

# AI-01984 SeriesNotes The Knick

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## Explain the plot and characters of the hbo series The Knick.

**The Knick** is an HBO/Cinemax medical drama set in New York City in 1900. Directed and edited by Steven Soderbergh, the show is known for its gritty and often gruesome depiction of early 20th-century surgery, as well as its exploration of social issues like racism, classism, and drug addiction.

## Plot Summary

The series centers on the fictionalized Knickerbocker Hospital, or "The Knick," a struggling institution where a group of brilliant but flawed doctors and nurses are pushing the boundaries of medical science. The show begins with the suicide of the hospital's chief surgeon, which opens the door for the main protagonist, Dr. John W. Thackery, to take the lead.

The central conflict of the series revolves around the professional and personal lives of the hospital staff as they contend with the limited medical knowledge of the era. They perform groundbreaking but often bloody and unsuccessful surgeries, while also grappling with the moral and ethical dilemmas of the time. The narrative weaves together several storylines, including:

- **Medical Innovation:** The doctors, particularly Thackery and his rival, Dr. Algernon Edwards, pioneer new surgical techniques, some of which are based on real historical figures and procedures. The show's depictions of surgery are a major part of its aesthetic and tone.

- **Racism and Class:** A significant plotline is the struggle of Dr. Edwards, a highly qualified Black surgeon who trained in Europe, to gain respect in a prejudiced environment. He is forced to operate a secret, underground clinic for African American patients who are denied care at the hospital. The show also highlights the vast disparity between the wealthy benefactors and the impoverished patients.
- **Addiction and Personal Demons:** Many characters struggle with addiction and other vices. Thackery's cocaine and opium addiction is a central theme, as he uses the drugs to fuel his genius and cope with the high-stakes pressure of his work. Other characters deal with their own personal struggles, from corruption and financial debt to mental illness.
- **Social Change:** The series explores the rapid social and technological changes occurring in New York City at the turn of the century. The characters navigate new inventions like X-rays, as well as shifting social norms around issues like women's rights and public health.

## Main Characters

- **Dr. John W. "Thack" Thackery (Clive Owen):** The brilliant and charismatic but deeply flawed chief surgeon at the Knick. He is a visionary innovator who pushes the limits of surgical practice. However, he is a severe drug addict, a trait based on the real-life historical figure William Stewart Halsted. His addiction is a major driving force of his character arc.
- **Dr. Algernon C. Edwards (André Holland):** A Harvard-educated Black surgeon who trained in Paris and is arguably more skilled and qualified than his white colleagues. He is hired at the request of the hospital's benefactor, but he faces constant racism and professional obstacles. He operates a clandestine clinic in the hospital's basement for Black patients, showcasing his commitment to serving his community despite the systemic prejudice he faces.
- **Cornelia Robertson (Juliet Rylance):** The head of the Knick's social welfare office and the daughter of the hospital's primary benefactor. She is a compassionate and determined woman who uses her position and privilege to advocate for the poor and address social injustices. She has a complicated personal history and relationship with Dr. Edwards.

- **Nurse Lucy Elkins (Eve Hewson):** A young nurse from West Virginia who arrives at the Knick with a naive view of the world. She becomes close to Thackery, first as his trusted assistant and later as a crucial enabler of his drug addiction. Her character arc follows her loss of innocence and her entanglement in the darker aspects of the hospital's world.
- **Herman Barrow (Jeremy Bobb):** The corrupt and self-serving manager of the Knick. He is constantly scheming to keep the hospital afloat financially, often through shady and illegal means, including skimming from funds and getting in debt with local gangsters.
- **Dr. Bertram "Bertie" Chickering, Jr. (Michael Angarano):** A young and idealistic surgeon who admires Thackery and strives to emulate his success. He is often the moral compass of the surgical staff and has a romantic interest in Nurse Elkins.
- **Sister Harriet (Cara Seymour):** A Catholic nun and midwife who runs an orphanage associated with the hospital. In her off-hours, she secretly performs abortions for women in need, a dangerous and illegal practice that puts her at great risk.

### **Explain the first case Placenta Previa**

While there isn't a single "first case" of placenta previa that is universally documented and cited as the absolute beginning, the condition itself has been recognized and described for centuries. The term "placenta previa" was first used by French obstetrician Paul Portal in 1685, who is credited with the earliest clear description of the condition.<sup>1</sup>

### **What is Placenta Previa?**

To understand why it was a life-threatening problem for centuries, it's essential to know what placenta previa is.

