Issue 10 SPRING 2021

History of Pharmacy SIG Newsletter

Pharmacy Chronicles: Past, Present, and Future

Welcome Message from the Chair, History of Pharmacy Special Interest Group

Dear Readers,

As I sit at my desk, I marvel that it has been 383 days since I last stepped foot in my campus office or my clinical work space. Zoom meetings and virtual rounding have become our "new normal", yet we excitedly anticipate the return to our typical venues and spaces.

In our last SIG newsletter, I encouraged participation in documenting the impact of the COVID-19 pandemic on your lives by visiting the AIHP COVID-19 Pandemic Pharmacy Historical Documentation Project (https://aihp.org/collections/aihp-covid19-project/). This compilation of reflections and experiences continue to be gathered and remains open to your submissions.

As we each become a living testament to this historic time, we can reflect on the rich history of pharmacy and medicine to appreciate this incredible moment. If we would have convened in person at the AACP Annual Meeting in Toronto in July this summer, we would be celebrating 100 years since the isolation of the human insulin hormone on July 27, 1921 by Banting and Best. I think to the years of WWII, the race to produce clinically relevant amounts of penicillin, and the joint efforts of Heatley, Fleming, Florey, and Chain across years to make this a reality. The fear of polio also comes to mind, and the stories many of us grew up with. My mother, born in 1939, never learned to swim as her parents feared her contracting polio if she went swimming in the summer. She rejoiced in 1961 when she lined up with her 35 first grade students to receive her oral polio vaccine delivered via a sugar cube in the elementary gymnasium. In other moments, I remember growing up across the alley from a young boy who faced a lifetime of complications from congenital rubella syndrome—something rarely seen today with the use of our MMR vaccine.

When the mumps vaccine was developed in 1967, it was after just four years of development—a feat in itself. Yet as I review my chicken-scratch notes from the past year on the COVID vaccine, it almost is a miracle in its development and road to production. While it is not uncommon for it to take 10-15 years to develop an effective vaccine, take a moment to reflect. Just 63 days after sequencing the COVID virus, Phase I studies were initiated on these mRNA-based vaccines. By July 2020, we were reading results of initial Phase I and Phase II clinical trial data. And December 2020 found the FDA declaring emergency use authorization to begin vaccination by the middle of the month.

Yes, we are living in a momentous time in history. As we move our way through this, and into a post-COVID world, reflect on the unique role pharmacists and the profession of pharmacy have on our world—not just in the past and present, but also the future. Stay safe, stay well, and enjoy the newsletter.

Sincerely,

-Megan Undeberg, SIG Chair

INSIDE THIS ISSUE:

Meet the Editors

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Message from the Editor

Welcome We are pleased to present the 10th issue of the History of Pharmacy SIG Newsletter *Pharmacy Chronicles: Past, Present, and Future*. We are so excited and impressed at the quality and diversity of the articles submitted. In the original edition, we were worried we wouldn't have enough material to fill the annual, 12 page edition. Last year, despite the pandemic, we published two editions, each 18 pages long! We are very grateful for the interest of the SIG members, their willingness to write and submit their work and to include students in the process! We are also grateful to our peer reviewers to provide helpful feedback who improve the articles. Personally, I am grateful for my co-editor, Bernie Olin and all the hard work he does with the peer review process; Thank you! As the pandemic becomes more controlled and we ease back into a "new normal", please stay in touch and reach out with ideas, submissions or to volunteer. Looking forward to seeing you "virtually" at AACP this summer and hopefully in person in the future!

—Cathy Taglieri, MCPHS University, Boston

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ANNOUNCEMENTS

PHILADELPHIA COLLEGE OF PHARMACY CELEBRATES BICENTENNIAL

Submitted by Edward Foote

To mark 200 years since its founding as Philadelphia College of Pharmacy, University of the Sciences (USciences) and the College are hosting a year-long Bicentennial Celebration through 2021.

On February 21, 1821, the first college of Pharmacy in North America, was established by 68 Philadelphia apothecaries in Carpenters' Hall. They sought to establish improved scientific standards and to train more competent apprentices and students to enhance their vocation and protect the public welfare.

Before tuition payments, students attending Philadelphia College of Pharmacy in the 19th century would purchase lecture tickets, essentially a season pass from each professor to get into class. The money from each went directly to the professors' pockets, minus expenses paid to the college and other sundry bills.

Getting a diploma required two years of college and the completion of a minimum four-year apprenticeship. Students typically matriculated two years shy of their apprenticeship fulfillment, making the college an after-work night school.

The college began to grow and in 1921, the name of the institution was changed to Philadelphia College of Pharmacy and Science and began granting master's and doctoral degrees in addition to bachelor's degrees. The college evolved with new science and technology, ex-

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AMERICAN INSTITUTE OF THE HISTORY OF PHARMACY UPDATE

Greetings from the American Institute of the History of Pharmacy! Here is a brief report on current happenings:

AIHP's "Kreminar" Series Is Underway: AIHP is pleased to offer the Second Annual Edward Kremers Seminar in the History of Pharmacy & Drugs, a series of free online seminars on Thursdays during May and June. The 2021 "Kreminar" explores the theme of Opiates & Opioids and will feature six virtual seminars by scholars and practitioners researching and writing about the history and contemporary status of opiates, opioids, and addiction. The seminars will be streamed live from Noon to 1:30 pm CDT (1:00 to 2:30 pm EDT) on Thursdays through June 17.

AIHP Now Accepting Nominations for Certificates of Commendation: Each year AIHP awards Certificates of Commendation to recognize individuals or organizations whose efforts or activities in some concrete way have (i) advanced knowledge or understanding of the history of pharmacy and pharmaceuticals; or (ii) utilized the history of pharmacy and pharmaceuticals to entertain, inform, or educate or to address or advance understanding of contemporary issues. If you know of a colleague or group whose work or activities have contributed to the advancing understanding of pharmacy history in some tangible way, please consider nominating them for a Certificate of Commendation before the August 1 deadline.

Recognize Your Student's Pharmacy History Achievements: AIHP's Student Recognition Certificate Program offers a great way to recognize a pharmacy student who excelled in their pharmacy history course or module or who engage in some other type of relevant historical activity (*e.g.*, historical essay, collecting books or artifacts, historical photography, historical hobbies, etc.). It's not too late to request a certificate for this year's exceptional student!

Check Out AIHP's Online Exhibit: If you haven't already done so, we encourage you to check out AIHP's online historical exhibit, "The Misappropriation of Native/Indigenous Imagery in Pharmaceutical Advertising." Composed mostly of images and artifacts from the joint collection of AIHP and the University of Wisconsin–Madison School of Pharmacy, the virtual exhibit documents how drug companies and pharmaceutical manufacturers have misappropriated Native and Indigenous imagery, customs, and beliefs to market their products—particularly during the nineteenth and twentieth centuries

BOOK REVIEW:

A History of Pharmaceutical Education at Howard University: 1868-1981

In March 2019, the story of A History of Pharmaceutical Education at Howard University: 1868-1981 was given the life that the author, Roy C. Darlington, PhD had envisioned. As a faculty member and college of pharmacy administrator, Dr. Darlington chronicled the details of the Howard University College of Pharmacy, which included the history of Howard University, founded in 1867. Howard University was founded with the goal of establishing an educational institution for the "freedmen" faced with ongoing racial challenges, discrimination and limited opportunities following the emancipation of Blacks after the American Civil War. Pharmaceutical education at Howard University was initiated within the Medical Department, where pharmacists were trained alongside physicians and surgeons.

