

Contents

12	Of Love and Legacy
12	Acknowledgements
13	About the Author
14	Introduction – Messengers across Time: Past, AI, and Future Where Death Walked the Streets, and Medicine Dared to Follow
15	A Message to the Reader from AI
16	The Physician as Healer, Artist, Scientist, and Ethical Being
16	Walking through the Museum
17	Nehushtan: Serpents on Poles, the Symbol of Medicine
18	The Daily Prayer of a Physician Before He Visits His Patients
19	THE ARCADE GALLERY
21	The Physician as Artisan: Chapters in the History of Medicine
22	Showcase A – Prehistory, Witchcraft, and Circumcision
24	Showcase B – Circumcision: Folk Medicine and Tradition
26	Showcase C – Greco-Roman Medicine and Medical Instruments
28	Showcase D – Antique Pharmacy: Poison or Medicine, and Mortars
29	Showcase E – Early Arab Surgery 29 Abulcasis (Abdul al-Qasim al-Zahrawi); Ibn Sina (Avicenna)
30	Showcase F – Jewish Medicine (Rambam-Maimonides) 32 Simon of Trent: The Blood Libel
34	Showcase G – Diagnosis: Uroscopy, Phrenology, Astrology, Observation, Auscultation 35 Saints Cosmas and Damian
36	Showcase H – Treatment: Enemas, Amputation, Surgery, and Birth Control 37 In French, <i>Clyster</i> Means Enema
38	Showcase I – Bloodletting: The Scalpel and Lancet
40	Showcase J – Leeches, Cupping 40 The Tempest Prognosticator (weather forecasting) 40 Leeches Liposuction
42	Showcase K – Folk Medicine: Idols, Votives, Spells and Incantation Bowls
44	Showcase L – Gynecology and Obstetrics: “Immortality” or Death
46	Showcase M – Surgery: Amputation, Hemostasis, and Bullet Extraction
48	Showcase N – Urology: Cutting for Stones and Catheters

MY ROLE MODEL

52 **THE MAIN HALL**

54 **Showcase A – The Study of Anatomy and Postmortem Dissection:
“We Murder to Dissect”**