- **The Placenta:** This is the organ that develops in the uterus during pregnancy to provide oxygen and nutrients to the baby and remove waste.<sup>2</sup>
- **Normal Location:** Typically, the placenta attaches to the top or side of the inner uterine wall, away from the cervix.<sup>3</sup>

- **Placenta Previa:** This occurs when the placenta attaches low in the uterus, either partially or completely covering the opening of the cervix.<sup>4</sup>

## The Problem in the Past

In an era before modern medical technology, particularly before the advent of the C-section as a routine procedure, placenta previa was extremely dangerous for both mother and child.<sup>5</sup>

- **Painless Bleeding:** The main symptom of placenta previa is painless, bright red vaginal bleeding in the later stages of pregnancy.<sup>6</sup> This bleeding happens because as the uterus grows and the cervix begins to thin and open in preparation for labor, the placenta—which is attached to the cervix—tears away, causing hemorrhage.<sup>7</sup>
- **Risk of Hemorrhage:** The bleeding can be severe and life-threatening.<sup>8</sup> Before the 20th century, there was little that could be done to stop this kind of hemorrhage. A vaginal delivery was not possible because the placenta was blocking the baby's exit, and attempting it would cause a massive, often fatal, bleed.<sup>9</sup>
- **Lack of Surgical Options:** The Cesarean section was a procedure of last resort, almost always fatal for the mother due to infection and hemorrhage. Therefore, a diagnosis of placenta previa was essentially a death sentence for the baby, and a high-risk situation for the mother. Doctors might try to manually detach the placenta or perform other desperate measures, but these often resulted in dire outcomes.

## The Modern Approach

Today, with the ability to diagnose the condition via ultrasound and perform safe Cesarean sections, placenta previa is no longer the grave danger it once was. A C-section can be scheduled before labor begins, preventing the life-threatening bleeding and ensuring a safe delivery for both mother and baby.<sup>10</sup> This highlights the incredible progress in obstetrics and surgery, turning what was once a deadly complication into a manageable condition.

In Episode 1, I noticed the following:

1. Surgery with no gloves

2. Surgery done in a wide open space
3. Anesthesia was used already
4. Resection of intestine was done
5. Unsuccessful c-section failed 12x
6. Septicemia common but patients are still dying

The observations from Episode 1 of *The Knick* accurately reflect the state of medicine around 1900, a period of transition where surgical knowledge had advanced significantly, but the understanding of infection and sterilization was still catching up.

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## Key Medical Inventions and Practices of the 1900s

### 1. Surgical Gloves

The use of **surgical gloves** was a new and not yet universal practice. Dr. William Stewart Halsted, the real-life inspiration for Dr. Thackery, introduced rubber gloves at Johns Hopkins Hospital in 1889. His initial reason was not to prevent infection for the patient, but to protect his scrub nurse's hands from the harsh antiseptic chemicals he was using. However, other surgeons at Johns Hopkins soon realized that the gloves dramatically reduced post-operative infections, as they created a barrier between the surgeon's hands and the patient's body. By 1900, about 28% of surgeons were using them, a number that would continue to rise.

### 2. Antiseptic vs. Aseptic Surgery

The concept of germ theory—that invisible microorganisms cause disease—was relatively new, having been popularized by Louis Pasteur and Joseph Lister in the late 19th century. In 1900, the medical community was still transitioning from **antiseptic** to **aseptic** techniques.

- **Antiseptic surgery** involved using chemical disinfectants, like carbolic acid, to kill germs on instruments, wounds, and in the operating room. This is the source of the open-air surgery and the strong smells depicted in *The Knick*.
- **Aseptic surgery** was the more modern approach, focusing on creating a sterile environment to prevent germs from entering the wound in the first

place. This included boiling instruments, wearing sterile gowns and gloves, and strictly limiting who and what could enter the operating area. The open-air "operating theater" was a remnant of the pre-aseptic era, where crowds would watch surgeries, further increasing the risk of infection.

### 3. Anesthesia

Anesthesia was well-established by 1900, though it was still a relatively recent innovation. **Ether** and **chloroform** were the primary general anesthetics used to render patients unconscious. However, the administration was often done by untrained individuals, and dosing was imprecise. Anesthetics made long, complicated procedures like the intestinal resection shown in the show possible, but the patient's survival still depended on other factors, such as blood loss and post-operative infection.

### 4. Blood Loss and Transfusions

While intestinal resection was a known procedure, blood loss remained a huge challenge. The understanding of blood types (A, B, AB, O) was not fully developed until 1901 by Karl Landsteiner. Before this, blood transfusions were incredibly risky and often fatal, as incompatible blood types would cause a severe immune reaction. As a result, transfusions were rarely attempted and often failed, making procedures with significant blood loss extremely dangerous.

### 5. Failed C-sections and Sepsis

Cesarean sections were a last-resort procedure and were very rarely successful for the mother. In 1900, the primary goal of a C-section was to save the infant, as the mother's death from **sepsis** (blood infection) was almost a certainty. The uterus was not sutured closed and there was no way to prevent the resulting internal infection. The show's depiction of 12 failed attempts highlights this grim reality and the lack of options for a safe delivery in cases of complications like placenta previa.

