

DYING FROM DIRTY TEETH

Why the Lack of Proper Oral Care
Is Killing Nursing Home Residents
and How to Prevent It

ANGIE STONE, RDH, BS



INDIE BOOKS
INTERNATIONAL

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ISBN: 1-941870-11-2
ISBN 13: 978-1-941870-11-2
Library of Congress Control Number: 2015931105

Designed by Joni McPherson, mcpersongraphics.com

INDIE BOOKS INTERNATIONAL, LLC
2424 VISTA WAY, SUITE 316
OCEANSIDE, CA 92054

www.indiebooksintl.com

This book is dedicated to my mother-in-law, Gladys Stone, Grandmother Helen Schrantz, and longtime patient, friend, and supporter Ed Shaw. Without the needless suffering of Gladys and Helen and the opportunity to change that path for Ed, the vital message of this book would not have come to fruition. The three of them provide constant guidance from above. I feel their presence.



From left to right: Gladys (2003), Gram (2012), and Ed (2013).



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FOREWORD

The plight of the nursing home resident has been in the forefront of my mind for nearly two decades. As more people enter care facilities with more teeth, teeth with expensive dentistry, and an impaired ability to take care of their own oral health, palliative help for oral care must find a place in the facilities. As researchers find more system wide consequences from poor oral biofilm management and economists discover the true costs of poor oral hygiene, improvements in the status quo become even more imperative. Losing a tooth to poor oral hygiene, it turns out, is the least of the problem.

In this seminal book, Ms. Stone, lays it all on the line. Using cases she herself has experience with, she proves that things can be different. There are other hygienists in the land approximating what Stone is doing, but no one puts the same level of passion and the wherewithal to come out loud and strong offering solutions workable in today's world as well as offering solutions for the future.

Dental hygienists are highly skilled and motivated by clean teeth. They are women and men who signed up to work on the biofilm that accumulates on teeth. As a matter of fact, the profession of dental hygiene was invented to remove the debris on teeth so the dentists would have less work and could see the teeth he was about to work on. It seems odd that so many women have taken on the role of oral biofilm wranglers but they did. And most love their work. Ms. Stone shows us a workforce model that activates the vast number of dental hygienists who are currently under employed.

The message is clear, people with teeth live longer and people with teeth live better. There are many ways to die, some more dignified than others, but we all agree that dying from dirty teeth is not only undignified, it's wrong.

Thank you Angie Stone, RDH, BS for putting your facts and feelings into words on a page. Bring out your highlighter, oh gentle reader, you're going to need it.

Shirley Gutkowski, RDH, BSDH

February 2015

ACKNOWLEDGEMENTS

The thought of writing a book never even crossed my mind and now I hold my very own book in my hands. I certainly could not have accomplished this alone. Many people were instrumental in making this book a reality. Special thanks to:

Shirley Gutkowski for her ever present guidance and placing the idea in my head that I could write a book.

Beth Thompson and Shirley Gutkowski for having Michelle Prince as keynote speaker at CareerFusion.

Kris Potts for believing I had a book in me and dragged me almost kicking and screaming to Michelle's book writing conference.

Michelle Prince for an amazing Book Bound conference and book mind mapping experience.

Patti DiGangi for being a constant "connector" and introducing me to Henry DeVries and Mark LeBlanc.

Jennifer Rinker for spending her time and energy on being my personal proofreader and editor.

My long time employer, colleague, and friend, Dr. John Dubats, for seeing I was capable of more than providing dental hygiene services, for encouraging me to follow my path and being selfless in the process.

My husband, Jay, for his constant encouragement and support of my ideas and goals, even though he doesn't always know where they are going to lead. Also for dealing with the times I am in "Angie World."

My parents, Nicki and Jim, children Ashley and Spencer, brother Jim, and Aunt Andrea for always believing that I can do anything I decide to do and for always being there for me.

And of course, I would not be successful without the unconditional love I have received from each of these people and the countless others who have loved and supported me along my journey.

