a 1933 article, a doctor named Ethem celebrated Ankara as an emerging "sanatorium city," describing the capital's climate as dry, clear, and rich in oxygen, free from dampness, microbes, and stagnant air (Doktor Ethem, 1933). With its elevated position above the city's pollution and its proximity to vineyards and hills, Keçiören was deemed uniquely suited for producing a "cure-worthy mountain air" (Doktor Ethem, 1933).

While early twentieth-century medicine had moved beyond the belief that healing depended on specific Alpine or coastal locales (Eylers, 2014), the perception that fresh air was therapeutically valuable persisted in a more general form, detached from geographic particularity and transformed into an architectural issue. Atatürk Sanatorium exemplified this through its design, which embraced air and light as therapeutic elements through the building's orientation, elevation, and ventilation paths. These principles were materialized through open-air balconies and sun-oriented patient rooms with regulated ventilation, the design strategies that frame sanatoria as what Tim Altenhof calls a "device for atmospheric exposure" (Altenhof, 2023, p. 330).

Accordingly, the climate was a key architectural parameter of Atatürk Sanatorium, resulting in a U-shaped building mass and an exterior formed by south-facing wards and long, continuous balconies, designed to maximize natural ventilation and optimize sun exposure. The patient wards typically consisted of three- to four-bed units along double-loaded corridors, with doors opening onto the southern façade, which featured long, communal balconies furnished with loungers for rest therapy (Figure 11A). These continuous balconies, which was a common practice in public sanatoria, prioritized efficient surveillance and circulation for medical staff over patient privacy (Figure 11B). The exteriors were characterized by rational geometries exposing concrete columns and balconies with simple metal railings, with an overall formal language that echoed the aesthetic of contemporary International Style architecture.[17] Typical of modern



Figure 11A. Low-tech infrastructure: the cure balconies, signature of sanatorium aesthetics. On the end wall of the balcony, an unattributed artwork depicting a woman in traditional clothing is visible.
Source: VEKAM, Photograph Collection, Inventory no: 3016_15.
Figure 11B. Low-tech infrastructure: the cure balconies, shown in use with patients.
Source: ASERH.

17 For more information on hygiene discourses and modern architecture, see Colomina, B. (2019). *X-Ray Architecture*. Lars Müller Publishers; Overy, P. (2007). *Light, Air & Openness: Modern Architecture Between the Wars*. Thames & Hudson.



Figure 12. Low-tech infrastructure: Hygienic bedroom design. Source: ASERH.

healthcare institutions, patient rooms were plain and hygienic, with walls coated in washable oil paint, easy-to-clean materials, minimal ornamentation, and light-colored finishes that maximized natural light (Figure 12). This was because, even after the development of antibiotics, newly admitted patients still posed an infection risk (Gunnels & Bates, 1977). Atatürk Sanatorium thus embodied a form of low-tech care, in which preventive strategies were employed through aseptic design.

Sanatoria also implemented pedagogical functions in that patients were educated about the disease and the "tuberculosis etiquette" to live within society without spreading the disease (Snowden, 2019, p. 306). As Katherine Ott states (Ott, 1996, p. 150), sanatoria functioned as extensions of the state, aiming to instill discipline and promote hygiene and civic education. Treatment emphasized self-control, both of the body, such as not coughing or spitting, and also over emotions. Strict rules, quiet hours, and regimented daily routines reinforced this disciplinary environment. Indeed, sanatoria emerged from multiple corrective, therapeutic, and educational traditions incorporating programmatic aspects from hospitals, prisons, schools, asylums, and resorts (Bashford, 2005, p. 125). Atatürk Sanatorium, for example, had auditoriums



Figure 13. Rehabilitative Environments: The reception and hall of the Halil Aktar Pediatric Tuberculosis Pavilion. Source: ASERH.

for cultural activities like theater performances, concerts, and lectures, a reception area reminiscent of a hotel (Figure 13), and design features that softened the institutional feel with paintings (Figure 14A and 14B), sculptures, and artificial pools (Figure 15A and 15B). The site was also landscaped to create picturesque views to compensate for what Ankara's natural environment lacked: Istanbul's sea views and pine forests.



Figure 14A. Rehabilitative environments: Wall paintings in the dining hall.
Source: VEKAM, Photograph Collection, Inventory no: 3016_18.
Figure 14B. Rehabilitative environments: Wall paintings in the circulation areas.
Source: VEKAM, Photograph Collection, Inventory no: 3016_21.

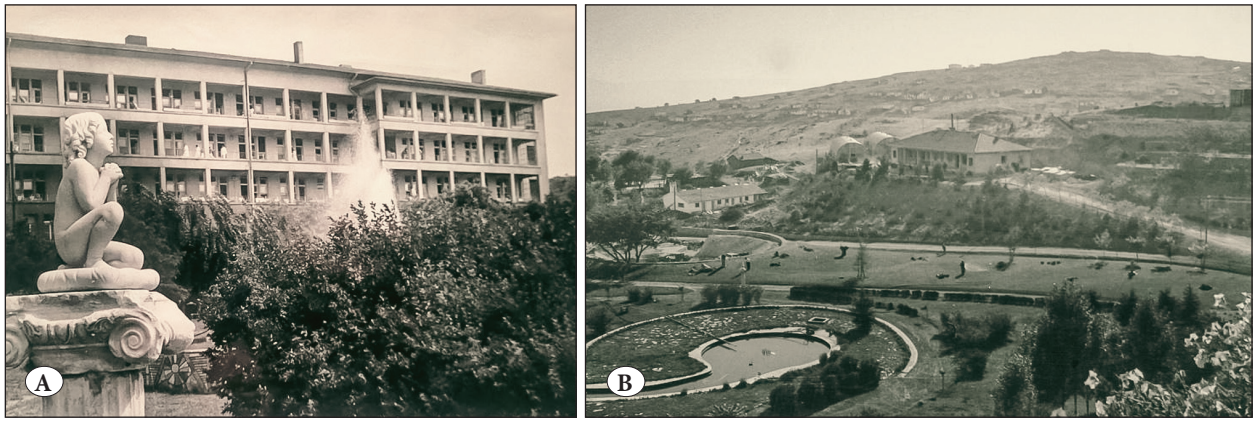


Figure 15A. Rehabilitative environments: Courtyard, fountain and sculpture.
Source: ASERH.
Figure 15B. Rehabilitative environments: The courtyard with pool and landscape design, with the fifth pavilion in the background.
Source: VEKAM, Photograph Collection, Inventory no: 3016_56.

A Functioning Machine: Technical Infrastructure

Like twentieth-century hospitals generally, sanatorium buildings were symbols of social progress and the advancement of medical science (Logan et al., 2010, p. 601). Thus, a legacy of twentieth-century modernism is both the formal, technical and technological transformation of healthcare architecture. In this sense, Atatürk Sanatorium is also "a cluster of boxes linked by a system of invisible mechanical connections" (Lungu, 2011, p. 12).