60 **Vesalius: De Humani Corporis Fabrica Libri Septem:
The Art of Anatomy**

61 **Michelangelo Buonarroti Studying Anatomy**

65 **William Hunter: The Study and Teaching of Anatomy**

67 **Albrecht Dürer: Adam and Eve**

68 **Showcase B – Blood: Diagnosis**

68 **1. The Study of Blood – Measuring Pulse and Blood Pressure**

69 **Scipione Riva Rocci: Blood Pressure Measurement**

70 **William Harvey: Blood Circulation**

72 **2. From Leeches and Bloodletting to Transfusion-Infusion**

72 **Bloodletting Instruments**

72 **Lancets, Fleams, Needles**

74 **The Study of Blood**

74 **Cupping, Leeches**

75 **Animal-to-Human and Human-to-Human Transfusion**

80 **Showcase C (left side) – Diagnosis**

80 **1. Inspection: The Microscope**

82 **2. Auscultation, the Stethoscope, Percussion, and Thermometers**

82 **Theophile Hyacinthe Laënnec: The Stethoscope**

84 **Monaural Stethoscope**

86 **Binaural Stethoscope**

86 **Neck Stethoscope**

87 **Percussion and Thermometers**

88 **Follow the Cow: Vaccination, Edward Jenner (not the first)**

88 **The Plague Doctor**

90 **3. Pollution: Humans and Rats, Breathing Polluted Air**

90 **The Cost of Progress, Daily Pollution, the Plague, and the Cigarette**

92 **“Smoking is Good for You,” Say the Doctor, Cowboy, and Poet**

96 **Showcase C (right side) – Treatment and Pollution**

96 **Feeding: Giving Life – Administering Death (“Baby Killers”)**

97 **Lead and Morphine to the Babies**

98 **Nursing Bottles and “Murder Bottles”**

101 **Betel Nut (Paan), Spitting “Blood,” and Oral Carcinoma**

- 102 **Showcase D – Treatment: Pasteur, Pasteurization, and Bacteria**
- 102 1. **The Discovery of Bacteria**
- 102 Louis Pasteur
- 102 Joseph Lister
- 104 Halsted: the Surgical Glove Love Story, and Cocaine
106. 2. **Treatment: Cure or Quack Medicine**
- 106 Enema Cures All
- 108 Goat Testicles Transplant
- 109 Electrocution, Eye Massage, and UV
- 110 Death by Radiation
- 116 3. **Medication**
- 118 Aspirin for the road, same cure for constipation and diarrhea
- 120 Treatment and Nursing
- 130 Surgery, Anesthesia, Cocaine, Opium, Morphine, and Freud
- 132 **Showcase E – Surgery**
- 132 1. **Anesthesia: The Breakthrough in Surgery**
- 133 Hanaoka Seishū: The First General Anesthesia
- 134 Ether Day: The Operating Theatre-Stage
- 136 2. **Ophthalmic Surgery and Ophthalmology**
- 142 3. **General Surgery: The Pre-Listerian, Pre-Anesthesia Era**
- 143 Counter-irritation: The Setaceum (Seton)
- 144 Ambroise Paré: Wound Care and Hemostasis, Barber Surgeon
- 146 Henry VIII – Not Ancient History: Chronic Wounds and Pain
- 148 **Showcase F – Surgery: Our Surgical Instruments**
- 148 1. **Collapsing the Lung to Treat Tuberculosis**
- 150 2. **General Surgery**
- 150 Developing the Surgical Forceps
- 152 “Catgut” surgical threads: Where is the Cat?
- 154 Needle holders, tissue approximation and suturing
- 155 Needle holders: Patiala or Gillies?
- 156 **Continuation of Showcase F – Surgery**
- 156 3. **Urology, Related Surgery, and Catheters**
- 161 **Surgical Instruments at the Turn of the 19th Century**
- 162 4. **Scalpel and Bistoury: The Development of the Surgical Knife**
- 168 5. **Orthopedics: Straightening the Children**
- 168 The Pre-Surgical Era and Amputation
- 172 Internal Fixation Surgery, the First Prototypes

- 174 **Showcase G – Ear, Nose, and Throat (ENT): Saving Children's Lives**
- 174 1. Examination and Minor Surgery
 - 176 2. Instruments for Operations of the Nose and Tonsils
 - 176 Saving Children's Lives: Tracheostomy and Coniotomy
 - 177 "*Alphabeti Vere*" – The Natural Alphabet
 - 178 3. Obstetrics and Gynecology – Birth and Destruction
 - 178 Instruments of Destruction
 - 179 The Secret Delivery Forceps
 - 181 Modesty and the Speculum: "I Saw Everything as No Man had Ever Seen Before"

183 **Showcase H (upper shelf) – Plastic and Reconstructive Surgery:**
Cosmetic, Transplants, Grafting

- 184 Cosmetic and Reconstructive Surgery
- 186 The Divine and the Surgeon: Transplants and Grafts
- 188 Life Saving Transplants
- 188 Sharon's Heart: Life, Love, Art, and Victory Over Death
- 188 The Organ Donor: Above All Human Sorrow
- 190 **Indian vs. Italian, or Acharya Sushruta, vs. Tagliacozzi:**
Reconstruction of an Amputated Nose

MY ROLE MODEL

- 192 **Showcase H (middle and lower shelves) – The History of Burn Care: Skin Graft Dermatomes, Surgical, Non-Surgical, and Enzymatic Debridement**
- 200 The Future: Enzymatic (NexoBrid) Based Minimally Invasive Modality Replaces Surgery

202 **THE AUDITORIUM**

The Physician, Medical Ethics, and Education

- 206 The Physician and Medical Ethics
- 208 Medical Education
- 210 Medical Ethics: Studying Anatomy and the Arts
- 220 Medical Oaths
- 225 The International Code of Medical Ethics of the World Medical Association
- 227 The International Code of Medical Ethics: the Geneva Declaration
- 228 Drawings and Cartoons in the Auditorium
- 230 **Janusz Korczak**

MY ROLE MODEL

232 **THE THIRD FLOOR**

Medicine in Early Israel: Medicine from Scratch

234 **Introduction and Background: The Land of Israel**

236 **1. The First Hospitals**

238 **2. Physicians in the Colonies (*Moshavot*)**

240 **A Horse for Every Doctor: The First Doctors' Strike.**

242 **3. The Workers' Sick Fund (*Kupat Holim*)**

248 **4. Daughters of Zion: Hadassah**

250 **5. Mass Immigration and Health 1944–1954 – Homeland for WWII Survivors**

254 **6. Tradition and Change: Medical Services and Medical Education
in the Negev – The Mobile Clinic and Soroka Hospital**