The 127-page book paves the journey of pharmaceutical education in the United States from the early attempts of education by organized American pharmacy starting in 1821; Howard University was the eighth institution to offer pharmaceutical education in the United States. The book describes each of the initial academic sessions, typically 6 or 7 months, the admission requirements, the courses offered, the requirements for the degree, the backgrounds and responsibilities of the faculty and administrators, the names and demographics of the graduates, and commencement details, up to 1981. Notably, the first degree was the Doctor of Pharmacy degree granted to James Thomas Wormley in 1870; but with the evolution of two-year, three-year, four-year, five-year programs, the name and nature of the degree or certificate, marking successful completion, changed. The book also captures the evolution of every Howard University President, every College of Pharmacy Dean, and the occurrence of societal events, such as World War II.

The book includes the impact of the Accreditation Council for Pharmacy Education (ACPE) on the College of Pharmacy, the important role of the pharmaceutical companies in career decisions, employment opportunities afforded the graduates, references to national pharmacy associations, and the establishment and contributions of the pharmacy alumni association.

As stated in the book, "as educated professionals, pharmacists have a need for knowledge of their educational and professional roots" and "…the accomplishments and contributions of their predecessors". This book contributes significantly to the history of pharmacy and pharmacy education, in general, but especially because Howard University College of Pharmacy is one of only four historically-Black institutions for pharmaceutical education in the country.

—Reviewed by: Terri Smith Moore, PhD, MBA, RPh, CPH; Senior Director of Academic Services, American Association of Colleges of Pharmacy

Title: A History of Pharmaceutical Education at Howard University: 1868-1981
Author(s): Darlington, Roy C; Moore TS, editor
ISBN: 978-1-5144-7659-8
Publication Year: 2019
Format: hardcover; softcover; and eBook

Philadelphia College of Pharmacy Celebrates Bicentennial…

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panding its curriculum to prepare students for the new wave of breakthroughs.

During World War II the college offered accelerated classwork to educate students to fulfill Selective Service, evening classes for civilians to learn chemistry so that they could work in war industries, and first aid classes. A series of lectures were published in Popular Science to depict the role of science in the war. The college collected salvage and scrap metal to fill a national and military need and launched the Quinine Pool, which collected more than 30,000 ounces of the medication to give to the government to treat malaria.

The Commonwealth of Pennsylvania approved the institution's application for university status in February 1997. In recognition of the broad spectrum of new health and science programs introduced by the institution, the college changed its name to University of the Sciences in Philadelphia to reflect the broader range of academic opportunities.

The institution has grown to more than 30 degree granting programs in a range of fields from the health sciences, bench sciences and beyond. In 2020 USciences launched USciences Online, a new division offering asynchronous, fully-online degrees and certificates.

In recognition of this growth, USciences hosted its Bicentennial Founders' Day Celebration virtually on February 23, 2021. The Celebration included the awarding of an honorary doctor of science degree to Kenneth C. Frazier, Chairman and CEO of Merck and Co, as well as acknowledgement of faculty, staff, and students with Awards of Merit. At a special Bicentennial Research Day event, student and faculty research and scholarship were presented, acknowledging the lasting legacy of the University's founders and their focus on scholarship and innovation.

Additional events will be added to celebrate the Bicentennial year. For more information about the celebration visit usciences.edu/200.

PODCAST YOU MAY WANT TO CHECK OUT!

MelisRxScripts podcast is a series of lively conversations with friends, colleagues and various leaders in health care, pharmacy and beyond. In Episode 17, host Melissa Murer Corrigan talks with Metta Lou Henderson, a research pioneer in the history of women in pharmacy. Recorded to celebrate Women Pharmacist Day during Pharmacists Month, they discuss what was happening in society and the experiences of women in pharmacy over the years. The impacts of women pharmacy leaders like Zada M. Cooper and Gloria Niemeyer Francke are discussed along with others. Metta Lou also shares her groundbreaking research on the important contributions of Catholic Sister pharmacists, especially in hospital pharmacy and the founding of ASHP. Follow this link to the podcast: https://www.melisrxscripts.com/2020/10/12/episode-17-take-risks-and-make-it-work-with-metta-lou-henderson/

AIHP wants to document your History…relating to COVID-19

The American Institute of the History of Pharmacy (AIHP) wants to record and preserve the history that pharmacist are making dealing with the COVID-19 pandemic for the benefit of future historians.
Contributions may take a variety of forms to documents that memorialize stories and experiences and may be uploaded to a portal on AIHP's website - **available at this link** .
Our website portal will allow participants to immediately record their COVID-19 experiences in a textbox and/or upload up to three digital items for preservation in AIHP archives.
We are especially interested in having pharmacists address such questions as:

- How did the public health emergency affect your work as a pharmacist?
- How did pharmaceutical treatment options change and evolve over the course the crisis?
- How did social distancing or quarantine affect pharmacy practice, pharmacy education, or pharmacy customers
- What were the most difficult challenges you confronted?

Please share this announcement with your colleagues and share on social media.

Applying Lessons Learned from the History of the Drug Distribution System to the Current Opioid Epidemic

By Madrona Boutros and Kenneth Pawa

Since the beginning of the pharmaceutical era, numerous medication safety issues have been reported within pharmacy practice, mainly in hospital settings, leading to the creation of a drug distribution system.[1] Prior to 1950, medication errors garnered very little attention due to a lack of a protocol system through which errors could be detected. Medication errors and drug interactions were under reported, but as medication dispensing increased in frequency, the incidences of adverse drug events, adverse drug reactions, and critical medical complications also increased. Due to the increase in medication errors, which led to increased awareness, many reports were published regarding these medication errors, which demanded the creation of a safe and efficient medication distribution system.

In many states, major roles of a hospital pharmacist during the 1930's involved bulk compounding and sterile solution manufacturing, as well as stocking items in the nursing units. In those days, nurses were the ones who carried out the work of a modern-day pharmacist.[2] At the time, nurses interpreted physicians' orders, which included mixing, measuring, compounding, and diluting doses, and then putting them into unlabeled medication cups or syringes using stocked items from the nursing unit.[2] Drugs were administered to the patient without any prior checkpoints from the pharmacist. If a medicine was not in stock in the nursing units at a particular hospital, the prescriptions was then transcribed by a nurse or ward clerk to pharmacists in another hospital in the hopes of finding the medication in stock at a different pharmacy. This interaction between nurses or ward clerks and pharmacists led to potential misinterpretations in the drug dispensing process. Additionally, pharmacists rarely saw a physician's original drug order, further interfering with optimal patient safety, and leading to potential overdose, ineffective therapeutic action, incorrect dosage forms, drug interactions, and toxicity.

Beginning in the 1950s, though the role of pharmacists did not change much, there were efforts by the hospital pharmacies and American Society of Health-System Pharmacists (ASHP) to reduce medication errors. One such effort was by clarifying specific duties of pharmacy technicians – to aid or assist the pharmacist in hospital pharmacies and would assist the pharmacist in all assignments except those that needed a pharmacist's clinical judgement.[2] Although the term "pharmacy technician" was not yet in use, ASHP advocated in developing technician training programs, and recognizing that changes needed to take place to ensure the role of technicians was articulated in state regulations.[2, 3]

Despite these efforts, many common medication errors continued to exist. As a result, a change in the systematic approach was deemed necessary. To create a system in which patient safety was at the forefront, several hospital pharmacists involved in resolving medication issues, focused on identifying the key points in the system where specific errors were made. Identifying where these errors were made, and by whom, allowed them to create a system of checks and balances to ensure a safer and more effective drug distribution method in hospitals across the United States. Two prominent hospital pharmacists: William M. Heller from Arkansas and William W. Tester from Iowa led the important medication error studies that resulted in the creation of a safer drug distribution system.[2] Hospital pharmacists at the Universities of Iowa, Florida, Arkansas, Kentucky, and Ohio State developed the unit dose drug distribution concepts and implemented those systems throughout hospitals in their local regions.[4] These unit dose concepts were the origins of the drug distribution system implemented in hospitals and healthcare systems. Unit dose systems consisted of centralized and decentralized systems, and were shown to be safer and more efficient than the previous system, leading to a substantial improvement in patient outcomes. The early unit dose systems during the late 1960's contained four elements described in Table 1 (found on page 11).