During the mid-twentieth century, idealized rationality and deterministic mechanical systems became central to architectural thought and practice (Wihart, 2015). Modernist post-war hospitals, driven by political agendas tied to technical and technological advances, incorporated elaborate mechanical solutions within their structural systems and functional zoning. Healthcare architecture underwent a series of transformations during this period, led by advances in construction technologies, particularly the use of concrete and steel frames, as well as retrofitting infrastructural systems like heating, water, sewage, and electricity (Heikinheimo, 2018, p. 12–13). These district systems required early-stage planning and integration into the building project. New technical service requirements led to the installation of (exo)skeletons to carry conduits throughout the building: "heating and electric power plants, workshops, garages, […] pathology and histology laboratories and mortuary services", hence "a notable part of the complex are its […] retaining walls, the underground facilities, the water supply, the sewerage and purification system" (Del Curto and Toso, 2012, p. 676–677).

As machinery rooms became sites and symbols of technical progress in nation-building discourses and international promotions (Architectural Histories, 2025; Troelenberg et al., 2024), the service infrastructure of large healthcare facilities like Atatürk Sanatorium surpassed their material function to became symbols. Through promotional brochures and news coverage, photographs of the boiler room, laundry machine, or stainless-steel dish rack communicated the message of a modern state capable of improving public health. In fact, infrastructural machinery had long been used to symbolize the architectural expression of modernity, and the technocratic visibility of such systems was part of a longer practice of materializing progress through the built environment. In Türkiye's case, this extended back to the late Ottoman period. Hamidiye Etfal Hospital, for instance, was featured in Sultan Abdülhamid II's imperial photography albums (Çelik & Eldem, 2021). Such visual strategies established a precedent in which the state's authority was projected through the visibility of medical science.

In the Republican period, this repertoire expanded to include comprehensive technical infrastructures of care. Spaces like sterilization units, laundries, and kitchens, although functionally peripheral, became architecturally and photographically central. Early Republican Türkiye cultivated a "machine aesthetic" in its architecture and image-making, which linked mechanical rationality to state legitimacy (Bozdoğan, 2001, p. 114–132). Factories, dams, power stations, and railroads appeared regularly in official imagery to symbolize the country's industrial progress and national strength. We argue that hospitals and sanatoria, too, participated in this logic. Through the photographic representation of its pipes, ducts, boilers, and sterilizers, Atatürk Sanatorium performed technocratic modernity (Figure 16).[18]

Drawing on extensive documentation of Atatürk Sanatorium's machines and infrastructure, we argue that these reflect more than technical records. Rather, they display a deliberate effort to showcase physical, engineering, technical, and technological progress as evidence of national development in mid-twentieth-century Türkiye. The sanatorium's machinery and technical features were meticulously recorded and disseminated at the time. This documentation included (1) retrofitting: machinery that enabled the functioning of the complex (heating, electricity, water) (Figure 16 and 17); (2) services: machinery that supported daily life and convalescence (kitchen, laundry room)[19] (Figure 18 and 19) and (3) machinery infrastructure: evolving surgical and laboratory equipment (Figure 20 and 21).

Beyond their symbolism, there is another layer to Türkiye's healthcare infrastructure in that was transformed to reflect twentieth-century understandings of hygienic space with the conception of bacteriology, aseptic surgery, and pathology; and these created a need for more

18 In the Yücel-Uybadin plan, the water supply center is seen close to the complex's perimeter. With the commissioning of Çubuk Dam and Water Supply Center, water supplies were installed to Etlik and Keçiören in 1936 (Erdoğan, 2018, p. 400–401). In 1950, to retrofit Atatürk Sanatorium's water supply, Ankara Water Administration purchased eight motor pumps, and two diesel and six electric machines ('Ankara Sular İdaresi Müdürlüğünden', 1950). In 1953, the water filtration station was connected via a new line to Keçiören ('Bir Aylık Verem Savaşı Haberleri: Atatürk Sanatoryumu Merasimle Açıldı', 1953).

19 Gökçe's sanatorium guidelines, informed by his European visits, provided detailed guidance for kitchen and laundry design, recommending these facilities be located near the generator room for ease of technical installations (Gökçe, 1957, p. 372, 375–376). Despite this hint, we could not determine the kitchen, laundry, or generator room locations, even though photographs from the 1950s and 1960s show several ancillary structures.

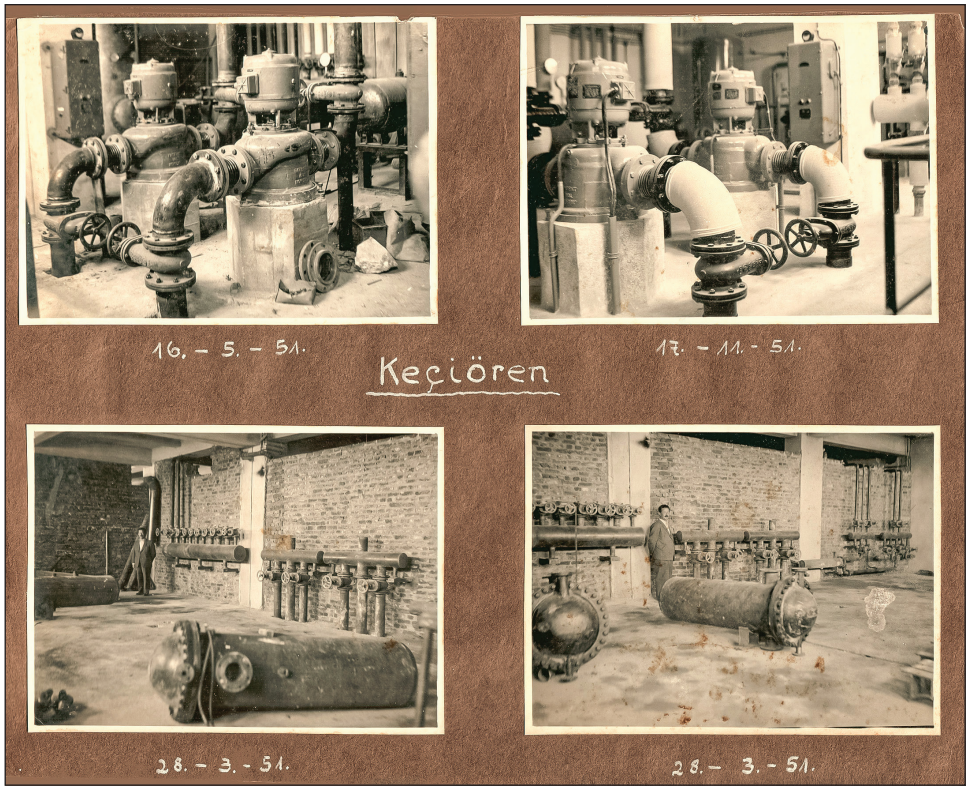


Figure 16. Technical Infrastructure, dated to 1951.
Source: SHTR.