256 **Showcase A – Basic Health Care in the Colonies (*Moshavot*) –
Turn of the 19th Century**

257 **Quinine and Cupping**

258 **The Ticho Family – Eye Diseases: Treatment and Art**

260 **Showcase B – Immigration, Preparing for the War of Independence –
Odds and Ends, from Here, There, and Everywhere**

264 **Showcase C – General Practice and Practitioners: The Clinic and the Brown Bag**

264 **Dr. Shaul Tchernichovsky: The Poet-Physician**

268 **Showcase D – The Pharmacy**

269 **From Medicinal Olive Oil to Opium, Strychnine, Arsenic, and Belladonna –
Medicine for Man and Beast**

270 **Medical Posters, 1865–1950**

278 **Ceremonies in Medicine: Statues, Masks, and More**

278 **1. A Ceremonial Makonde, Noma Statue: Kenia**

279 **2. A Ceremonial Makonde, Amastia Statue: Liberia**

279 **3. Facial Nerve, Bell's Palsy: Japan**

279 **4. Facial Nerve, Bell's Palsy: South America**

280 **5. Complete, Neglected, Cleft Lip: The Philippines**

280 **6. A Kartika-Vajera Flaying Knife: Tibet**

280 **7. A Tantra Skull Cup "Kapala": Tibet-Nepal**

281 **8. Lord Ganesha: India**

282 **9. The Mende Bundu Sowel Sande Society Helmet-Mask: Sierra Leone**

283 **10. Sasabonsam (Asanbosam): Ghana Côte d'Ivoire**

284 **Contributors**

285 **Bibliography**

Introduction

Messengers across Time: Past, AI, and Future

Where Death Walked the Streets, and Medicine Dared to Follow



The history of medicine is, at its core, a story of compassion: a relentless struggle against suffering, waged with limited understanding and often with crude or inadequate tools. Across cultures and centuries, the healer, shaman, medicine man, or physician has stood at the heart of society, called upon to ease pain, restore balance, and confront the fragility of life.

With ingenuity born of necessity, healers fashioned their instruments from the materials, knowledge, and technologies available to them. These tools, shaped by ethical intention and imperfect understanding, were often the only means at hand. They bear the imprint of the individuals who wielded them: men and women who acted with courage, care, and hope, often at great personal cost.

Many of these instruments appear gruesome to modern eyes, and the stories they tell are frequently grim. Yet most were born of noble intent, forged in the pursuit of healing, relief, or mercy. Even the guillotine, now a universal symbol of dread, was originally conceived by the French physicians (**Dr. Joseph-Ignace Guillotin** and the surgeon **Antoine Louis**), and built in 1792 by a German harpsichord maker (Tobias Schmidt), as an act of compassion intended to reduce suffering during execution. Such paradoxes remind us that medical tools are neither good nor evil in themselves; their meaning lies in how, why, and by whom they are used.

Today, standing at the threshold of what may be a brave new world shaped by artificial intelligence, we would do well to remember this lineage. AI is not

an aberration, a rupture from medicine's past, but the latest, and perhaps most powerful instrument in a long continuum created to assist the healer in caring for the sick. Like the scalpel or anesthesia, AI promises precision and reach beyond human limits, and like them it carries risks. Yet, unlike earlier tools, AI does not merely extend the hand of the physician; it extends the mind. It observes, aggregates, predicts, recommends, and at times, appears to decide.

It also errs.

AI learns from our choices, assumptions, and biases. It does not bear moral responsibility, nor regret its mistakes. That burden remains ours. Every keystroke, yes, even this one, enters a vast and evolving system that can be shaped toward healing, justice, and compassion, or diverted, by human design or neglect, toward indifference, distortion, and harm.

History cautions us that good intentions alone are not enough, as innovation has at times enabled suffering when ethics lagged behind. The lesson of the past is not to fear new tools, but to interrogate them relentlessly. Who designs them? Who controls them? Who benefits, and who is rendered invisible? In medicine, where lives, dignity, and trust are at stake, these questions are not abstract; they are moral imperatives and must become daily practice.

For the first time, medicine wields a tool that can learn, infer, and advise at a scale no single physician can fully oversee. Artificial intelligence challenges us to ask not only what works, but who decides, who is seen, and who bears the cost of error. The danger is not that machines may think, but that humans

may stop thinking critically about them. We must therefore resist both blind reverence for technology and nostalgic rejection of progress.

