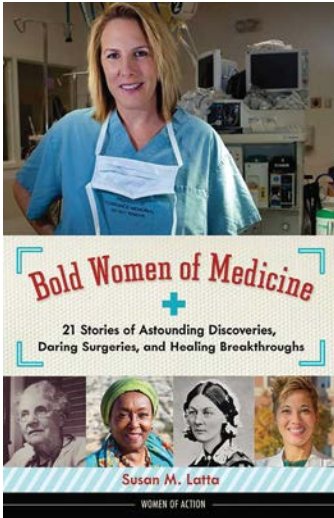


Bold Women of Medicine: 21 Stories of Astounding Discoveries, Daring Surgeries, and Healing Breakthroughs

Written by Susan M. Latta

BOOK SYNOPSIS (FROM CHICAGO REVIEW PRESS)



Chicago Review Press, 2017
ages 12-17, grades 6-12

“From Florence Nightingale and Clara Barton to today’s guiding lights, women continue to shine in the medical field. *Bold Women of Medicine: 21 Stories of Astounding Discoveries, Daring Surgeries, and Healing Breakthroughs*...will introduce young adult readers to medical mavens from the 1800s to the present whose stories inspire others to rise to the challenge.

“These determined women fought against discrimination in the field of medicine while wrangling with personal challenges, many of them fighting challenges, many of them fighting illness and injury themselves. The ‘Lady with the Lamp’ and the ‘Angel of the Battlefield’ earned their nicknames by overcoming gender stereotypes and taking their places in nineteenth century battlefields to aid wounded soldiers, forever changing the standards of medicine. Likewise, the

perseverance of modern day medical heroines is as remarkable as that of their predecessors. Bonnie Simpson Mason harnessed the challenges of her chronic illness and founded an organization to introduce women and minorities to orthopedic surgery. In the male-dominated arena of heart transplants, Kathy Magliato passed the hurdles to become a talented cardiac surgeon.

“Though they faced obstacles at every turn, many of these women had mentors who encouraged them in their pursuits, and bolstered them as they faced danger, risk of infection and blood on battlefields and in hospitals. The women now serve as role models themselves, providing inspiration for young women who want to improve livelihoods and save lives. With courage and their knowledge of science, these nurses, physicians, midwives and physical therapists apply their STEM skills to improving health and hearts. Packed with photos and informative sidebars and including source notes and a bibliography, *Bold Women of Medicine* is an enlightening, essential addition to the *Women of Action* series.”

More info: <http://www.chicagoreviewpress.com/bold-women-of-medicine-products-9781613734377.php>

REVIEWS

From *Booklist* (August 2017): “A read packed with brief yet thought-provoking stories of fearless women in medicine. Ideal for high school students or those interested in a similar career path.”

From *VOYA* (August 8, 2017): “This volume provides an impressive overview of women in medicine...”

From *NSTA recommends*, National Science Teachers Association: “Boys and girls alike will benefit from these short biographies. Students will see connections to their own lives as they read about each woman and see how life’s obstacles can be overcome to succeed. The lives of these maverick women will definitely impact the lives of students inspiring their future!”

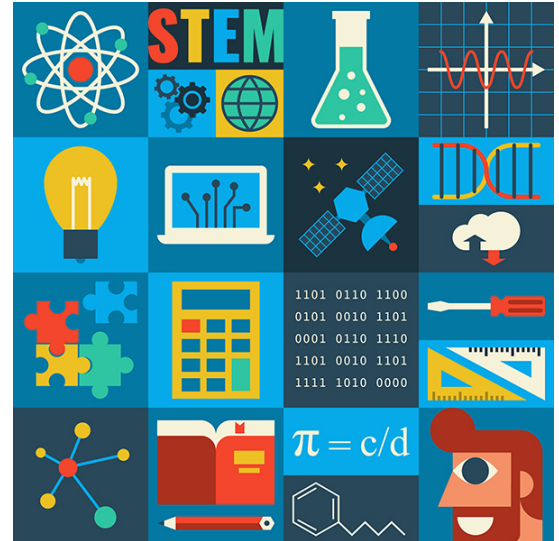
DISCUSSION QUESTIONS AND ACTIVITIES

A NOTE FOR TEACHERS: The following questions and activities support The College and Career Readiness Anchor Standards for Reading, Writing, Speaking, and Listening for Grades 6 – 12. These questions and activities also support the Next Generation Science Standards in terms of core ideas, practice, and cross cutting.