Figure 17. Low-tech infrastructure: Interiors and furniture from a room complete with a built-in sink.
Source: ASERH.

complex hospital diagrams, with proliferating and reconnecting branches (Logan et al., 2010, p. 603–604). The previously simple interiors began to be furnished with high-tech medical equipment and machines, marking a technological evolution in hospital architecture (Lungu, 2011, p. 8). The architecture now had to accommodate both longstanding practices like rest cures and newer technological interventions, which triggered architectural modifications and reshaped spatial organization (Adams et al., 2008, p. 939). Modern X-ray machines, surgical practices, and pharmaceuticals led to the decline of electrotherapy (Burke, 2014, p. 155–156), while the increased size of medical equipment required extra hospital space (Burke, 2014, p. 184–185).

Electricity infrastructure transformed twentieth-century hospitals through spatial additions and consequent reconfigurations of existing plan layouts. For instance, new radiology departments required "X-ray equipment itself, a generating plant and darkroom" located in "the lower section of hospitals" (Burke, 2014, p. 164–166). Other changes included surgical innovations and laboratory revolutions (e.g., pathology, pharmacy). Atatürk Sanatorium's administrative board ensured that these spatial expansions with the new equipment were thoroughly documented (Figure 20 and 21). With these new conduits, i.e., lighting and ventilation, as well as the new surgical equipment and sterilization, one of the most sig-

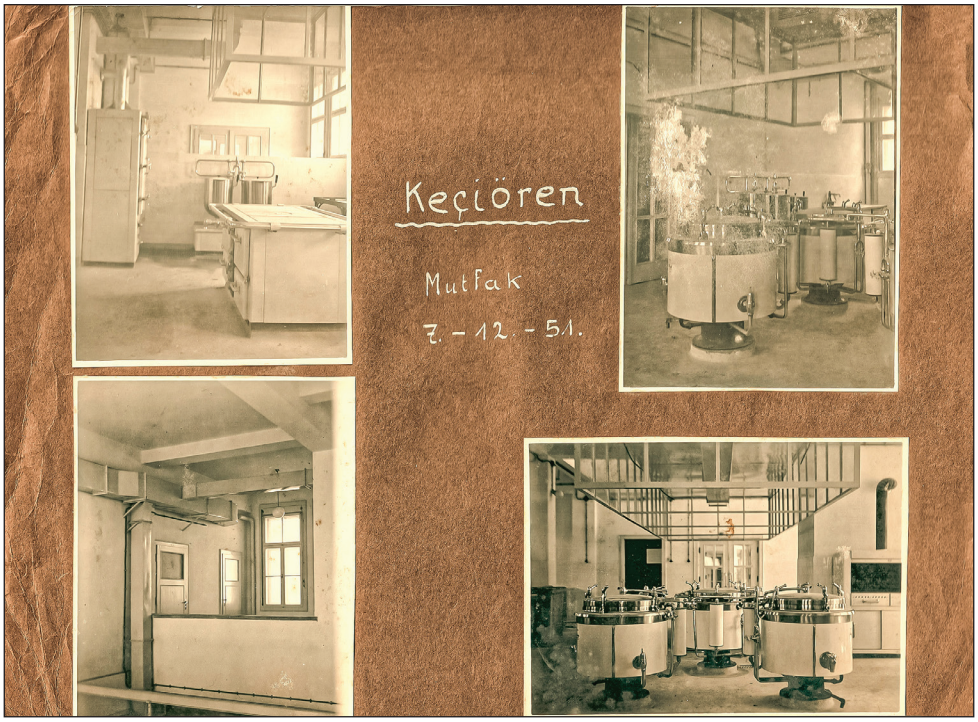


Figure 18. Service infrastructure: The kitchens. Dated 7 December 1951. Source: SHTR.



Figure 19. Service infrastructure: The kitchens. Source: ASERH.

nificantly transformed spaces was the operating room (Logan et al., 2010, p. 610–612). Accordingly, Atatürk Sanatorium's X-ray rooms and operating rooms were not only photographed for the institution's archives but were also displayed publicly on postcards and in documentary films, thereby underscoring the importance attributed to them.

From Surgical to Medicinal Infrastructure

The arrival of these new treatment methods did not signal a departure from nineteenth-century climatic medicine but rather its institutional refinement. A closer look at international developments in pharmaceuticals and their distribution in Türkiye offers insights into the country's economic and socio-political healthcare infrastructure, which can help in understanding the scope of this refinement. As the tuberculosis control center shifted to Ankara, so did the distribution of medicines. In particular, given its large warehouses and state-of-the-art laboratories, Atatürk Sanatorium became a storage and distribution center for NATO and UNICEF medical/pharmaceutical aid (GDPT, 1962) (Figure 22A and 22B). In 1960, for example, AID[20] provided the sanatorium with medicines, medical instruments, and devices. A documentary film of the time shows medicines, machinery, and furniture arriving at the sanatorium, and then being unpacked, sorted, assembled, repaired, and modified in the sanato-

20 Also known as Economic Cooperation Administration [*iktisadi işbirliği idaresi*] (ECA) and with other abbreviations: MSA, FOA, or ICA.



Figure 20. Machinery infrastructure.
Source: ASERH.

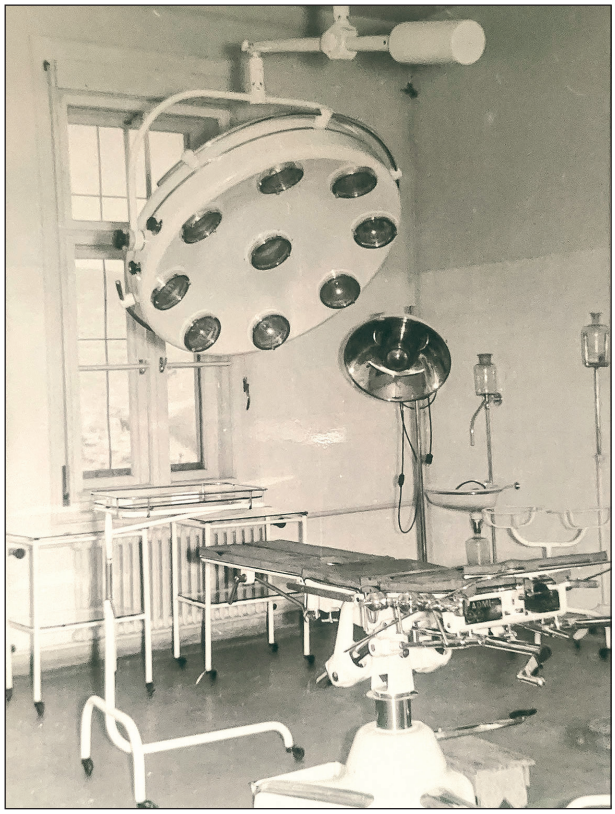


Figure 21. Machinery infrastructure: The operating room.
Source: ASERH.

rium's workshops and warehouses before being shipped to other institutions across Türkiye (GDPT, 1962).