### 6. Fighting Infection

The most common cause of death after a successful surgery in 1900 was **septicemia** (blood poisoning). Before the discovery of antibiotics like penicillin in the 1920s and 30s, a bacterial infection was often a death sentence. Doctors had

very few tools to combat infection, relying instead on hope and the body's own immune system. This explains why a patient could survive a complex surgery only to die from a seemingly simple post-operative infection, as seen in *The Knick*.

### **Tell more about MDs and Nurses and racism and arrogance of Caucasian doctors.**

In "The Knick," the racism and arrogance of Caucasian doctors are central themes, particularly through the character of Dr. Algernon Edwards. The show uses his experiences to expose the deeply ingrained prejudice in the medical establishment of 1900.

## **Racism in the Medical Field**

Dr. Edwards, a highly-skilled Black surgeon, is hired at the Knick, but his exceptional qualifications from Harvard and his training in Europe are largely ignored. The Caucasian doctors, especially Dr. Thackery, see him as an outsider and a threat.

- **Segregation and Subjugation:** Dr. Edwards is not allowed to operate on white patients and is denied access to the main operating theater. He is instead relegated to a makeshift, segregated clinic in the hospital's basement to treat Black patients, highlighting the pervasive racism of the era.
- **Professional Jealousy and Sabotage:** Dr. Thackery's arrogance is intensified by his fear that Edwards's superior surgical skills might eclipse his own. This leads to professional sabotage and an ongoing rivalry, as Thackery is not willing to acknowledge Edwards as his equal. This dynamic is a microcosm of the larger societal issues where white men in positions of power used their privilege to maintain control and suppress the advancement of people of color.

## **Arrogance of Caucasian Doctors**

The show also portrays the broader arrogance and elitism of the Caucasian doctors. They see themselves as pioneers of modern medicine, yet they often disregard new ideas or alternative practices.

- **Disregard for Patient Lives:** Their arrogance is evident in the show's depiction of experimental surgeries, where patient lives are risked without much

consideration for the outcome. The doctors' focus on advancing medical science often comes at the expense of patient care.

- **Racial and Social Hierarchy:** The medical hierarchy in "The Knick" reflects the racial and social hierarchy of the time. The doctors' interactions with patients and staff from lower social classes are often condescending. This is particularly evident in how they treat the hospital's impoverished patients, whom they view as little more than subjects for their medical research.

The show makes it clear that while some of the doctors possess undeniable medical genius, their talent is often overshadowed by their profound racism, arrogance, and moral failings. This contrast provides a powerful critique of the medical field's history and the systemic barriers faced by people of color.

### **Summarize the key medical notes and procedures in Episode 1.**

Here are the key medical notes and procedures from Episode 1 of *The Knick*.

## **Introduction of Dr. Thackery**

The episode opens with the suicide of the hospital's chief surgeon, which thrusts **Dr. John W. Thackery** into the role of chief surgeon. The scene sets the tone for the series, showing the immense pressure and high stakes of surgery in 1900.

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## **Placenta Previa Case**

The central surgical case of the episode is a patient with **placenta previa**.<sup>1</sup> This condition, where the placenta covers the cervix, was a death sentence for the baby and highly risky for the mother in the early 1900s. Thackery attempts to deliver the baby via Cesarean section, a procedure that was almost always fatal for the mother due to infection.<sup>2</sup> The surgery fails, resulting in a bloody and traumatic scene. Thackery's arrogant demeanor is on full display as he declares the patient a "hopeless cause" and orders her to be given more ether, demonstrating the period's lack of concern for the patient's well-being beyond surgical success.

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## **Intestinal Resection**

Another major procedure shown is the **resection of the intestine**. This surgery highlights the contrast between the advanced surgical skills of the doctors and the

primitive state of their environment. Thackery and his team perform the procedure in an open amphitheater, with a crowd of observers, which was common at the time. The surgery itself is a success, but the patient later succumbs to **septicemia** (blood poisoning), a common post-operative killer due to the lack of sterile environments and antibiotics.

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## Introduction of New Technology

The episode introduces two key advancements. The first is **x-ray technology**, shown as a dangerous curiosity. Dr. Gallinger's demonstration of the x-ray machine, with him placing his hand directly under the unshielded beam, highlights the era's lack of understanding about radiation and its dangers. The second is the use of **aseptic surgical practices**, introduced by the new head of the board, Cornelia Robertson. She pushes for the adoption of sterile equipment, gowns, and the use of rubber gloves, which were revolutionary at the time.

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## Dr. Edwards and Racial Prejudice

**Dr. Algernon Edwards** is introduced as a highly-skilled Black surgeon who trained in Europe.<sup>3</sup> He is brought to the hospital by Cornelia's father but is met with immediate prejudice. The hospital's staff, led by Thackery, refuses to acknowledge his qualifications, forcing him to set up a private, segregated clinic in the hospital's basement to treat Black patients, a clear depiction of the racial barriers in medicine at the time.