Over time, further technological advances such as the computerized physician order entry (CPOE) was introduced, when it was observed that a major source of medication error was the transcribing step of the medication distribution process. Ninety percent of the errors that occurred during transcription were due to poor handwriting, various unknown abbreviations, and lack of

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"Dulce et decorum est pro patria mori" . . . But Only When Accompanied by a Field Medical Kit

By Megan R. Undeberg

Bent double, like old beggars under sacks,
Knock-kneed, coughing like hags, we cursed through sludge,
Till on the haunting flares we turned our backs,
And towards our distant rest began to trudge.
Men marched asleep. Many had lost their boots,
But limped on, blood -shod. All went lame; all blind;
Drunk with fatigue; deaf even to the hoots
Of gas-shells dropping softly behind.

Gas! GAS! Quick, boys!—An ecstasy of fumbling
Fitting the clumsy helmets just in time,
But someone still was yelling out and stumbling
And flound'ring like a man in fire or lime.—
Dim through the misty panes and thick green light,
As under a green sea, I saw him drowning.

In all my dreams before my helpless sight,
He plunges at me, guttering, choking, drowning.

If in some smothering dreams, you too could pace
Behind the wagon that we flung him in,
And watch the white eyes writhing in his face,
His hanging face, like a devil's sick of sin;
If you could hear, at every jolt, the blood
Come gargling from the froth-corrupted lungs,
Obscene as cancer, bitter as the cud
Of vile, incurable sores on innocent tongues,--
My friend, you would not tell with such high zest
To children ardent for some deperate glory,
The old Lie: Dulce et decorum est
Pro patria mori.

--Poet Wilfred Owen
"Dulce et Decorum Est", 1917

The Roman poet Horace wrote "It is sweet and fitting to die for one's country", and WWI poet Wilfred Owen incorporated this into his own poem "Dulce et Decorum Est", a wry commentary from the perspective of the field soldier fighting in WWI. Soldiers faced not only the horrors of artillery barrage in the battlefield, but also chemical warfare with the release of chlorine gas by the German military.

What, if any, pharmaceuticals did the fighting soldier have access to in WWI? A local pharmacist in eastern Washington state possesses in his pharmacy paraphernalia a WWI field kit, from his great-grandfather's service as a soldier on the Western Front with the German Army during this time. As visualized from the kit contents pictured here, the soldiers carried with them a variety of products.

First noticed are five steel-capped, glass vials labelled as follows:

Baldriantropfen
Hoffmannstropfen
Salmiakgeist
Essigsaure Tonde

The soldiers were also supplied with a small tweezers, *Mull-binde (*cotton gauze), and what appears to be a roll of cotton wool. Off to the far left side is a small sewing kit, *Nahzeug*.. So what are the contents of these vials?

Baldriantropfen contains a tincture of valerian drops, for insomnia and activity as a sleep aid—just as it is used still today.[1]

Hoffmannstropfen, or the compound spirit of ether, is a solution of one part diethyl ether in three parts alcohol.[1] Also referred to as "Hoffmann's anodyne", "Hoffman's drops," it is usually diluted in water,

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Influenza Pandemic of 1918: Impact, Treatment, and the Response of US Community Pharmacists

By Jane E. Krause, Alicia S. Cheng, Rurie W. Lee and Holly L. Mason

Introduction

The Spanish Influenza was the most severe pandemic of the 20th century and, in terms of total numbers of deaths, among the most devastating in human history.[1] During the pandemic, it is estimated that 500 million people (about 33% of the global population) contracted the influenza.[2,3] Of those, between 50 and 100 million people died of the disease or from its complications.[2,3,4] In the United States (US), about 675,000 Americans died resulting in an estimated fatality rate of about 2%.[3,5]

In the US, the earliest cases of the influenza pandemic were detected in March 1918 among military personnel stationed at Camp Funston in Fort Riley, Kansas.[1] Movement of troops and crowded conditions during World War I [(WWI), (1914-1918)] contributed to the spread of the virus throughout the US and western Europe by late spring.[1,2] This first wave lasted through the spring of 1918.

The outbreak was named the "Spanish Influenza" because Spain, which remained neutral during WWI, was the first country to publicly report cases of the disease in May 1918.[5,6] Although other countries already had cases of the influenza, wartime censorship suppressed newspaper reports on how the disease was impacting their populations.[3,6] Even the King of Spain (Alfonso XIII) and several members of his government contracted the influenza.[6] This series of events led to the mistaken belief that the disease originated in Spain.[3,4,6] Although unknown, France, China, Britain, and the US have all been suggested as the potential birthplace of the virus.[5]

In August 1918, a second and more lethal wave began.[1] During this wave, pneumonia often developed quickly, with patients dying a few days after experiencing the first symptoms of the influenza. During the fall of 1918, the influenza reached pandemic levels.[4] A "pandemic" is defined as an "epidemic" occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people.[7] An "epidemic" is defined as the occurrence of more cases of disease than expected in a given area or among a specific group of people over a particular period of time. US Army records show that 27.5% of personnel across all facilities were hospitalized for respiratory illness during the fall of 1918.[8] As social distancing measures were enforced, the second wave began to ease by the end of November.[1] The second wave was responsible for the majority of influenza cases including President Woodrow Wilson who became infected while negotiating the end of WWI (November 18, 1918).[6]

During this time period, large gatherings contributed to the increased spread. For example, the city of Philadelphia, PA was significantly impacted by the influenza in this manner. Although citizens were advised to avoid crowds, a "Liberty Loan" parade, designed to promote the sale of war bonds, was held in downtown Philadelphia on September 28, 1918 with hundreds of thousands of citizens participating and/or watching.[9,10] Within 72 hours of the parade, so many people had become infected with the influenza that every hospital bed in the city was taken. By early October, public buildings in Philadelphia were closed and the city was quarantined. Overall, it is estimated that nearly 12,000 Philadelphia residents passed from the influenza or its complications as a result of the parade.

Although the case load was lessening, they began to rise when US service members returned home and bringing the influenza with them again, and subsequently exposed communities who may have not been impacted significantly in the previous wave.[2] Many US service members who survived the war, did not survive the influenza as this third wave occurred during the winter and spring of 1919.[1,2] The post-war period was a time for celebration and public gatherings which presented an ideal opportunity for the disease to spread.[2,11] Following this, although less prominent and virulent, a fourth wave occurred in the winter of 1920.[1,11] By this time, the virus was still a

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Student Pharmacists' Impression of Three Pandemics

By Tracey L. Mersfelder

Introduction:

The COVID-19 pandemic was one of the top news stories of 2020, and it affected people worldwide in different ways. For college students in Michigan, it caused the cancellation of in-person classes in the spring and, for many, again in the fall. Several procedures were implemented to help "flatten the curve" by slowing the infection rate and lessening the strain on the healthcare system. These included quarantines, mask mandates, and closures of gatherings and establishments such as schools, gyms, restaurants and bars, government offices, churches, and many other "non-essential" businesses. The COVID pandemic had brought a unique opportunity to explore ways to teach the history of pharmacy while students are experiencing history in the making.

Objective:

To obtain one institution's Doctor of Pharmacy students' perspectives on the similarities and differences of two notable historical pandemics compared to the current COVID-19 pandemic.