BEFORE YOU READ

1. **STEM EDUCATION** is an acronym for Science, Technology, Engineering, and Mathematics. A common definition for S.T.E.M. education can be found in an article by Jonathon Gerlach of the National Science Teachers Association. It is, "...an interdisciplinary approach to learning where rigorous academic concepts are coupled with real-world lessons as students apply science, technology, engineering, and mathematics in contexts that make connections between school, community, work, and the global enterprise enabling the development of STEM literacy and with it the ability to compete in the new economy."

<http://www.nsta.org/publications/news/story.aspx?id=59305>



In 2009, because American students were underperforming in the areas of Science, Technology, Engineering, and Mathematics, and because fewer of them were studying to be employed in careers related to these fields (especially girls and students of color), President Barack Obama began the "Educate to Innovate" program. The Committee on STEM Education was formed to "...create a joint national strategy to invest federal funds in K-12 STEM education, increasing public and youth STEM engagement, improving the STEM experience for undergraduates, reaching demographics underrepresented in STEM fields, and designing better graduate education for the STEM workforce." (<https://www.livescience.com/43296-what-is-stem-education.html>)

In what ways are the goals of STEM important to your future, the future of the United States, and the future of the world? As you read, think about how books like *Bold Women of Medicine* can contribute to the goals of STEM education programs.

Examine current **STATISTICS** that look at the number of females and males entering STEM careers. For instance, at the National Girls Collaborative Project (<https://ngcproject.org/statistics>) you will see that, "Women remain underrepresented in the science and engineering workforce, although to a lesser degree than in the past, with the greatest disparities occurring in engineering, computer science, and the physical sciences," and "Women make up half of the total U.S. college-educated workforce, but only 29% of the science and engineering workforce." Discuss your response to these statements.

2. Paul Tough, the author of *How Children Succeed: Grit, Curiosity and the Hidden Power of Character*, believes that there are seven key **CHARACTER TRAITS** that will lead children to success: grit, curiosity, self-control, social intelligence, zest, optimism, and gratitude. How might each of these qualities contribute to an individual's success? As you read *Bold Women of Medicine*, keep a list of the character

traits that each of these women possessed/possess which contributed/contribute to their success. Define each of these traits.

For instance, in the book's forward, Dr. Gina Routh talks about being denied acceptance into medical school the first time that she applied. She demonstrated **DETERMINATION** and **PERSISTENCE** when she gained more experience and then applied to medical school again. Her determination and persistence led to her eventual acceptance into medical school.

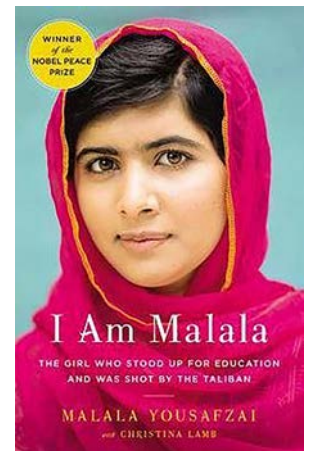
As you read *Bold Women of Medicine*, create a **TIMELINE**, depicting significant historical events, particularly those in the field of medicine. For instance, you might include the first appearance of polio in the United States in 1900 and the publication of the *Flexner Report* in 1910. Be able to justify your inclusion of the particular events you choose to include on your timeline.