During the 1950s, drug trials became a frequent topic of discussion. The first and later widely used antibiotic streptomycin(e) was discovered in 1944 in the laboratory of U.S. scientist Selman Waksman.[21] This and subsequent chemotherapy developments were closely followed by Türkiye's medical community, especially by sanatorium administrators like İhsan Rıfat Sabar and Gökçe. Gökçe initially reported that streptomycin was only effective against early and febrile forms of pulmonary tuberculosis, with no effect on chronic patients (Gökçe, 1949). A year later, he claimed that, among other issues, streptomycin could not replace long-term care and surgical methods (Gökçe, 1950).

Indeed, as effective as these drugs were, after several trials in various tuberculosis care institutions, including

21 For historical analyses of pharmaceutical developments in tuberculosis care, see Gradmann, C. (2022). This is the End: Eradicating Tuberculosis in Modern Times. *Centaurus*, *64*(1), 171–180; Kehr, J., & Condrau, F. (2016). Recurring Revolutions? Tuberculosis Treatments in the Era of Antibiotics. In J. A. Greene, F. Condrau, & E. S. Watkins (Eds.), *Therapeutic Revolutions: Pharmaceuticals and Social Change in the Twentieth Century* (p. 126–149). University of Chicago Press.

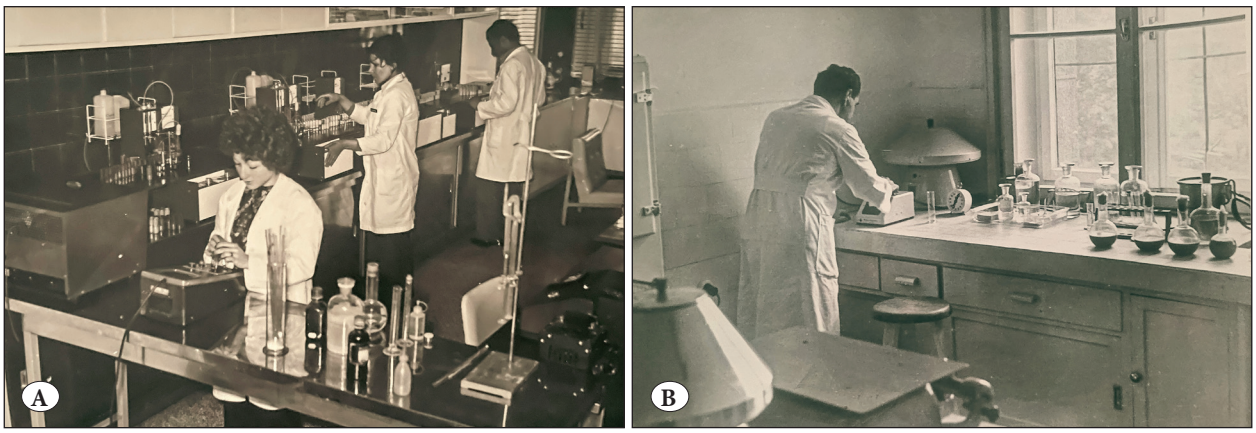


Figure 22A. Machinery infrastructure: The laboratories, with staff at work.
Source: ASERH.
Figure 22B. Machinery infrastructure: The laboratories, with naturally lit interiors following hygienic design principles.
Source: ASERH.

Atatürk Sanatorium, Turkish doctors remained concerned that streptomycin, pas, and other medications of similar origin, were being used so thoughtlessly by the public that they would soon become ineffective (Gökçe, 1952). They therefore advocated continuing adjunctive treatments (e.g., collapse, chest and abdominal thorax, partial or entire removal of the lung) to stabilize the disease before the drugs lost their effect (Dr. E. E., 1955). Turkish doctors believed that the sanatorium treatment would not cease anytime soon, nor would the need for dispensaries (Sabar, 1952); indeed, even after the introduction of pharmaceuticals at Atatürk Sanatorium, adjunctive surgical treatments continued as well as low-tech care.

Meanwhile, the Ministry of Health and Social Welfare worked to develop its medicine production and distribution infrastructure. In 1953, it prepared the Medical and Pharmaceutical Preparations Manufactories Directive [*Tıbbî ve İspençiyarî Müstahzar İmalâthaneleri Talimatnamesi*] and reorganized and increased the capacity of pharmaceutical laboratories to meet rising general demand (SPTİGM, 1973, p. 343–344). By the 1950s, Türkiye's pharmaceutical industry included several domestic factories and laboratories, and foreign-owned factories.[22] By the 1970s, Türkiye was a major producer of tuberculosis drugs (SPTİGM, 1973, p. 118). Ankara also established its own tuberculosis medicines distribution mechanism and financial support through the work of Ankara Provincial Health Directorate [*Ankara İl Sağlık Müdürlüğü*] ('Bir Aylık Verem Savaşı Haberleri: Ankarada Verem İlâç Yardımı', 1952).

The ministry lacked warehouses for storing medicine or medical equipment until 1963, when it established the General Directorate of Equipment [*Donatım Genel Müdürlüğü*] under Law No. 225, taking over responsibilities from the former Directorate of Supplies [*Levazım Müdürlüğü*]. The new plans included various spatial requirements: four main depots and repair shops, 16 regional depots, and two transit warehouses. The first main depot and repair shop had already been set up in 1960 at Atatürk Sanatorium.[23]

Even though tuberculosis treatment was significantly transformed by advances in antibiotics, these medications were not sufficient alone. With trial and error, their use was standardized over time, with specific dos-

22 There were 102 companies producing medicines. These were located in Istanbul (85), Ankara (2), Adana (3), Izmir (7), and one each in Samsun, Diyarbakır, Manisa, Rize, and Zonguldak. Of these, 91 operated with domestic capital and 11 were foreign-owned (SPTİGM, 1973, p. 118). For material-culture research on pharmaceutical collections in Ankara, see Alpay, İ. (2024). *The Making of a medical museum: Recontextualizing the Gülhane medical history collection in Ankara, Türkiye* [Master's Thesis, Koç University]. YÖK National Thesis Center.

23 In 1963, the new facility on the Esenboğa road included a main depot and central repair shop (SPTİGM, 1973, p. 346–347).



Figure 23. Nurse vaccinating a patient.
Source: ASERH.

ages and methods of use being developed to provide better controlled and effective treatments (Figure 23). One challenge was bacterial resistance, while another was that early forms of the medicines were only temporarily effective. Therefore, adjunctive older treatment methods, i.e., low-tech, architecture-based care, collapse therapy, and surgical interventions, continued to play an important role. Sanatorium architecture was thus transformed into a hybrid of tuberculosis sanatorium and hospital complex that required physical expansion and eventually a more intricate network of infrastructure by the mid-twentieth century.

Prolonged Infrastructure: Anti-tuberculosis Living by Rehabilitation

An article in *Yaşamak Yolu* explained "rehabilitation" to its readers as "accustoming those who escaped death and recovered to live again" (Akın, 1962, p. 10). While antibiotics promised quicker cures, tuberculosis care in mid-century Türkiye extended well beyond the disappearance of symptoms. Recovery was increasingly linked to what officials called rehabilitation, which was not simply a return to health, but a return to an economically productive life.[24] Within sanatoria, rehabilitation became part of the medico-social mission of tuberculosis control by blending clinical care with efforts to re-integrate patients into the workforce (Berthet, 1950, p. 124–125).[25] Rehabilitation concern marked a shift in institutional thinking whereby tuberculosis specialists had to look beyond biomedical treatment to recognize social realities like poor and exhausting labor conditions. Recovery required new and safer occupations that were suited to the patients' health (Delmaire, 2024, p. 508–515).