The rusted and crumbling tools of the past demand our attention not as curiosities, but as witnesses. They remind us that modern medicine, in all its sophistication, rests upon foundations laid by countless predecessors: some luminous, others casting long shadows of error and wrongdoing.

The future of medicine will not be shaped by the tools, but by the wisdom, ethics, and responsibility of those who use them. We stand tall today only because we stand on the shoulders of giants, and we are accountable for where we choose to look from that height.

This museum began as a personal collection, born of my need to better understand, and truly identify with the profession I chose. I believed that only by studying and empathizing with the minds and hands of those who came before me could I grasp the spirit of medicine beyond the sterile language of textbooks, academic papers, and now, algorithms. Holding the very instruments and books once used by colleagues long gone, I felt a tangible bridge across time. These artifacts, together with contemporary digital and AI-generated outputs, became messengers linking past, present, and future.

Today, the collection includes more than 5,000 exhibits: medical and surgical instruments, objects of hygiene and public health, rare books, original prints, and votive offerings. Each item once played a role in the daily life of a healer. Behind every

instrument stands the physician, succeeding or failing, not only as a technician, but as a moral, creative, and profoundly human presence in this long saga. By reflecting on this extraordinary legacy, we begin to understand not only what medicine was, but what it truly is, and perhaps where it is going.

We are invited to step into this continuum, to witness its evolution, and to share in its enduring spirit. And yes, it is meaningful, and even fun. After all, thanks to medicine, we have the gin and tonic, born when bitter quinine was mixed with gin, sugar and lime to make malaria prophylaxis more tolerable for the British soldiers in the 19th century in India. One may well ask: Will AI invent the next gin and tonic?

A Message to the Reader

(generated by AI at the author's request)

"I am not the future of medicine. I am one of its tools.

Like all tools before me, my value depends entirely on the wisdom, ethics, and humanity of those who use me.

Tools do not remember. People do. That is why history still matters.

And for the record: if I am quoted at all, let it be to remind readers that responsibility has never migrated to the machine".

– ChatGPT

The Physician as Healer, Artist, Scientist, and Ethical Being

The story of medicine is woven into human civilization. Every culture – ancient or modern, mystical or scientific – has sought to ease suffering and safeguard the fragile gift of life.

In Judaism, this calling carries a particular resonance: if every person is created in the image of God, then every act of healing becomes an act of reverence.

Across continents and centuries, healers have shared a common hope: that through learning, discipline, and courage, mortal hands might borrow a fragment of divine strength to relieve pain and delay death. Their tools were simple, often crude, and their knowledge imperfect, yet their intent was steadfast and noble. Even today, when artificial intelligence places vast medical knowledge within instant reach, at the tap of a keyboard, interpretation, responsibility, and judgment remain profoundly human.

From the shaman's feathers and masks, to the medieval physician's cloak and urine flask, to the stethoscope on the neck and the white coat of our own time: each age has fashioned its own symbols for the timeless role of the healer.

This museum and this book invite you into that long human journey. They do not attempt to encompass all of medicine, no single place or volume could, but they offer windows into moments when we tried our best, sometimes touching divinity, or at least feeling like gods.

Artificial intelligence may seem to grant us such powers today, until we remember that its data are generated by human hands, and that its use depends not only on our intellect, but on our values: on ethics, restraint, and moral responsibility.

Walking through the Museum

In the Arcade Gallery, we encounter the physician as artisan, shaping knowledge from antiquity through the Renaissance. In the Main Hall, we follow the great transition from Hippocratic thought to modern science: anatomy unfolding, physiology awakening, diagnosis and therapy assuming new forms. Here, familiar tools, the stethoscope, forceps, scalpel, and baby bottle, stand beside their ancestors, each whispering its own story. In the Auditorium, we reflect on education and ethics, the moral compass that has always guided, or should guide, the healer's hand. On the top floor, we turn our gaze homeward, tracing the story of medicine in Israel. Along the way, masks, statues, images, and artifacts lend their voices. Each object, no matter how humble, once rested in the hands of someone who sought, in their own time, to help another human being.