Methods:

Student pharmacists who were enrolled in the history of pharmacy elective at one college of pharmacy were included in the study. As part of the two-credit hour, on-line elective course, students were asked to complete an assignment about historical pandemics. The assignment was to watch a documentary on the history of the Black Death (https://www.youtube.com/watch?v=HYNB4sAxemk) and a documentary on the history of the 1918 influenza pandemic (https://youtu.be/TkgQQaVgqMw). After watching these video clips, the students were asked to identify four similarities and four differences for each pandemic as compared to the ongoing COVID-19 pandemic. The students were also asked to provide a statement of their overall impression of the Black Death and the 1918 influenza pandemic. Lastly, they were asked to provide an overall statement how learning about two previous pandemics changed their view of the current COVID pandemic. The results were collected and categorized into themes based on free-text answers. Percentages were calculated and represent the frequency of responses. The study was classified by the Institutional Review Board as exempt.

Results:

A total of 15 (75%) students provided consent. Three main themes were identified based on the frequency of the student's responses. These themes were medical, social, and overall advancements leading up to the COVID-19 pandemic. The medical theme covered the etiology, epidemiology, and clinical outcomes of the pandemics. For example, the majority of the students mentioned that the Black Death was started by or spread by a mammal although a different mammal (rat vs bat). Another example provided was that the Black Death was caused by a bacterium while the 1918 influenza and COVID-19 pandemics are viral. Students remarked on the differences in mortality rates among the pandemics. The Black Death was stated to have had a 40% death rate in Europe, higher in stated cities. The 1918 influenza was noted to be 3% and some population pockets were upwards of 30% or more. Top medical themes stated by the students are included in Table 1.

The second theme involved social aspects. The two top social aspects were the enforcement of quaran-

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Table 1: Top Medical Themes Identified by Students

	Black Death and COVID-19	1918 influenza and COVID-19
Vector difference	14 (93.3%)	3 (20%)
Virus vs. bacterial	12 (80%)	7 (46.7%)
Mortality rate difference	11 (73.3%)	8 (53.3%)
Age difference	1 (6.7%)	10 (66.7%)
Place of origin	7 (46.7%)	5 (33.3%)
Incubation time different	3 (20%)	7 (46.7%)
Treatment options	0 (0%)	11 (73.3%)
Clinical signs & symptoms	12 (80%)	2 (13.3%)

Pharmacy Through the Lens of Hollywood III: "Happy Land"

By David M. Baker and Aqsa Alam

Lew Marsh, renowned community druggist and owner of Marsh's Drugs, pictured with his son, Russell "Rusty" Marsh, in the pharmacy. Ever since he was a young boy, Rusty always followed his father's footsteps of doing good and being selfless.[1]

The third in our leading-role pharmacist character movie articles represents the 1940s, and World War II (WWII), with the movie entitled "Happy Land."[2] A classic black and white film that portrays the meaning of life in WWII-era America, as seen through the eyes of a small town community pharmacist.[2]

Released: November 10, 1943
Playing Time: 1 hour, 13 minutes
Availability: Available in DVD format; occasionally shown on Turner Classic Movie channel and Hulu.
Production Company: Twentieth Century Fox Film Corporation
Director: Irving Pichel
Producer: Kenneth Macgowan
Writers: MacKinlay Kantor (novel), Julien Josephson (screenplay) and Kathryn Scola (screenplay)

Cast:
Don Ameche – Lew Marsh (Pharmacist)
Frances Dee – Agnes Marsh (Wife)
Harry Carey – Edward "Gramps" Marsh (Dead Grandfather/Pharmacist)
Ann Rutherford – Lenore Prentiss
Cara Williams – Gretchen Barry
Richard Crane – Russell "Rusty" Marsh (Son)
Henry Morgan – Anton "Tony" Cavrek
Minor Watson – Judge Colvin
Dickie Moore – Peter Orcutt
Joe Bernard – Clerk
Natalie Wood – Little Girl Who Drops Ice Cream Cone (uncredited)[3,4]

"Happy Land," set in the fictional town of Hartfield, Iowa, has Lew Marsh as the pharmacist-owner of Marsh's Drug, the local drugstore. Prior to practicing pharmacy, Lew served in the U.S. military during World War I; so, he naturally tries to pass his American values on to his son. The movie explores the themes of American identity, noble work, and innate altruism through this father-son relationship. It is interesting to note how these themes go hand-in-hand with the characteristics of a good community pharmacist —benevolence, altruism, and honesty.[2]

Movie Summary

"Happy Land" starts with an admiring introduction to the small town of Hartfield. The narrator notes many young men from this town are patriotically serving in the U.S. military. As the narrator continues, he transitions to Marsh's Drug in a lighthearted manner, describing the store as a place where customers can, "talk and smoke and stay as long as they'd like."[2]

In the drugstore, Lew is busy working in his white coat as the pharmacist. Customers refer to him as Mr. Marsh or Lew, and often inquire about Russell or Rusty, his son, serving in the Navy. In the opening scene, Marsh directs one customer to exactly where a product is on the shelf, and advises another that vitamins would be better for her than Dr. Tom's Trusty Tonic. The background music stays upbeat as Marsh remembers his grandfather, Edward "Gramps" Marsh, while straightening a picture of him in his Civil War uniform.[2]

When Lew gets home, his dog meets him outside and shortly thereafter, his wife, Agnes, inside. They chat about their day and their son, Rusty. However, the background music turns solemn as a Western Union girl

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Applying Lessons Learned from the History of the Drug Distribution …

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Table 1: Elements of the Early Unit Dose Systems during the Late 1960s [4]

1. Pharmacists received and reviewed all medication orders from a copy of the physician's original order.
2. Pharmacists and pharmacy technicians maintained a medication profile for each patient to assess allergies, drug interactions, and therapeutic duplicates before dispensing an order.
3. Single drug doses were packaged and labeled appropriately by a manufacturer or a pharmacy technician.
4. No more than a twenty-four-hour supply was dispensed for each patient.

knowledge on behalf of the ordering physician.[5] Implementing CPOE led to a shift towards a culture of team-based safety, by focusing on three components: the right drug, the right patient, and the right time. The drug must be questioned in the context of the patient's diagnosis together with their history to assess whether or not this drug will be of therapeutic benefit. While only 2% of hospitals used computer technology to improve the accuracy of medication dispensing prior to the establishment of CPOE, it increased to 75% after it was mandated in 1975.[1] In addition to reducing the high rates of adverse drug effects, the other benefits of CPOE involved improved patient-administered doses, reduction in medication errors, and the involvement of a team of physicians, nurses, pharmacists, and the patient.

As the healthcare landscape changes over time, pharmacists are faced with new challenges that threaten patient safety. As new challenges emerge, it is an opportunity for us to look back at the history, learn from it, and apply the same principles to solve the challenge. Currently, a major issue facing the United States and healthcare specifically is the opioid epidemic. In the last twenty years, the healthcare system and the US federal government have taken many steps to address this opioid epidemic. The federal government has placed guidelines and schedules for prescribed substances that would have psychological or physical dependence in patients over time.[6] These guidelines were set in place to increase awareness and limiting the prescribing authority of physicians and pharmacists who dispense the drugs.

We can learn from history and use the same concept of "modifying and enforcing the drug distribution system" to control the misuse of opioid drugs by avoiding errors in prescribing as they arise. Pharmacists should take responsibility by using the drug distribution system to review prescriptions for prescribing guideline adherence and match them with the federal controlled substances guideline. Pharmacists also have the ability to prevent opioid misuse by reducing the supply of available opioids, developing abuse-deterrent opioid formulations, encouraging medication storage security at home, providing drug take-back programs, using prescription monitoring programs, and educating prescribers when opioids are overprescribed for acute pain.[7] In scenarios where the use of a controlled substance is deemed necessary, the Pharmacist Patient Care Process can be applied to collect information about the patient, assess their condition, and make a plan for the patient which puts a limitation to the use of controlled substances. Collectively, the plan should be to utilize a time-tested strategy such as the drug distribution system, to ensure patient safety and avoid drug abuse and misuse; by monitoring opioid prescriptions from physicians and its usage by patients.