These ideas had already surfaced in the early 1950s. Türkiye's first tuberculosis rehabilitation center opened in 1954 at Heybeliada Sanatorium. Atatürk Sanatorium followed shortly after, launching its first workshops in 1955 with support from AID. These facilities were integrated into the sanatorium block: rehabilitation began in the basement and ground floors of pavilions 1 and 2, placing light labor spaces directly adjacent to the patient wards. This spatial proximity to the wards blurred boundaries between convalescence and labor. This first facility was described by observers as insufficient (Ilgaz, 1959), so the administration sought to formalize and expand these services by founding the Atatürk Sanatorium Rehabilitation Association (ATASAY, 1965).[26]

Rehabilitation facilities were shaped by evolving ideas about what kinds of working environments were suitable for tuberculosis patients. In 1950, social nurse Fatma Acar defined distinct spatial conditions in workspaces for recovered or chronically ill patients (Acar, 1950, p. 135). Echoing the broader architectural principles of sanatoria, she argued that the spaces had to be well-lit, dry, and ventilated, yet protected from drafts or cold air currents. Furthermore, patients were to avoid occupations in dusty environments, such as mines, or those involving food or drink production.

A 1958-1961 study was conducted at Atatürk Sanatorium to facilitate patients' return to employment (Bozyakalı & Fincancıoğlu, 1960, 1963). Dr. Bozyakalı remarked that patients treated in tuberculosis institutions could be employed both during and after treatment. In its re-

24 For the case of the US, see Goggins (2025). This link between rehabilitation practices and the social productivity of individuals can be read through biopolitical frameworks that examine how modern medicine came to govern not only illness but also the management of life, labor, and health. In this view, rehabilitation was a tool for economic and social optimization. For a theoretical grounding, see Foucault, M. (1995). *Discipline and Punish. The Birth of the Prison* (A. Sheridan, Trans.). Vintage Books; Foucault, M. (2007). The Incorporation of the Hospital into Modern Technology. In J. W. Crampton & S. Elden (Eds.), *Space, Knowledge and Power: Foucault and Geography*. Ashgate.

25 The idea that a social illness requires political as well as medical solutions is found particularly in the conferences given to Turkish healthcare workers in 1950 by the team sent by the WHO to Turkey, notably by Etienne Berthet.

26 On March 14, 1966, the Council of Ministers recognized ATASAY as a public-benefit organization (T.C. Başbakanlık Kanunlar ve Kararlar Tetkik Dairesi, 1966).

habilitation services, Atatürk Sanatorium aimed to educate patients and improve their skills by (1) "occupational therapy": light work for bedridden patients; (2) "the rehabilitation department": providing transitional education and work for those recovering; and (3) longer term "workshops for chronic patients". The workshops, which operated continuously from 1955, employed 211 patients by 1959, with some later joining the sanatorium staff in full-time roles (Bozyakalı, 1960), further blurring the line between recovery and institutional labor. This scheme reflects how rehabilitation was spatially structured according to each patient's stage of illness. Promotional posters for the sanatorium from the 1960s depict the wide range of training opportunities, including photography, tailoring, shoe repair, lampshade making, typing, artificial flower making, cornice and frame making, stone figurine making, and woodworking. The photographs portrayed the attendees as cheerful individuals working in everyday clothes (Figure 24A and 24B). However, while health officials promoted rehabilitation as a path to self-reliance, the capacity of such services remained limited relative to the scale of tuberculosis in Türkiye's working population.[27] Still, rehabilitation had an economic value in a context where tuberculosis was presented as an economic burden.



Figure 24A. Prolonged infrastructure: Workshops in the ATASAY pavilion, with women in embroidery and lacework workshops.
Source: ASERH.
Figure 24B. Prolonged infrastructure: workshops in the ATASAY pavilion, with men in lamp-making workshops.
Source: ASERH.

27 Chronic tuberculosis patients in Ankara, Istanbul, and Eskişehir were treated and "rehabilitated" in residential centers, performing supervised, non-strenuous labor; and one facility operated by Istanbul Anti-Tuberculosis Association in Şişli offered day programs to young women. Özgen, Z. S. (1965). Radyo Sohbetleri: Rehabilitasyon. *Yaşamak Yolu*, (340–341), 10–11.

Conclusion: Shifts from a Tuberculosis Sanatorium to a Hospital Complex

Combining extensive archival research with on-site analysis, this study positioned Ankara's Atatürk Sanatorium within a *layered infrastructure* framework that integrates architectural, technical, medicinal, and rehabilitation components with their institutional organization. Whereas the majority of scholarship on sanatorium architecture tends to focus on earlier, traditional examples, our study analyzed the mid-twentieth-century sanatorium in Türkiye as an adaptive, multi-layered complex integrated into international, national, and local healthcare networks.

We identified four interdependent layers of healthcare infrastructure that together sustained the sanatorium's function: low-tech (architectural), technical (operational and surgical), pharmaceutical, and medico-social (rehabilitation). The low-tech aspects were fundamental elements of traditional sanatorium care, specifically fresh air, hygiene, and rest. However, by itself, it fell short of answering the demands of contemporary advances. Accordingly, operational technical systems, as *supportive* elements to the low-tech treatment, were upgraded to run the building, while surgical technologies, as *transformative* elements, soon fundamentally reshaped the sanatorium's spatial characteristics and configuration.

Notably, this work challenges two widespread approaches employed in architectural histories of sanatoria: first, the tendency to frame low-tech sanatorium architecture as existing only because pharmaceutical cures had not yet been invented; and second, the rupture narrative that views the traditional sanatorium model as disappearing overnight following the advent of antibiotics. Our findings show instead that low-tech architecture and rest-based therapeutic practice persisted well into the antibiotic era in Atatürk Sanatorium, indicating that sanatorium care was more than a temporary substitute for absent drugs. This perspective complicates the rigid pre- and post-magic bullet divide often reproduced in architectural historiography of healthcare environments; on the contrary, it reveals a prolonged transitional period.

The developments explored in this article were also influential in linking previously remote sanatoria into urban health infrastructures. This shift was both biomedical and urbanizing, reflecting changing transportation patterns within and around the complex, and thus patterns of daily mobility in Ankara. Our examination of Atatürk Sanatorium thus reveals how the architecture of this typology was transformed into a hybrid of tuberculosis sanatorium and hospital complex that required physical expansion and, ultimately, a more intricate infrastructural network during the mid-twentieth century.