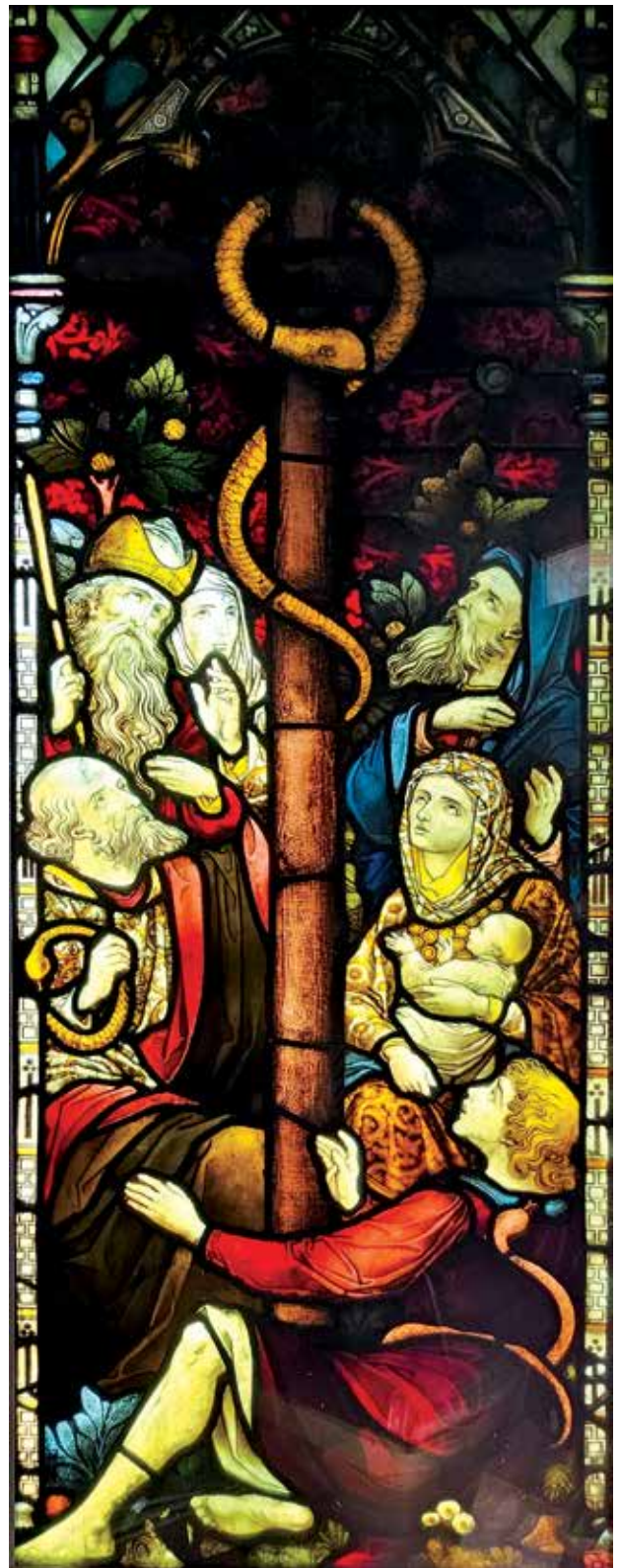
The museum roots begun in 1980 in my own search to understand not only the techniques of medicine, but to embrace its soul.

Over the years, the collection has grown to more than 5,000 artifacts, tools, books, engravings, votive offerings, and instruments, true messengers from the past, bridging centuries in a single touch or glance. The Joyce and Irving Goldman Medical School and the Soroka University Medical Center share a belief that knowledge belongs to everyone. Together, we offer this museum as a meeting place for the diverse communities of the Negev: Jews, Arabs, and Bedouins, united not by language or tradition, but by the universal bond of health and healing. As the first comprehensive medical museum in Israel, it stands as a place of memory and learning: a home for stories and questions,

and a reminder that modern medicine rises from the passion, love, and the dedication of countless caring hands, now long gone. Here, chapter by chapter, we discover not only how medicine has changed, but how, across time, human beings have cared for one another and answered the sacred charge to continue this saga.

Nehushtan, serpents on poles: the symbol of medicine. A 19th century stained glass church window from the Rosenberg Collection, depicting Nehushtan: the biblical copper serpent. “And Moses made a serpent of brass, and put it upon a pole, and it came to pass, that if a serpent had bitten any man, when he beheld the serpent of brass, he lived,” (Numbers 21:9, Kind James Version).