CHAPTER ONE

The Monster Problem

There is an epidemic going on among nursing home residents. This condition is making them sick and is leading to death. The situation has been happening for years; the problem is only getting larger, yet residents and family members remain unaware of it. Even the caretakers at nursing facilities are often times unaware of the magnitude of this issue.

Gladys became so physically ill with Chronic Obstructive Pulmonary Disease (COPD), at age sixty-three, she needed to move into a nursing home environment. As Gladys's oral health deteriorated, so did her lung health, or maybe it was vice versa, but the two conditions were definitely related. When the mouth is infected, the bacteria that cause the infection can easily be transferred into the lungs. This can compromise the health of the lungs and result in lung

infections such as pneumonia. Couple this with lungs that do not work well due to COPD and the result can be deadly. Eventually Gladys's lung infections occurred closer and closer together. Each infection became harder and harder to resolve. The prescribed antibiotics got stronger and stronger. Eventually nothing more could be done, and Gladys lost her life to COPD. Or did she die from dirty teeth?

Ida broke her leg when she was 102 years old. It was logical to think this may be the beginning of the end of her life. Situations like this can often bring that on. But she recovered after three months of therapy. Shortly after that Ida contracted double pneumonia and she wasn't expected to make it, but she did. The antibiotics however had managed to kill off the good bacteria in her mouth and let the yeast take over. A yeast infection in the mouth is called thrush. Ida was in such pain she could not eat. She died of starvation. Or was it from the condition of her mouth?

Helen was placed in a nursing home. She was able to floss and brush her teeth, and was under the care of the nursing team and the nursing home dentist. She never had trouble with her teeth or gums. As her medications increased, her mouth became more and more dry. There are over 700 prescription drugs that cause dry mouth and she was on approximately seven of them. Even though she was legally blind and her body did not work well enough to allow her to walk, her biggest complaint was her dry mouth. The care team offered what

they knew to address the problem, but it was not enough. When there is not enough saliva to control the bacteria in the mouth, teeth get cavities, and cavities need to be filled by a dentist. Helen was on Medicare. There are very few dentists who take this benefit for payment of services. As a result, the cavities were not filled. When teeth have cavities that are not filled, they break. As her teeth broke, her daughter would take her out to a private dentist for care, because a broken tooth was an emergency. Recommended treatment was always removal of the tooth in question. This was a vicious cycle, and one that no one, not the care team or the dentist, had any answers to. As a result, in the two short years Helen spent in the facility, she had lost 60 percent of the teeth she had managed to keep healthy for 90 years. She, like Gladys and Ida, had become a victim of our broken system of nursing home oral care and suffered needlessly from dental disease. Helen went to her final resting place with no front teeth, and cavities in the teeth that remained. While Helen did not die from dirty teeth, her dirty teeth certainly affected her quality of life. Can a poor quality of life decrease the will to live?

The Results from a Lack of Good Care

The lack of good oral hygiene is killing our elders and the ailment is completely preventable. Oropharyngeal bacteria are wreaking havoc. These bacteria can be controlled, and typically are controlled by most people through brushing and between

the teeth cleaning. However, once people become dependent on others to remove these bacteria, the microbes run wild in the mouth, because they are not being kept at bay on a daily basis with tooth brushing and between the teeth cleaning.

The greatest risk of dying from dirty teeth comes when the bacteria in the mouth get aspirated into the lungs and the person contracts aspiration pneumonia. Aspiration pneumonia is a lung infection that is a result of oral bacteria, stomach contents, or both, being inhaled (aspirated) into the lungs. It is not unusual for small amounts of this material to trickle or be inhaled into the airway and into the lungs. In the general population the inhaled secretions have low bacterial count and are usually cleared out by normal defense mechanisms such as coughing. Bacteria are not allowed to reach the lungs to cause inflammation or infection.

This process is quite different with elders who have oral secretions containing high levels of bacteria and a compromised immune system. When an abnormally high amount of bacteria are aspirated and gain access to the airway, it can cause serious consequences. Elders cannot easily clear the microbes out of their respiratory tract. Bacterial pneumonias are strongly associated with aspiration of bacteria into the lower respiratory tract, which is normally a sterile environment. When this happens the result is aspiration pneumonia.