Another critical layer expanding our infrastructure-based analysis is rehabilitation, which ensured continuity of treatment, fostered patient circulation, and reframed tuberculosis as a social issue as well as medical disease. By including rehabilitation, the architectural program of Atatürk Sanatorium redefined the boundaries of convalescence and took on the responsibility of providing labor, which eventually attributed economic value to the care of the unwell citizen. Together, chemotherapies and rehabilitation shortened treatment durations, facilitated reintegration into the workforce, and repositioned the sanatorium from a retreat-like facility to an institution with dual state-economic functionality; that is, greater efficiency in patients' circulation by providing faster treatments and their integration into the national workforce. While earlier understandings of institutional space prioritized state representation, the new institutional functionality resonated with broader mid-century ideals of public building design.

The case of Atatürk Sanatorium demonstrates how these layers functioned within a mixed economy of welfare in which state, voluntary associations, and market actors intersected. Ankara became a strategic point in Türkiye's tuberculosis control network, with the establishment of the Ankara Society for the Fight Against Tuberculosis, and the opening of the city's first tuberculosis hospital, and its key dispensaries, all of which sought to lessen geographical and socio-economic inequalities in access to care. Our findings thus contribute to a better understanding of healthcare geographies in mid-century Türkiye and clarify Ankara's evolving spatial role in mid-century public health.

This investigation also opens new avenues for studies on Cold War foreign aid to Türkiye by revealing a health-related dimension that calls for further scholarly attention. Our discussion highlights the significance of medical infrastructure in relation to international alliances formed during the period. In this sense, beyond its strategic role in national public health services and urban development, Atatürk Sanatorium further provides a lens for un-

derstanding the diverse dynamics of foreign aid and its broader geopolitical dynamics.

The infrastructural and cultural persistence of Atatürk Sanatorium's afterlife is evident in the naming of its neighborhood, which indicates a continued presence in Ankara's mental map, as exemplified by the building's prominent signage and a bus route named after the institution, all of which indicate its continued symbolic and functional identity. This study, by highlighting these intertwined material, institutional, and cultural dimensions of the sanatorium, reframe the history of tuberculosis treatment in Türkiye and demonstrate the potential of applying an infrastructural framework for future analysis of other medical sites and complex healthcare systems.

Today, Atatürk Sanatorium, now named Ankara Atatürk Sanatorium Teaching and Research Hospital, remains operational as a larger full hospital facility that specializes in chest diseases (Figure 25). At first glance, the complex appears to have grown with new buildings in recent years; a second look reveals a fragmented site, bisected by traffic-filled streets, and hemmed in by residential neighborhoods, as once feared by early Republican health officials. Tuberculosis is no longer a priority as the complex now treats a wider range of pulmonary illnesses. Nonetheless, it remains a distinct example that preserves its core purpose, given that most sanatoria in Türkiye have been demolished, abandoned, or repurposed. Except for the former Pediatric Pavilion, which is now a day clinic and family rehabilitation center, the long balcony blocks still follow the original layout of patient rooms opening onto continuous exterior galleries. However, these balconies—once critical for ventilation and rest cure—are now relics, empty without loungers, as if abandoned and only offering patients and their attendants brief outdoor moments. Ironically, in contrast to its predecessors, the new tuberculosis building within the complex lacks balconies. Another relic of the bygone sanatorium care is the landscape, now punctuated by large oxygen tanks occupying what was once a therapeutic garden of pools, sculptures,



Figure 25. Current site map of Atatürk Sanatorium. Source: SHTR.



Figure 26. Atatürk Sanatorium: Current view from pavilion 4. Source: SHTR.

and calming views (Figure 26). Nevertheless, despite all these changes, Atatürk Sanatorium's former layers are still very much visible, marking the technological shift brought about by the move from care to cure.

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References

1,5 milyon lira harcanarak Keçiören'de modern bir sanatoryum yapılacak. (1945, July 11). *Ulus*, 2.

Acar, F. (1950). *Hemşirelik ve Ziyaretçi Hemşirelik Tekniği*. Verem Mücadelesi Cemiyeti Yayınları.

Adams, A., Schwartzman, K., & Theodore, D. (2008). Collapse and Expand: Architecture and Tuberculosis Therapy in Montreal, 1909, 1933, 1954. *Technology and Culture*, *49*(4), Article 4. https://doi.org/10.1353/tech.0.0172

Akın, C. (1962). Veremi Yenenler Arasında 1 Gün. *Yaşamak Yolu*, *November*(314), 10–11.

Aksüğür, H. (1953). Heybeliada Sanatoryomunda streptomisin ile alınan neticeler. In *Birinci Türk Tüberküloz Kongresi 25-27 Şubat 1953* (p. 195–216). Sermet Matbaası.

Altenhof, T. (2023). Inhabiting the Atmosphere: The Architecture of the Queen Alexandra Sanatorium. *Journal of the Society of Architectural Historians*, *82*(3), 314–334. https://doi.org/10.1525/jsah.2023.82.3.314

Ankara sular idaresi müdürlüğünden. (1950, January 23). *Akşam*, 9.

Ankara veremle savaş derneği 1952 yılı çalışma raporu. (1953). *Yaşamak Yolu*, *August*(203), 6–11.

Ankarada Atatürk Sanatoryomu. (1956). *Yaşamak Yolu*, *May*(236), 12.

Architectural Histories. (2025, April 26). *Conference call: Looking into the machinery room (Düsseldorf, 8-10 May 25)*. https://arthist.net/archive/49115

ATASAY. (1965). *Atatürk sanatoryumu ve rehabilitasyon merkezini geliştirme ve yardım derneği tüzüğü*. Doğuş Ticaret Limited Şirketi Matbaası.

Atatürk sanatoryumu 200 yataklı çocuk pavyonu temeli atıldı. (1959). *Yaşamak Yolu*, *July*(174), 5.

Avcı, D., & Değirmencioğlu, C. (2024). 100. Yılda İstanbul sanatoryumlarına yeniden bakmak: Yapı tipleri ve veremden sonraki yaşamları. In İ. Akpınar Aksugür & Ş. Önal Hoşkara (Eds), *Cumhuriyet'in 100. Yılında mimarlık* (p. 336–370). İdealkent.

Avcı, D., Değirmencioğlu, C., & Kepez, O. (2022). *Architecture of convalescence: Mapping the sanatorium heritage of Turkey* [Modern Architecture Research Award]. Turkish Architects' Association 1927.

Bashford, A. (2005). Cultures of confinement. Tuberculosis, isolation and the sanatorium. In C. Strange & A. Bashford (Eds), *Isolation: places and practices of exclusion* (p. 125–140). Routledge.

Berthet, E. (Ed.). (1950). Tüberküloz, medeniyet ve sefalet hastalığı (Dr. Mefküre, Trans.). In *Aspects medico-sociaux de la tuberculose/veremin mediko-sosyal görünüşleri* (p.123-125). Pulhan Matbaası.

Besim Ömer. (1904). Tebdîl-i havâ. In *Nevsâl-i âfiyet* (Vol. 3, p. 166–188). Matba'a-i Ahmed İhsan ve Şürekâsı.