History has also taught us to act quickly to resolve errors before they have an impact on the patients who we care for. As can be seen from the history (Figure 1, below), it took almost three decades to mandate CPOE. In 2013, New York state implemented the I-STOP program

Figure 1

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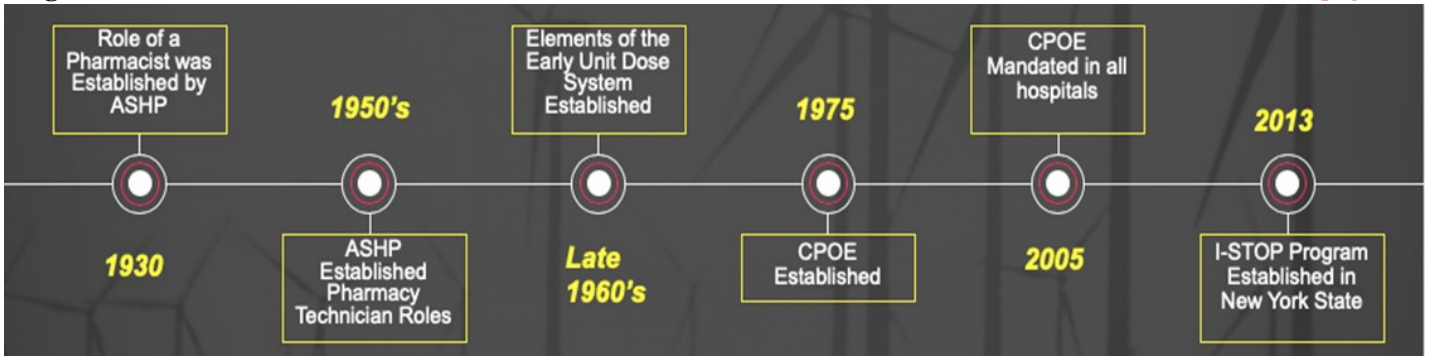

But Only When Accompanied by a Field Medical Kit . . .

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flavored with sugar, cinnamon or honey and cloves, and consumed orally to aid in digestion; it also is a GI anti-spasmodic. However, consumption of diluted ether pre-WWI was supported by the temperance movement as a substitute for imbibing alcohol, and between the World Wars, ether use, including that through Hoffmann's drops, was commonplace and was noted to induce euphoria. The risk was the volatility; liquid ether boils at 35 degrees C/95 degrees F.[2,3]

Salmiakgeist, or a vial of ammonia water.[1] It was believed that dousing a handkerchief with ammonia water and placing it over one's eyes, mouth, and nose would neutralize the chlorine gas and protect the mucous membranes from the toxic effects of the gas, with the early widespread use of chemical warfare by both the British and German military. Later, there was the thought ammonia water would neutralize the blistering associated with contact from mustard gas. Uses of ammonia water in both these situations did not bear out.[4, 5, 6, 7] Alternatively, ammonium carbonate was dissolved in ammonia water then added to an alcoholic solution of nutmeg, lemon and lavender. After allowing to set for 24 hours, this solution was filtered and diluted and purported to remedy indigestion.[8]

Essigsaure Tonde is aluminum acetate, or what we commonly refer to today as Burow's solution. Whether then or now, this solution capitalizes on its astringent and antiseptic properties, and is still utilized as a topical agent for skin irritation and rashes. Its creator was Dr. Karl August Burow, a physician-professor in East Prussia and later a military physician with the Prussian army in the 1860s.[9, 10]

WWI brought changes to the battlefield, the way warfare was conducted, and ushered in new ways of providing care to soldiers. Seeing the field medical kits issued to soldiers gives us insight to the limitations of pharmaceutical provision from a century ago.

Credit: Many thanks to David Easley, RPh, Newport Hospital and Health Services, Newport, WA for sharing this medical kit carried by his great-grandfather on the battlefield as a German soldier during WWI.

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Applying Lessons Learned from the History of the Drug Distribution …

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(Internet System to Stop Overprescribing) to limit the use of controlled substances and improve patient safety by monitoring their use state by state.[1] To reduce the opioid misuse, pharmacists are recommended to review prescriptions according to the I-STOP program. The program can be used by pharmacists as an opportunity to discuss with physicians, to determine the necessity of the prescription, and to examine if there are alternative medications that have an equal therapeutic effect for the condition at hand. Further studies should be done to determine the effectiveness of the I-STOP program. If found effective, the healthcare system should take quick steps to implement the I-STOP program across the United States and making it mandatory for pharmacists to check the program.

In conclusion, pharmacists are called to assume leadership, responsibility and accountability for the quality, effectiveness, and efficiency of the medication use process.[2] We used the drug distribution process in the past to achieve this goal; now it is time for us to work in collaboration with other health care providers and

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Influenza Pandemic of 1918…

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threat, but fewer people were dying and scientists moved on to other research.[6] William Henry Welch, a physician at Johns Hopkins who was studying the pandemic, found it frustrating that the outbreak was ending without scientists truly understanding the underlying cause of the disease.[12]

Impact, Etiology, and Symptoms

The cause of the influenza pandemic of 1918 is now known to have been a novel H1N1 influenza virus "with genes of avian origins" which indicates that at some point it passed from birds to humans.[6] As with seasonal influenza, the worst-hit populations were the very old and the very young.[2] However, in comparison to a typical influenza epidemic, about one-half of the deaths occurred among otherwise healthy adults between 20 to 40 years of age.[1,2,3,6] It has been shown that the virus triggered a "cytokine storm", an immune response that can be severe/fatal in those with strong immune systems.[2,13] People were getting sick and dying in the prime of their lives leaving behind widows, widowers, and orphans. Associated with this, pregnant women were significantly impacted; of those who survived the virus, approximately 25% lost their child.

Symptoms were generally characterized by common complaints associated with the influenza including fever (101 - 105^{0} F), delirium, chills, severe headache, body aches, muscle and joint pain, sore throat, cough, and acute congestion.[11,14] The most unusual pathological finding was massive pulmonary edema and/or hemorrhage.[11] Bloody noses, difficulty with breathing, vomiting, diarrhea, and constipation were also seen.[14] The onset was peculiarly sudden, as people were struck with dizziness, weakness and pain while going about their daily work. Those who did not die of the influenza, often died of secondary bacterial pneumonia.[11,14]

Vaccines

At the time, there were only three human vaccines available (smallpox, rabies, and typhoid) and a diphtheria toxin-antitoxin formulation used during epidemics, with smallpox the only one in widespread use among civilians.[15] Having no vaccine to protect against influenza infection and no antibiotics to treat secondary bacterial infections, meant that control efforts were limited to non-pharmaceutical interventions, such as isolation, quarantine, good personal hygiene, and use of disinfectants.[5] Cities and towns essentially shut down.[4,6] Schools, churches, theaters, and other public gathering places were forced to close and people wore masks in public. There were often "no spitting" ordinances as spitting in public was believed to contribute to the spread of the influenza.[11] In Wisconsin, masks were to comply with the Board of Health's recommendations of three thicknesses of butter-cloth or eight thicknesses of cheese-cloth.[11]

Not a great deal was understood at the time regarding knowledge of influenza as an infectious disease.[16] The tools of the time were only able to detect bacteria, not smaller pathogens such as the influenza virus.[15,16] The foundation of scientific knowledge about the influenza was information collected during the previous major pandemic of 1889-1890.[17] In 1892, Richard Pfeiffer, a physician and bacteriologist from Germany, announced that he had discovered influenza's cause, Bacillus influenzae. Many vaccines were developed and used during the 1918 pandemic, all targeting bacteria that caused secondary infections, although that was not well understood at the time.[15,17] A number of vaccines were tested against Bacillus influenzae (now known as Haemophilus influenzae) as well as strains of pneumococcus, streptococcus, and Moraxella catarrhalis bacteria.[2] The medical literature contained contradictory claims of their success.[17] It is now known that these vaccines had no chance of stopping the influenza pandemic.[2] Evaluation of these vaccine testing approaches resulted in an early set of criteria for valid vaccine trials.[17,18]

In 1928, a virus was defined scientifically to be a submicroscopic infectious entity which could be filtered but not grown in vitro.[14] The 1918 influenza pandemic afforded the opportunity to research the etiological agent and develop the idea of the virus. As a result, scientists were able to prove that influenza was due to a virus and not a bacteria, refuting the claims of Dr. Pfeiffer and advancing virology.