AS YOU READ

1. In the introduction to *Bold Women of Medicine*, Latta tells us that the women she highlights in the book, "...survived many failures on the way to success." (p. 3) Paul Tough, the author mentioned earlier, says that, "Failure is an important stepping stone on the way to success, because it helps develop character." (<http://www.cbc.ca/news/world/7-traits-kids-need-to-succeed-1.1232995>) Define **FAILURE**. Discuss ways in which failure can actually contribute positively to our success. Can you think of any examples from your own life?
2. The value of **EDUCATION** is very evident in the stories of each of the "bold women of medicine" featured in Susan M. Latta's book. She tells us on page 7 that, "Several of the medical pioneers had something in common. They had parents, and especially fathers, who were forward thinking. These parents believed their daughters had as much right to education as their sons." However, getting that education was often a challenge. Discuss some of the obstacles that the subjects of this book faced. What has and has not changed where educational opportunities for females are concerned, both in general and in specific career areas? Edna Adan Ismail tells us that even today, "Education is one of the strongest gifts we can give a human being and particularly women in Africa." (p. 142)

In her memoir, *I Am Malala: The Girl Who Stood Up for Education and Was Shot by the Taliban*, Malala Yousafzai details her own struggles to obtain an education in Pakistan. From her story we see that educational equality for females has not been achieved throughout the world. Respond to these statements attributed to Yousafzai:

- ▶ "Let us pick up our books and our pens," I said. "They are our most powerful weapons. One child, one teacher, one book and one pen can change the world."
- ▶ "If one man can destroy everything, why can't one girl change it?"
- ▶ "With guns you can kill terrorists, with education you can kill terrorism."
- ▶ "The extremists are afraid of books and pens. The power of education frightens them. They are afraid of women."



Find out more about Malala Yousafzai and her mission at: <https://www.malala.org/malalas-story>.

- After you have read Part I, “The Bold Pioneers,” discuss **AMERICAN LIFE** in the 1800’s in terms of education, the roles of girls and women, opportunity for females, disease, mortality, the state of medicine, war, the Industrial Revolution, transportation, etc. With your group, compare and contrast the lives of Americans, and women specifically, in the 1800s to current American life.
- A common thread that runs through many of these women’s stories is that there were important individuals, in the form of mentors and supporters and role models, who assisted them along the way. At dictionary.com we learn that a **MENTOR** is a, “wise and trusted counselor or teacher” or “an influential senior sponsor or supporter.” For Edna Adan Ismail, her father (a doctor), was her role model and mentor. (p. 137) A construction engineer, Bonnie Simpson Mason’s mother was an early role model for her. (p. 173) Give additional examples of the mentors in the lives of the women featured in the *Bold Women of Medicine* and the positive ways in which these mentors impacted them. Who are some of your mentors? In what ways have they supported and impacted you?

Sherrie Ballantine-Talmadge said, “I have a passion for helping young females and believe in payback mentorship, just as I was mentored.” (p. 194) In what ways might you be a mentor to others?

- Florence Nightingale believed that “...statistics...is the most important science in the whole world, for upon it depends the practical application of every other [science] and of every art.” (p. 18) Mary Carson Breckinridge found that, “Donor support would come easier if [she] could prove her success with hard data, so nurses were required to keep meticulous data.” (p. 102) The study of **STATISTICS** is defined at dictionary.com as, “the science that deals with the collection, classification, analysis, and interpretation of numerical facts or **DATA**, and that, by use of mathematical theories of probability, imposes order and regularity on aggregates of more or less disparate elements.” Discuss the ways in which the use of statistics impacts our daily lives.
- GENDER INEQUITY** is an important theme throughout *Bold Women of Medicine*. On page 30, Latta tells us that, “Teaching was considered one of the few ‘acceptable’ careers for a woman in the early 1800’s...” Careers in medicine were not considered “acceptable” for women at the time. Discuss the ways in which these “bold women of medicine” paved the way for the women who today work in medical fields. Give examples of other careers that traditionally have been divided among gender lines. Do you feel that there are still careers today that are largely closed to women? Give examples.

Examine **STATISTICS** related to gender and career. For instance, look at the United States Department of Labor’s Women’s Bureau website and their “Women in the Labor Force” page:

https://www.dol.gov/wb/stats/stats_data.htm. As of 2015, what were the five most common careers for women? For men? Analyze the highest paying occupations for each gender. Based on these statistics, is there gender equity in terms of pay for those working in these occupations? Discuss. What is the correlation between the highest paid careers and gender?