Bir aylık verem savaşı haberleri: Ankara verem savaş derneğinin faaliyeti. (1952). *Yaşamak Yolu*, *November*(194), 6–7.

Bir aylık verem savaşı haberleri: Ankarada verem ilâç yardımı. (1952). *Yaşamak Yolu*, *November*(194), 6–7.

Bir aylık verem savaşı haberleri: Atatürk sanatoryumu merasimle açıldı. (1953). *Yaşamak Yolu*, *May*(201), 10–11.

Bir aylık verem savaşı haberleri: Keçiören verem hastahanesi. (1952). *Yaşamak Yolu*, *September*(192), 6–7.

Bir aylık verem savaşı haberleri: Sağlık işlerinde elde edilen başarı. (1953). *Yaşamak Yolu*, *January*(196), 6–8.

Bir aylık verem savaşı haberleri: Verem savaşı programı. (1952). *Yaşamak Yolu*, *November*(194), 6–7.

Bozdoğan, S. (2001). *Modernism and nation building: Turkish architectural culture in the early republic.* University of Washington Press.

Bozyakalı, E. (1960). Atatürk Sanatoryumunda rehabilitasyon ve readaptasyon çalışmaları. In *Dördüncü Türk Tüberküloz Kongresi, 15-18 Şubat 1959, Ankara* (p. 432–433). Gürsoy Basımevi.

Bozyakalı, E. & Fincancıoğlu, K. (1960). Sanatoryuma yatan hastaların sosyal durumlariyle hastalıkları arasındaki münasibetler – Atatürk Sanatoryomu çalışmalarından. In *Dördüncü Türk Tüberküloz Kongresi, 15-18 Şubat 1959, Ankara* (p. 426–431). Gürsoy Basımevi.

Bozyakalı, E. & Fincancıoğlu, K. (1963). Atatürk sanatoryomunda yatan hastaların sosyal durumları ile hastalıkları arasındaki münasebetler. In *Beşinci Türk Tüberküloz Kongresi, 15-18 Mayıs 1961, Konya* (p. 742–748). İsmail Akgün Matbaası.

Burke, A. (2014). *Towards a new hospital architecture: an explorationof the relationship between hospital space and technology*. [PhD dissertation, University of East London].

Çelik, Z. & Eldem, E. (Eds). (2021). *Camera Ottomana: Photography and Modernity in the Ottoman Empire, 1840-1914*. Koç University Press.

Çeşitli verem savaşı haberleri: Ankara veremle savaş derneği bir prevantoryum yaptıracak. (1957). *Yaşamak Yolu*, *August*(251), 12.

Daniel, T. M. (2011). Hermann Brehmer and the origins of tuberculosis sanatoria. *The International Journal of Tuberculosis and Lung Disease*, *15*(2), Article 2.

Del Curto, D. & Toso, F. C. (2012). Technical systems and networks for a modern high altitude settlement: The construction of the sanatorium village in Sondalo [1932-1946]. n R. Carvais et al. (Eds), *Nuts & bolts of construction history: culture, technology and society, Vol. 3* (p. 675–684). Picard.

Delmaire, L. (2024). «*Le grand miracle turc» problématisation et politiques de la tuberculose en Turquie (1945-1975).* [PhD thesis]. Institut d'études politiques de Paris.

Doktor Ethem. (1933, February 8). Sıhhî Tetkikler Ankara—Dağ Havası. – Kür Yeri. – Sanatoryum Şehri. *Milliyet*, 4.

Dr. E. E. (1955, June 11). Hastalıklar: verem tedavisinde yenilikler. *Akis*, 21.

Dr. Kemali Bayizit'in demeci. (1949, June 2). *Ulus*, 1–3.

Erdoğan, A. (2018). *Keçiören tarih ve kültür atlası*. Keçiören Belediyesi Yayınları.

Eylers, E. (2014). Planning the nation: The sanatorium movement in Germany. *The Journal of Architecture*, *19*(5), Article 5. https://doi.org/10.1080/13602365.2014.966587

GDPT (Director). (1960). *Çeşitli olaylar [Various events] [includes images from the April 23rd celebrations in Ankara, the Etimesgut Air Supply Center aid campaign, and the opening of the Ankara Atatürk Sanatorium Annex Building]* [Documentary]. Republic of Turkey Directorate of Culture and Tourism, General Directorate of Press-Broadcasting and Tourism Film Publication. https://filmmirasim.ktb.gov.tr/tr/film/eitli-olaylar-1

GDPT (Director). (1962). *Dost eller (Friendly hands)* [Documentary]. Republic of Turkey Directorate of Culture and Tourism, General Directorate of Press-Broadcasting and Tourism Film Publication. https://filmmirasim.ktb.gov.tr/tr/film/dost-eller

Goggins, S. (2025). Between decay and maintenance: Tuberculosis sanatoriums, care infrastructures and U.S. health policy debates, 1945–1972. *Science, Technology, & Human Values*, *50*(3), 642–675. https://doi.org/10.1177/01622439241305988

Gökçe, T. İ. (1949). Verem bilgisi 9: On birinci bahis, verem tedavisinde yeni ilâçlar: Streptomicyne – Pas (Aminacyl). *Yaşamak Yolu*, *April*(151), 8–9.

Gökçe, T. İ. (1950). Streptomaycin. *Yaşamak Yolu*, *November*(170), 2–3.

Gökçe, T. İ. (1952). Yeni verem ilâcı hakkında bir hasbıhal…. *Yaşamak Yolu*, *June*(189), 2.

Gökçe, T. İ. (1957). *Heybeliada Sanatoryumu kuruluş ve gelişimi 1924-1955*. İsmail Akgün Matbaası.

Gunnels, J. J. & Bates, J. H. (1977). Shifting tuberculosis care to the general hospital. *Hospitals*, *51*(6), 133–138.

Heikinheimo, M. (2018). Paimio sanatorium under construction. *Arts*, *7*(78), 1–19. https://doi.org/10.3390/arts7040078 ,%2520p.3,%2520pp.12-13.

Ilgaz, H. (1959). Atatürk sanatoryomu ve bir hatıra (Yeni İstanbul'dan). *Yaşamak Yolu*, *July*(274), 5.

Jensen, P. N. (1951). Notes on tuberculosis hospital planning. *Architectural Record*, 137–138.

Kahya, E., & Ataç, A. (2004). Prof. Dr. Nusret Karasu. In E. Kahya, C. Karasu & A. Ataç (Eds), *Prof. Dr. Nusret Karasu'nun doğumunun 100. Yılında Türkiye'de verem savaşının dünü-bugünü-geleceği sempozyumu* (p. 59–64). Ankara Üniversitesi Yayını.

Kari Mektupları. (1930, January 24). *Hakimiyeti Milliye*, 4.

Keçiören bağları günden güne şenleniyor: Ankaranın bu şirin sayfiyesi asrî tesisatla zenginleştirilecek. (1930, February 10). *Vakit*, 1.