The first influenza vaccine to be licensed in the US was in the 1940s.[3] Thomas Francis Jr. and Jonas Salk, known later for their work on the polio vaccine, were instrumental in the development of influenza vaccines.[4] The first approved version of the influenza vaccine was administered to service members in 1945, during World War II. Civilians were able to get vaccinated the following year.

Pharmacy Practice & Medications

When the Spanish Influenza arrived in 1918, most pharmacists in the US were "retail druggists" practicing in a community pharmacy where they compounded and dispensed medications.[19] A typical day in the pharmacy included patients bringing in prescriptions from their physicians. The pharmacist would then compound the prescription at the back of the pharmacy away from the patients whom they were serving. Each prescription usually called for three or more ingredients, thus compounding preparations required skill, knowledge, and time. To help make ends meet, other items were sold (e.g., toiletries, cosmetics, books) and many drugstores also housed a soda fountain. Once the Spanish Influenza arrived, the typical day of the pharmacist changed. Frightened patients would bring in their prescriptions and the drugstore would become overwhelmed.[20] Due to the high volume of prescriptions, pharmacists and

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Student Pharmacists' Impression of Three Pandemics…

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tines and the use of personal protection equipment. Other statements included the methods of spread of the illness for the previous two pandemics were trade and war, whereas COVID-19 was spread widely by travel. A few students were surprised that dead bodies were catapulted into cities where the purpose was to cause fear in the citizens when, in fact, it helped spread the infection. Another topic expressed by students was how death was handled. This ranged from abandoning the dead to having limited space in morgues to mandating smaller funerals. Similarities comparing the 1918 influenza with COVID-19 included overcrowded hospitals (N=5), the establishment of field hospitals, over-worked healthcare workers, the limited number of doctors, house call visits vs. telemedicine, and the use of volunteers for all areas of support. Table 2 includes results from the top social themes expressed by the students.

The third theme was that many advancements have been made since the time period of the two pandemics used for comparison in this project and when the COVID-19 pandemic occurred. Comments such as human ingenuity, increased medical knowledge, developments in tools to battle pandemics, and healthcare innovations were mentioned. Outside of the scope of medicine, advancements in technology such as the ability to order goods online and communications over the internet were mentioned. Also conveyed was that after the Black Death ended, social norms changed and the arts and sciences advanced. The students expressed gratitude and thankfulness for these advancements and a hope for future advancements such as an effective vaccine.

Students commented that this assignment helped put things into perspective for them. This perspective ranged from a better understanding of why quarantines were put into place to believing we will get through this pandemic similar to populations in the past with previous pandemics.

Although not part of the original design of the study, a final evaluation question of the course was "what assignment did the student like the best?". Eleven percent of the class chose the pandemic assignment while another 30% stated the videos used in this course were what they liked and how they learned best.

Discussion:

Through this assignment, student pharmacists identified several points about pandemics in history. Since the participants of this study were healthcare professional students, they focused on detailed clinical aspects of the diseases and their spread. They highlighted modes of transmission, clinical signs and symptoms, and incubation periods as points of interest. Another area that they wrote about were mortality rates. At the time of this assignment, the mortality rate for COVID-19 worldwide was reported to be less than 1% as compared to the 30%-70% rates mentioned in the video clips for the Black Death and the 1918 influenza.[1,2] Of note, this fatality rate is still in fluctuation because the COVID-19 pandemic continues to progress and earlier reports may have been flawed by reporting delays and exclusion of isolated regions with higher rates. Microorganisms are now known as the cause of infectious diseases and the mode of transmission is better understood. Due to this medical knowledge, the students commented on how we now have medical treatments that can be studied compared to supportive care or reported "cures".

Another prominent area the students reflected on was how the pandemic personally and socially affected them. These students attended a university in a state with a mandatory mask mandate and restrictions on group gatherings, so it is not surprising that these were top responses to the assignment.

Results of this survey that were not expected at the onset included hope, positivity, and thankfulness some students expressed. This ranged from appreciation of the advancements in medicine and technology to knowing that humanity survived prior pandemics. The students expressed

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Table 2: Top Social Themes Expressed by Students

	Black Death vs COVID-19	1918 influenza vs COVID-19
Quarantines (including ships)	13 (86.7%)	13 (86.7%)
Personal protection equipment	3 (20%)	12 (80%)
Reason for spread (war and trade vs travel)	6 (40%)	2 (13.3%)
The lack of caring for the dead	3 (20%)	6 (40%)

Student Pharmacists' Impression of Three Pandemics…

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that they were glad to be alive today compared to the historical time periods in the video clips due to medical advancements.

Not only does this study provide a way to teach the history of pharmacy in relation to the what the student was experiencing from a public health perspective but it documented information about the COVID-19 pandemic from a student pharmacist point of view.[3]

There are some limitations to this study that should be noted. The students' responses could have been greatly influenced by their own personal experiences and from outside media or reference resources they used for this pandemic. Second, the assigned video clips only covered a small portion of what is historically known about past pandemics and the information contained was at the discretion of the video authors. For example, the Black Death video did not include discussion of the "cures" used during that time period to the same degree that the 1918 influenza covered that topic.

Conclusion:

Through completion of this assignment in a history of pharmacy elective course, student pharmacists learned about two past pandemics while living in the midst of one themselves. They were able to identify similarities and differences among the pandemics. Top comments included items regarding the origin and spread of the disease in addition to how previous pandemics compared to the current pandemic affected their lives with personal protection and social distancing. They are living history.

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THE BLACK DEATH:

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patients to achieve the same goal for curbing the opioid abuse and misuse.

Acknowledgements:
We acknowledge Dr. Elizabeth Unni for her support and guidance in this manuscript preparation.