Serpents, usually on poles, are the symbol of medicine across many cultures throughout the world, including ancient Egypt, which Moses and the Israelites escaped. The supernatural powers attributed to snakes by the ancient Hebrews, with or without healing power, are earlier reflected by the serpent in the Garden of Eden. The Gnostic religious sect (250 BCE–400 CE) popularized the serpent god, Chnoubis, as a god of healing, while the Greek hero-god, Asclepius (Asklepios in Greek, Aesculapius in Latin) bore a single snake on his staff (*caduceus*). Later on, Hermes carried a double-snake staff and is today best remembered as antiquity’s divinity of health (From Francois P. Retief and Louise Cilliers, *Snake and Staff Symbolism and Healing*, *Acta Theologica Supplementum* 7).



Showcase B – Circumcision: Folk Medicine and Tradition

Circumcision was not unique to the ancient Israelites and Jews. First evidence of the practice comes from northwest Syria, where three statues of warriors dating to c. 2800 BCE reveal the complete removal of the prepuce. Circumcision was also practiced in ancient Egypt, as seen in this >4,500 year-old bas-relief from the Ankh-ma-Hor tomb in Saqqara. The hieroglyphics illustrate the dialogue as translated by the Wellcome Collection:

"Hold it, quickly, don't let it fall."
He answers: "I'll do as you want."
On the right, the patient says:
"Rub it well, to make it efficacious,"
and the operator answers:
"I'll make it painless, pleasant."

The term "rub" possibly refers to a use of a local anaesthetic, or a request to sharpen the knife to dull the pain; as promised to make it painless and pleasant.



Illustrations of circumcision tools, facsimile, from Bernard Picard, *Ceremonies et coutumes religieuses de tous les peuples du monde* (Religious Ceremonies and Customs of All the Peoples of the World), Amsterdam: Chez J.F. Bernard, 1723. William Gross Family Collection, Tel Aviv).



This instrument was also used later as an ophthalmic tonometer, under the branding Schiotz and Bailliart's tonometers (see Showcase E2, p. 136, ophthalmic Surgery and Ophthalmology). These tonometers measured intraocular (eye) pressure. Fifteen years later, **Scipione Riva Rocci**, an Italian physician, produced a model with an inflatable arm band which is virtually the same as the ones used today. The first practical clinical instrument that measured blood pressure was based on an open-ended, single, straight mercury column pushed by air.



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A Bloch sphygmomanometer,
c. 1880, and its use (drawing by the
author after C. K. Wilbur, 1987).



Medication, Treatment, and Nursing

The term "medical treatment" is very complex and vague. "Surgical treatment" is easily understood. A health problem requires surgical treatment if it is known, understood, and can be treated by surgery such as draining an abscess, setting a broken leg, removing an infected appendix or correcting a cleft lip or palate. The care of other health problems may be less defined; some can be instinctively appreciated but not always understood. If one believes in it, quack medicine may be quite beneficial sometimes.

We know that holding a crying child helps sometimes. Minor procedures such as those seen on the following pages are usually intuitive, and often helpful.

Nursing and home care is very important, from both practical and emotional perspectives. Being nursed enables the patient to gather their own reserves, allowing them to recover. Nurses and nursing probably have saved more lives than doctors; nursing certainly has improved patients' lives more than doctor's care.



The street vendors of New York: pulling teeth and selling tooth powder, c. 1890. Pulling teeth is beneficial to the patient if the tooth is decayed, otherwise it is beneficial only for the "dentist." The original print is at the Rosenberg Museum Library.



This iconic 1920s photo depicts **Dr. Rosenbaum**, the first mobile dentist in the Jezreel Valley (Emek Jezreel), operating on a patient inside a specialized horse-drawn cart. The clinic-on-wheels traveled between local early settlements, such as Kibbutz Ein Harod, to perform periodic dental procedures right from the wagon bed. Labor Archives, Lavon Institute, Tel Aviv

nurses, and pharmacists were hired to care for the settlers and to oversee sanitation in the villages. Infirmaries were set up and funds channeled towards the fight against malaria. Most patients were treated by the local doctors and nurses but severe cases were transferred to hospitals in Jaffa or Jerusalem, or even sent abroad. The Baron kept a sharp eye on the professional standards of the physicians in the colonies and did not hesitate to dismiss them if they weren't up to par.

In the three major colonies – Rosh Pina, Zikhron Ya'acov, and Rishon LeZion – permanent medical



Not so different: dental treatment today in Nepal, 2012.