Logan, C., Goad, P. & Willis, J. (2010). Modern hospitals as historic places. *The Journal of Architecture*, *15*(5), 601–619. https://doi.org/10.1080/13602365.2010.519952

Lungu, B. (2011). *The uncanny hospital: A study of modern hospital architecture through technical images of the 1950s and 1960s.* [Master's thesis]. McGill University.

Luxon, L. (2015). Infrastructure – the key to healthcare improvement. *Future Hospital Journal*, *2*(1), 4–7.

McBride, D. L. (1998). American sanatoriums: landscaping for health, 1885-1945. *Landscape Journal*, *17*(1). http://www.jstor.org/stable/43324287

Milletlerarası Verem Savaş Birliği Genel Sekreteri, Prof. Dr. Ettienne Bernard'ın söylevi [XV. Enternasyonal Tüberküloz Konferansındaki]. (1959). *Yaşamak Yolu*, *October*(277), 9–10.

N.B. (1935, June 13). Ankaranın En Güzel Köşelerinden Biri: Keçiören Nasıl Bir Yerdir? *Ulus*, 2.

Ott, K. (1996). *Fevered lives: Tuberculosis in American culture since 1870*. Harvard University Press.

Sabar, İ. R. (1952). Verem savaşında yeni ilaçlar. *Yaşamak Yolu*, *December*(195), 3–4.

Sıhhat işleri – Ankara'da sanatoryom. (1932, April 2). *Cumhuriyet*, 2.

Snowden, F. M. (2019). *Epidemics and society: From the black death to the present*. Yale University Press.

S.P.B. (1961a). Ayın olayları: Atatürk sanatoryumu Halil Aktar çocuk veremi pavyonu törenle açıldı. *Yaşamak Yolu*, *March*(294), 9–11.

S.P.B. (1961b). Ayın olayları: XV. Verem ve Eğitim Haftası İstanbul'da çok hareketli ve neşeli geçti.. *Yaşamak Yolu*, *December*, 10–11.

S.P.B. (1962a). Ayın olayları: 400 yataklı hastane törenle açıldı. *Yaşamak Yolu*, *April*(307), 13–15.

S.P.B. (1962b). Ayın olayları: Ankara verem savaşı derneği yeni bir tesis kuruyor. *Yaşamak Yolu*, *April*(307), 13–15.

S.P.B. (1962c). Ayın olayları: Verem artıyor. *Yaşamak Yolu*, *311*(August), 11–12.

S.P.B. (1963). Ayın olayları: Modern verem savaş dispanseri açıldı. *Yaşamak Yolu*, *April*(319), 9.

S.P.B. (1965a). Ayın olayları: 5 bin plâkla bir verem pavyonu inşa ediliyor. *Yaşamak Yolu*, *September-October*(348–49), 11.

S.P.B. (1965b). Ayın olayları: Keçiören'de ek Verem Pavyonu'nun temeli atıldı. *Yaşamak Yolu*, *July-August*(345–347), 13–15.

SPTİGM. (1973). *Sağlık Hizmetlerinde 50 Yıl.* Sağlık Propagandası ve Tıbbî İstatistik Genel Müdürlüğü. Sağlık ve Sosyal Yardım Bakanlığı Yayınları.

Street, A. (2012). Affective infrastructure: Hospital landscapes of hope and failure. *Space and Culture*, *15*(1), 44–56. https://doi.org/10.1177/1206331211426061

T.C. Başbakanlık Kanunlar ve Kararlar Tetkik Dairesi. (1966, March 14). *Atatürk Sanatoryumu ve Rehabilitasyon Merkezi Geliştirme Derneği'nin kamuya yararlı derneklerden sayılması [The acceptance of the Atatürk Sanatorium and Rehabilitation Center Development Association as a public benefit association]*. T.C. Cumhurbaşkanlığı Devlet Arşivleri. 30-18-1-2 [Fon] (193-19-18 [Kutu-Gömlek-Sıra]). https://www.devletarsivleri.gov.tr

T.C. Başbakanlık Muamelât Umum Müdürlüğü. (1945, September 29). *Ankara'da yaptırılacak verem hastanesi için Kızılay Kurumu'na 1,500,000 liranın verilmesi [Granting 1,500,000 liras to the Red Crescent Society for a tuberculosis hospital to be built in Ankara]*. T.C. Cumhurbaşkanlığı Devlet Arşivleri. 30-18-1-2 [Fon] (109-59-9 [Kutu-Gömlek-Sıra]). https://www.devletarsivleri.gov.tr

T.C. Başbakanlık Muamelât Umum Müdürlüğü. (1947, March 17). *Ankara Kadastrosunun 687. Adasının ve 688 ada 25 ve 10 parsel sayılı arsalardaki Hazine hissesinin Ankara Veremle Savaş Derneğine satılması [Sale of the Treasury's shares in Ankara Cadastre, block 687 and parcels 25 and 10 in block 688, to the Ankara Society for the Fight against Tuberculosis]*. T.C. Cumhurbaşkanlığı Devlet Arşivleri. 30-18-1-2 [Fon] (113-21-14 [Kutu-Gömlek-Sıra]). https://www.devletarsivleri.gov.tr

T.C. Devlet Şurası Üçüncü Daire. (1955, November 16). *Ankara Atatürk Sanatoryumu ilave pavyonu inşaatı demirinin temininindeki gecikme sebebiyle, sözleşme süresinin uzatılması [Extension of the contract period due to the delay in the supply of iron for the construction of the additional pavilion of*

Ankara Atatürk Sanatorium]. T.C. Cumhurbaşkanlığı Devlet Arşivleri. 30-11-1-0 [Fon] (256-9-11 [Kutu-Gömlek-Sıra]). https://www.devletarsivleri.gov.tr

Tevfik İsmail. (1933). Akciğer vereminde hıfzısıhha—Yiyecek tedavisi. In *Sıhhat Almanakı* (p. 909–914). Kader Matbaası.

Troelenberg, E.-M., Messner, A. S., Bhatawadekar, S., & Sakorafas, A. (2024). *Machinery rooms of the mediterranean (medmach): Images and visual archives of movement and acceleration, 1800-present*. Medmach. https://medmach.hypotheses.org

Ulusal verem savaşı derneği sayfaları: Yurdumuzda mevcut verem savaşı derneklerini tanıtıyoruz. (1952). *Yaşamak Yolu*, *May*(188), 6–7.

Wihart, M. (2015). The architecture of soft machines. [PhD dissertation, University College London].

Yıldırım, N. & Gürgan, M. (2012). *Türk göğüs hastalıkları tarihi* (M. Metintaş, Ed.). Türk Toraks Derneği, Aves Yayıncılık.

Yonat, M., Yunus, O., Mimaroğlu, S., Gökçe, T. İ., Çelebi, Y., Gökdoğan, M., Baydar, F., Holtay, A. H. & Onat, E. (1951). Sanatoryum proje müsabakası. *Mimarlık Güzel Sanatlar ve Şehircilik Dergisi*, *VIII*(3–4), I–IV, 3–13.

Yücel, N. (1992). 1957 Ankara imar planı. *Ankara Dergisi*, *1*(4), 7–38.