- Clara Barton was given the **NICKNAME** “Angel of the Battlefield.” (p. 33) Elizabeth Kenny was nicknamed “the wild one.” (p. 87) How did these women earn their nicknames? What were some of the other nicknames of the subjects of this book, and how did they get their particular nickname? Do you feel that these nicknames were appropriate? Discuss.

Famous individuals like former British Prime Minister, Margaret Thatcher (nicknamed “The Iron Lady” because of her tough stance on many political issues), and former American President, Abraham Lincoln (nicknamed “Honest Abe”), frequently earn nicknames associated with their lives and careers. Can you think of other examples? If you don’t know why an individual earned a particular nickname, do some research to try and find out the reason.

Do you have a nickname? Share with the group how you got this nickname. If you don't know, ask someone who might know. If you don't have a nickname, talk to someone who does and ask her or him to share how she or he got this name, as well as how she or he feel about it. What do you feel is the significance of a nickname?

8. Marie Zakrzewska says that as a child she followed her mother, a midwife, through the hospital wards and saw, "...meanness in palaces, virtue among prostitutes and vice among so-called respectable women. I learned to see goodness where the world found nothing but faults, and also to see faults where the world could see nothing but virtues." (p. 36) What do you think the lesson in this statement is for all of us?
9. We are told that Marie Zakrzewska was, "...not well liked by the other professors; they believed she had a snippy nature and angered too easily. But she was not behaving differently from the men. Her 'fault' was that she was a woman." (pp. 37-8) Discuss this statement. This is just one example of the ways in which **GENDER** was an obstacle for the women discussed in each of these essays. What are other ways in which gender was a hurdle for these individuals? Give specific examples.
10. In the section featuring Rebecca Lee Crumper and Rebecca Cole we see that, for women of color, the challenges associated with entering medical careers increased dramatically. They endured both **SEXISM** and **RACISM**. Discuss how and why. Do you think that these challenges still exist today? Look at this table from the Association of American Medical Colleges:
<https://www.aamc.org/download/321540/data/factstableb5.pdf>.

Analyze the **STATISTICS** found here. (Note that many of the colleges and universities covered in *Bold Women of Medicine* still exist today. Howard University is an example.) What conclusions can you draw? Would these statistics be more meaningful if you looked also at statistics regarding race and ethnicity throughout the United States and compared the numbers?

11. A recurring idea found in *Bold Women of Medicine* is that of **FIRSTS**. Dr. Susan La Fleshe Picotte was the first female Native American physician to earn a degree. (p. 84) Virginia Apgar was the first full professor in the new field of anesthesiology. (p. 119) Find and discuss other examples of firsts achieved by the women highlighted in this book. Look beyond medicine to find more examples of women who have achieved firsts.

The **GLASS CEILING** is defined at dictionary.com as, "an upper limit to professional advancement that is imposed upon women, minorities, and other nondominant groups and is not readily perceived or openly acknowledged." What are some examples of careers where the "glass ceiling" has not yet been broken (the American presidency, for example)?

12. Sister Elizabeth Kenny opened the Elizabeth Kenny Institute in 1942 in Minneapolis, Minnesota. It now called Courage Kenny. This is just one example of the impact that these "bold women of medicine" continue to have today. They have left us their **LEGACIES**.

On December 30th, 2011, sophomore high school hockey player, Jack Jablonski, suffered a life altering injury during a hockey game. Jablonski was left completely paralyzed from the neck down, and his prognosis was grim. However, through the wonders of modern medicine, and his rehabilitation at the Sister Kenny Rehabilitation Institute, Jack Jablonski is thriving. Here is a video update on Jack Jablonski: <https://www.youtube.com/watch?v=V98VmT25J4k>. Jack Jablonski is himself a **ROLE MODEL** for those who have had devastating injuries. He began the Bel13ve in Miracles Foundation to support individuals who suffer paralysis: <http://www.bel13vefoundation.org/>.

Discuss personal examples of individuals in your life who have benefitted from the work of medical pioneers and their legacies. Think ahead to your own future. Do you have ideas as to the legacy(s) that you would like to leave? Explain.