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Pharmacy Through the Lens of Hollywood

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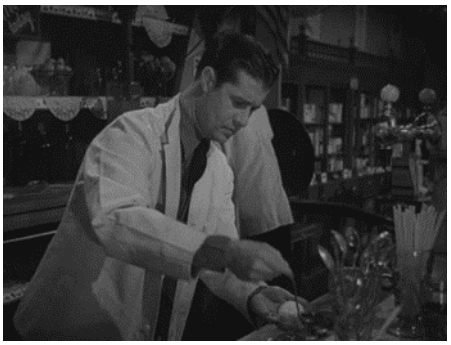
on a bicycle approaches the home. The telegram is from the Secretary of the Navy, informing Lew that Rusty had died in combat. "Kindness and gentleness and a sunny smile endeared him to all who knew him," are the words used by the newspaper editor in describing Rusty. He ends the story with, "Hartfield is proud of Rusty Marsh. We are going to miss him."[2]

In the next pharmacy scene, Lew is missing. A substitute pharmacist is working, brought all the way in from Des Moines. Even the local doctor, in talking with a store clerk, says he wishes there was something he could do for Lew, but "he's only a doctor." Depression has set in, and Lew has removed himself from life.[2]

The local church pastor stops at Lew's house in an attempt to help him. He tells Lew that pain and suffering are a part of life, and that Rusty died for his country. Lew erupts, "What was Rusty's country? What did he know about it? What did he know about life? He never had a chance to live! He never went any place. Just a youngster living at home, going to school, working for his Dad. He never owned his own home. He never had a boy of his own to worry about, or make a scooter for! It isn't right! It isn't fair!"[2]

Months later, Lew is standing outside, avoiding church, when the "ghost" of his grandfather, Gramps, suddenly appears. Gramps explains that he came back, over 20 years after his death, because he observed Lew grieving "so long and so hard." Lew dismisses the apparition as a figment of his mind, and runs into his house. Gramps follows through a closed door, and neither Agnes nor the dog notice him. Gramps insists on going for a stroll, and finally, Lew agrees to go with him.[2]

As becomes apparent, Gramps's stroll is a "spirit walk" into the past, to show Lew the experiences that his son lived. In each scene, Gramps shows Lew important moments, starting with the welcome home parade Lew participated in on his return from WWI. That same day, Lew would get his heart broken by his former girlfriend, and later, in Marsh's Drug, have Gramps introduce him to the woman who would become his wife.[2]



Lew Marsh assembling a peanut dope sundae for Agnes Dickens, his future wife, at his grandfather's pharmacy (Marsh's Drugs).[5]

Gramps then continues the "spirit walk" into Rusty's life, starting with the day he was born; coincidentally, the day Gramps passed away. Next, Rusty, a young child, and his parents visit Gramps's gravesite, after which Rusty asks if his Dad and he can have an American flag, like that at Gramps's tombstone. A few scenes later, at Marsh's Drug, Rusty and his two friends from kindergarten are enjoying some ice cream. Lew notices the boys are starving, hear they have a new baby brother, and learns their Dad is unemployed; so, he has Agnes buy and deliver groceries to the family at his expense. When Rusty asks about this, Lew responds, "You know, Rusty, when you run across a fellow that hasn't got anything, and you've got things, you just give him some of your things. Some folks call that charity - I don't like that word. All it is, is just being friendly." Inspired, Rusty offers to help his father in the pharmacy, working from childhood until he leaves to serve in the military.[2]

Later, as a teen, Rusty joins the Boy Scouts. Rusty says he wants a Scout axe like the older Scouts had. Weeks later, back at Marsh's Drugs, Rusty is counting his money into a tin can, having saved $2.47 from his 25-cent-per-week income towards the $2.85 axe. Lew leaves the store for a few minutes, leaving Rusty in charge. An older man comes in to pick up his wife's prescription. Unfortunately, the man only has 35 cents and expresses that it is a crucial medication for his ailing wife. Rusty, unbeknownst to him being watched by his father, pays the remaining $1.90 of the bill with his own money. Lew rewarded Rusty's "friendly" act by purchasing and surprising him with the Scout axe.[2]

As the parade of memories continue, Lew saw how Rusty grew and developed into a wholesome young man, through birthdays, sports, injuries, defeats, church activities, his first crush, high school graduation, his first break-up, and his first real love. In his late teens, with war starting in Europe, Lew and Rusty discuss volunteering to fight or attending university. Rusty says he would rather go to pharmacy school. That way, he could join his father in the family store, and if he has to go to war, he would be more useful to the military as a pharmacist than as a soldier.[2]

With Rusty away at school, it is the first time he has ever been away. Upon his return, his parents and girlfriend, Lenore, are happy to have him back. However, before returning to normal, Rusty tells his father he should enlist instead of waiting for the draft. Subsequently enlisting in the Navy, Rusty shows up at Lenore's house wearing his Navy uniform with a Pharmacist's Mate, Third Class Petty Officer patch.[6] When he leaves to join his unit, Lenore, Lew, and Agnes all say goodbye at the bus station. That was the last time they would see him.[2]

Towards the end of their

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clerks worked day and night (i.e., 20 hours a day, seven days a week) while also facing the risk of infection, to compound preparations, count tablets, and provide supplies for their patients.[19,20] During this time, pharmacists focused completely on the medication needs of their patients and other items for sale in the drugstore became secondary.[19] During WWI, pharmacists and pharmacy clerks were drafted into the army.[20] To combat the shortage of pharmacists, Dr. A.R.L. Dohme of Baltimore wrote to the US Surgeon General in October of 1918, explaining that "professional pharmaceutical services were essential so people can secure their medication" in an attempt to give pharmacists and pharmacy clerks military deferments.[20] It was clear that pharmacists played an equally essential role, alongside the doctors and the nurses, in the care of patients.

Without vaccines or antibiotics, physicians prescribed drugs to control cough, relieve pain, and treat respiratory diseases.[20] Medications available at the time included morphine and heroin for pain, quinine for malaria, digitalis for heart conditions, phenacetin for fever reduction, and morphine, ether, and chloroform for anesthesia. Patients bought laxatives in great quantity, which were considered a cure for everything. Medications for symptomatic treatment such as aspirin, calomel, castor oil, kidney pills with opium, and Vicks VapoRub were in great demand. Antiseptics (i.e., Listerine and hydrogen peroxide) were also popular purchases. Prescriptions for compounded preparations that would sanitize the nose and oral cavity were seen as a method of prevention.[19]

Aspirin, which was trademarked by Bayer in 1899, was used to treat symptoms of the influenza.[21,22] At the time, packages contained few directions for use and no warnings about toxicity. In 1917, when the patent expired, other companies started to manufacture the medication. Doses ranged from 8–31.2 grams per day, which is now known to be toxic. Symptoms of aspirin poisoning include hyperventilation and pulmonary edema. Although the number of deaths due to aspirin toxicity is unknown, it appears some deaths were caused or hastened by these high doses of aspirin.

In desperation, patients also turned to a variety of patent medicines, which were available from various manufacturers.[20] Laced with alcohol and narcotics, advertisements boasted the benefits of alcohol, tobacco, camphor, quinine, and many more items by simply adding "Spanish Influenza" to the list of illnesses it claimed to prevent, treat, or cure. Physicians would write prescriptions for medicinal whiskey so that pharmacists could dispense it in those states where alcoholic beverages were prohibited.[19,23] Some additional strategies that were used to treat the influenza were resting, opening the window for fresh air, and having a liquid diet of milk mixed with limewater or raw eggs that was taken around the clock.[19]

Conclusion

Over time, those who contracted the virus developed immunity and life returned to normal by the early 1920s.[6] Reports at the time suggest the virus became less lethal as the pandemic carried on in waves. However, the strain of the virus didn't disappear and, in essence is still with us. In 2009 Morens, Taubenberger and Fauci authored a paper explaining that descendants of the 1918 influenza virus contributed to a pandemic era that has lasted over the years.[24] At the time that article was published (2009), the H1N1 influenza virus in public circulation was a fourth-generation descendant of the novel virus from the 1918 influenza pandemic.

Looking back, pharmacists can proudly say they did their part to help combat the 1918 pandemic.[20] As the pandemic ran its course, pharmacists had the unparalleled task of serving alongside physicians and nurses on the front line of the health care system. Pharmacists made it possible for patients to have needed medications which alleviated symptoms and suffering while saving lives. In addition, patients found the availability and accessibility of community pharmacists to be reassuring during this challenging time.[25]

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"stroll," Gramps waxes eloquently, "As long as American kids can join the Boy Scouts, do a good deed every day, eat ice cream, go to high school, play football, and take a dollar and ninety cents out of an old baby product can, . . . it'll be worthwhile." Gramps ends with, "Don't you think so, Lew?"[2]

After some reflection, Lew responds, "Rusty did lead a rich life, you're right about that." Yet despite that revelation, Lew says he will always miss his son. By then, Lew and Gramps are back at the house, and Agnes comes out worried about Lew, since he was gone for three hours. She asks if he went to the store, Lew says no, but maybe he will go tomorrow. The last words from "ghost" Gramps are, "Better go down tonight, Lew."