13. The term **SEMINAL** is used "...to describe something that plants the seed for creative growth. An innovative piece of music or literature, a fresh new idea, or an invention that changes everything could be called 'seminal.'" (www.vocabulary.com) Many of these women of medicine had **SEMINAL MOMENTS**, turning points if you will, that changed the course of their lives. For Catherine Hamlin it was the day when she was out horseback riding and found the perfect piece of land on which to build a hospital, and the same day received a large donation to aid in the building of that hospital. (p. 134) For Kathy Magliato, it was the day she met a woman named "Pat," who was in charge of custodial services at her place of work. (p. 164-5) Can you identify seminal moments/turning points in your own life? Sit down with an adult with whom you have a close relationship and ask her or him to discuss some of the seminal moments in his or her life. In what ways did this moment(s) impact, positively or negatively, the direction of this individual's life?
14. When Bonnie Simpson Mason's grade point average was not enough to keep her scholarship, she says that she learned that, "'We have to ask for the help we need.'" (p. 174) Discuss the significance of this statement. In what ways can we all apply this lesson to our own lives.?

AFTER YOU READ

1. Analyze the list of **CHARACTER TRAITS** that you compiled as you read *Bold Women of Medicine*. Highlight those traits that appeared multiple times. Compare and contrast these qualities to Paul Tough's seven character traits for success. Which of these qualities do you feel you possess? Think of examples of specific instances in your life in which you have demonstrated that you possess these characteristics. Discuss ways in which an individual might develop these desirable traits in him or herself.
2. There is a growing movement to add an "A" to the **STEM** acronym to signify the **ARTS**. Check out the "STEM to STEAM" website: <http://stemtosteamm.org/>. They state that, "In this climate of economic uncertainty, America is once again turning to innovation as the way to ensure a prosperous future. Yet innovation remains tightly coupled with Science, Technology, Engineering and Math – the STEM subjects. Art + Design are poised to transform our economy in the 21st century just as science and technology did in the last century. We need to add Art + Design to the equation – to transform STEM into STEAM."



Try this **STEAM** activity. Find a piece of art (painting, poster, photograph, etc.) that depicts women in medicine. Analyze what is happening in this artwork and discuss how it supports what you learned in *Bold Women of Medicine*. What role might **ART** and **DESIGN** play in the areas of Science, Technology, Engineering, and Math?



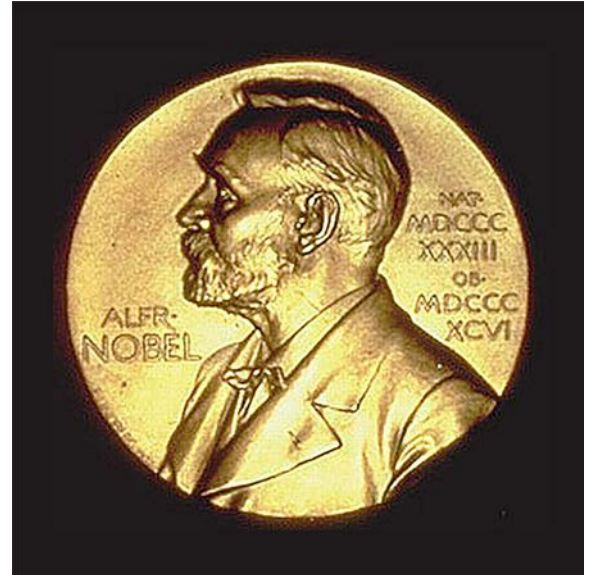
Author, Susan M. Latta tells us on page 5 that, “From the beginning of human civilization, women, whether trained or not, have been healers.” From left to right these are sample images found on www.medschooltutors.com, <http://www.homeoint.org/>, and <http://www.vernonfilleyartmuseum.org/>

Explore in more detail one of the organizations or institutions or topics or individuals highlighted in *Bold Women of Medicine*. Some areas for further exploration might include:

- ▶ the Crimean War
- ▶ Harriet Newton Phillips and Linda Richards (the first nurses officially trained in the United States)
- ▶ the New England Hospital for Women and Children (and early American nursing school)
- ▶ the Elizabeth Blackwell Award
- ▶ the Red Cross, in particular the American Red Cross
- ▶ the New England Women’s Club
- ▶ Howard University Medical School
- ▶ Women’s Medical College of Pennsylvania
- ▶ The Freedman’s Bureau
- ▶ Sarah G. Jones (founder of a training school and hospital in Virginia)
- ▶ Lucy Hughes Brown (founder of a training school and hospital in South Carolina)
- ▶ Dr. Susan Smith McKinney Steward (third African American female physician)
- ▶ women’s fashion and sexism
- ▶ the Congressional Medal of Honor
- ▶ the Carnegie Foundation
- ▶ Dr. Margaret D. Craighill (the first female commissioned into the U.S. Army Medical Corps)
- ▶ American Woman’s Medical Association
- ▶ twilight sleep
- ▶ the Treaty of 1854



- ▶ polio
- ▶ the Mayo Clinic in Rochester, Minnesota
- ▶ the National Foundation for Infantile Paralysis, later called the March of Dimes
- ▶ the Frontier Nursing Service and University
- ▶ dyslexia
- ▶ colleges and universities offering degrees in medical fields such as Harvard's School of Public Health or the John Hopkins University School of Medicine
- ▶ the American Heart Association
- ▶ Apgar score
- ▶ Neonatology
- ▶ obstetric fistula
- ▶ Desta Mender
- ▶ The Nobel Peace Prize
- ▶ female genital mutilation
- ▶ osteopathic medicine
- ▶ the Mississippi Delta
- ▶ Antarctica
- ▶ the Hippocratic Oath
- ▶ organ donation
- ▶ the Nth Dimensions
- ▶ the Perry Initiative
- ▶ traumatic brain injury
- ▶ sports medicine
- ▶ osteopathic medicine



Prepare a short research paper and/or presentation on your chosen topic which includes proper citation, as well as a bibliography of your sources.

3. Have you thought about your future **CAREER GOALS**? Discuss this informally with your group members. Do a **CAREER STUDY** in which you explore the possibilities for your future.
 - ▶ Begin by identifying your strengths. Look over the list you compiled of the qualities that these "Bold Women of Medicine" possessed and compare them to your own characteristics. (If you need help, try: <http://www.going-to-college.org/myplace/strengths.html> or <https://www.careeronestop.org/ExploreCareers/Assessments/skills.aspx>.)
 - ▶ Then identify your interests. (If you need help, try: <http://www.going-to-college.org/myplace/interests.html> or <https://www.careeronestop.org/toolkit/careers/interest-assessment.aspx>.)

- ▶ Identify careers where these skills and interests might be used. (If you need help with the last three steps, try: <https://www.careeronestop.org/toolkit/careers/occupations/occupation-profile.aspx>.)
- ▶ Explore what is required in terms of education and experience in order for you to enter into this/these career(s).
- ▶ Finally, explore institutions where you can attain this education and experience, as well as what is required for you to be admitted to these programs.

Report your findings to your discussion group and/or your classmates.

A NOTE FOR TEACHERS: This activity supports the ASCA National Standards for Career Development – Standards C:A1, C:A2, C:B1, C:B2, C:C1, and C:C2.

ABOUT SUSAN M. LATTA (from *Chicago Review Press*)

“Susan M. Latta holds an MFA in writing for children and young adults from Hamline University. She has written on history, biography, and geography topics for *Appleseeds* and *Faces* magazines and contributed freelance projects to Heinemann Leveled Books and ABDO Publishing. She is the recipient of the Loft Literary Center’s Shabo Award for Children’s Picture Book Writers. She lives in Edina, Minnesota.”

Find out more about Susan M. Latta at her website:

<http://www.susanlatta.com/about/about.html>

RESOURCES

In addition to the resources suggested in the questions and activities in this guide, find extensive book, website, and additional resource suggestions related to the topics presented in *Bold Women of Medicine: 21 Stories of Astounding Discoveries, and Healing Breakthroughs* after each biography, and in the **NOTES** and **BIBLIOGRAPHY** sections found at the end of the book.