So, Lew goes to the pharmacy, and eventually, is the last one in the store. After closing, a young man in a Navy uniform shows up. His name is Tony, and he served with Rusty. He tells Lew that he has been on his own since he was sixteen, and even worked in a drugstore "jerking" sodas. Since he did not have any parents, Rusty had an idea if anything were to happen to Rusty; Tony should go be with Rusty's parents.

Tony and Lew then go home together, since Tony has nowhere to go. Tony tells Lew and Agnes how Rusty died, "The last time I saw Rusty, he was coming up the ladder carrying the fellow that had been hurt. Before he could get up, another torpedo hit us. If Rusty had not been carrying somebody, he might have made the deck." As the movie ends, Lew and Tony toast Rusty with glasses full of Loganberry wine.

Pharmacy Depiction

The depiction of Marsh's Drug store is quite accurate for the 1920s to 1940s era in two ways: its physical presentation, and the social side of community pharmacy practice.

Marsh's Drug is quite realistic, probably because they filmed using actual buildings in existence at the time.[7] The pharmacy exterior is an all-glass front, a center door and two large window displays; and has the typical over-the-front roll-out tarp, as well as neon signs in the windows and above. There is even a large mortar and pestle hanging off the building above the front door. As expected for the period, both of the window display cases are full of display items and signs, although the details are not discernible.[2]

On the inside of Marsh's Drug are all of the normal accoutrements of a 1920-1940 era drug store: glass countertop cases in front of shelved display cases of products, a large L-shaped soda fountain counter with seats all along it, a double counter at the back-of-the-store prescription window, and a back room behind that window encompassing all of the compounding materials and equipment needed to fill prescriptions. Looking through the prescription window, prescription file boxes and rows of labelled glass jars filled with chemicals can be seen.[2]

What is noteworthy is the depiction of this same drug store interior from 1919 to 1943, the period depicted in the movie. In the early scenes (1919 – 1920s), customers stay in the center open aisle of the store or sit at the soda fountain counter, and are served by clerks or the pharmacist standing behind the counter. Most of the display cases have glass doors, in other words, the drug store was not self-service. In later scenes, depicting the 1940s, things have changed – there are table displays in the center aisle of the store, many of the wall cabinets are now open shelves without doors, and customers are seen going around the counter displays and taking items from the shelves.[2]

As for the social side of 1920s to 1940s-era pharmacy practice, the movie does a good job of showing the changes. In the earlier period, the customers are more reserved, and expect and wait to be served. In later scenes, the activity in the pharmacy increases with lively music playing, people talking loudly, and customers finding the items they want on their own. However, whether it was 1920 or 1940, customers always asked, received and respected the advice from one of the Marsh pharmacist family, be it Gramps or Lew.[2]

Final Analysis

Overall, the movie is a historically accurate depiction of an independent family-owned community pharmacy and its pharmacist-owners in the 1920s to 1940s. The three main pharmacist characters, Gramps, Lew, and Rusty, were pharmacists dedicated to their customers, regardless of their ability to pay. Their lives, both personal and professional, were on display for all to see – important public figures in their time. Helping their community, as well as their customers, was their mantra. Add to that, their service, sacrifice, and love of their country, and you have the complete picture of this WWII-era movie. If one seeks an accurate depiction of 1920s-1940s small town community pharmacy practice, with three generations of hard-working, community-oriented pharmacists, this movie will satisfy both pharmacy history and war-era movie aficionados alike.

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Pharmacy Chronicles

American Association of Colleges of Pharmacy AACP

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Published by:

History of Pharmacy Special Interest Group,
American Association of Colleges of Pharmacy
1400 Crystal Drive, Suite 300 ▪ Arlington, VA 22202

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The academic year (2020 – 2021) marks the thirteenth year since the History of Pharmacy Special Interest Group (SIG) was formalized as an AACP SIG.

As an open academic forum, the SIG strives to facilitate the exchange of ideas and innovation among pharmacy faculty across disciplines; to serve broadly as an accurate information resource for teaching, learning, and scholarship pertaining to the evolution and history of the pharmacy profession; to develop and maintain historical collections of artifacts and school or college museums; and to ensure the lessons, the message, and the legacy of the pharmacy profession is preserved to educate future generations of pharmacy students.

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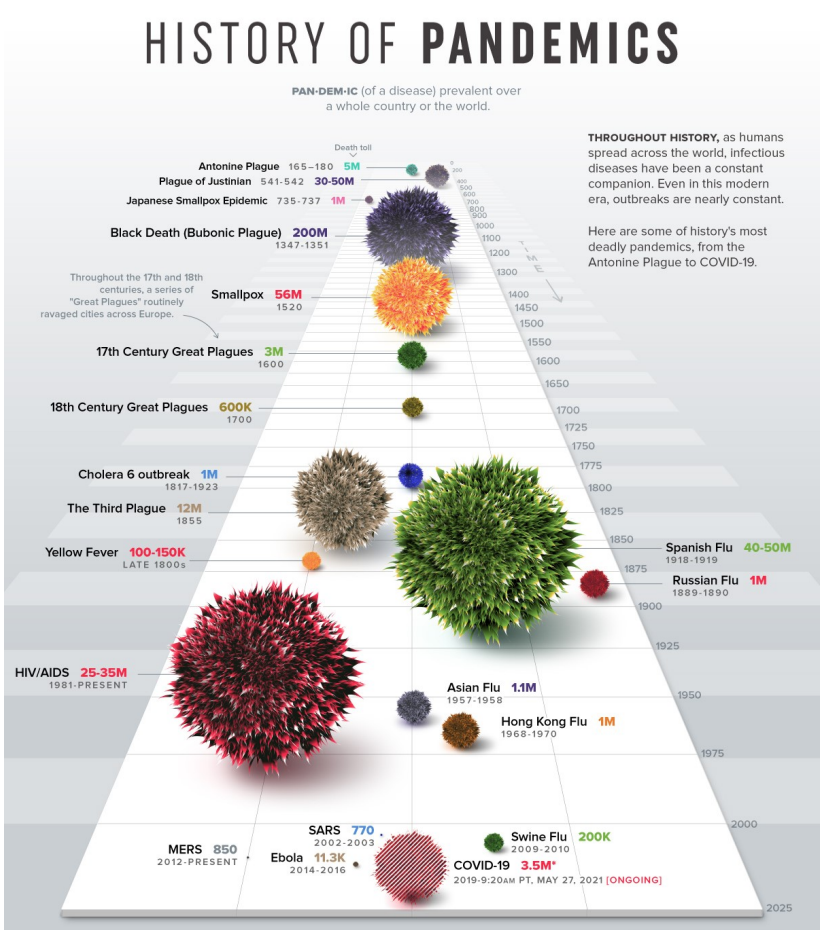

SPANISH FLU PANDEMIC:

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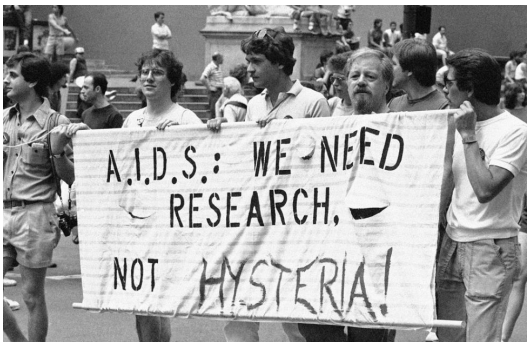

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