Infected and decayed teeth, as well as poor oral hygiene, have been correlated with the occurrence of aspiration pneumonia. Missing teeth and poorly fitted dentures predispose elders to aspiration by interfering with chewing and swallowing. When food is not properly chewed and swallowed it is allowed to remain in the mouth and break down. Aspiration of decomposing food that is laden with bacteria can lead to pneumonia as well.

Another issue our elders face in care facilities is oropharyngeal candidiasis or “oral thrush.” This occurs when there is an over growth of yeast in the mouth. This also tends to be a minor problem in a healthy individual, but in the weakened immune system of a dependent adult, the symptoms of oral thrush may be more severe and difficult to control. Thrush occurs commonly in seriously ill and dying patients, but can occur in people of any age. Some of the risk factors for thrush include xerostomia (dry mouth), diabetes, use of antibiotics, dentures, and old age. A person who has thrush may not realize it until the outbreak is severe. At this point they notice pain, dysphagia (trouble swallowing), halitosis (bad breath), changes in the taste of food, diminished appetite, and reduced ability to consume food. The lack of taking in nutrition can lead to weight loss, eventual starvation, and death.

Even if elder care residents are not dying as a result of these masses of uncontrolled bacteria, they are suffering needlessly from cavities and periodontal (gum) disease

because the bacteria in their mouths are being allowed to run amuck. When these bacteria cause periodontal disease, the destruction does not end in the mouth. A number of research studies show that teeth and gums burdened with the bacteria that cause periodontal disease can initiate cardiovascular disease, stroke, diabetes, and dementia. These bacteria can also complicate the control of existing diabetes.

Periodontal disease occurs when bacteria are allowed to thrive in the mouth and create a biofilm in which to live and do their dirty work. Once the body realizes the bacteria are doing damage, the immune system releases substances that inflame and damage the gums, the ligaments around the teeth, and eventually the bone that support the teeth. The body does this in an attempt to get rid of the bacteria. The release of these substances leads to swollen, bleeding gums, which are signs of gingivitis (the earliest stage of periodontal disease). If bacteria are not controlled at this point, the damage may continue resulting in full blown periodontitis (the advanced stage of periodontal disease) which is marked by loss of the bone around the teeth. This can cause teeth to become loose. Eventually teeth may be lost.

There are several causes of death that can be associated with poor oral health, including heart disease, stroke, diabetes, chronic obstructive pulmonary disease (COPD), and dementia.

Heart Disease: Several studies have shown that periodontal disease is associated with heart disease. Research has indicated that periodontal disease increases the risk of the development of heart disease. Scientists believe that inflammation caused by periodontal disease may be responsible for the association. The development of periodontal disease can also worsen existing heart conditions.

Stroke: Additional studies have pointed to a relationship between periodontal disease and stroke.

Diabetes: People with diabetes and periodontal disease may have more trouble controlling their blood sugar than diabetic patients with healthy gums. This appears to be a two way street. Those with periodontal disease are more likely to develop diabetes.

Chronic Obstructive Pulmonary Disease: Research has shown those with periodontal disease have a 60 percent higher likelihood of developing COPD than those without periodontal disease.

Dementia: Oral bacteria in the mouth due to poor dental hygiene have been linked to brain tissue deterioration.

Why Does Any of This Matter?

Elders, in general, have increased risk factors for heart disease, stroke, diabetes, COPD, aspiration pneumonia, and

thrush. The lack of adequate oral care increases these risks significantly. While medical professionals go to great lengths to keep our dependent elders healthy, there is a huge piece of the puzzle that is not only in the wrong spot, it is completely missing. In the 2000 report, *Oral Health in America*, the U.S. Surgeon General pointed out that total health cannot be attained until oral health is improved. There needs to be a movement to end this epidemic. While death certificates do not list oropharyngeal bacteria as the cause of death, they are most certainly the origin of many illnesses that lead to death. There are many challenges and this problem can seem unmanageable, however the circumstances can be turned around so elders are not dying from dirty teeth. This needs to be done sooner than later. The population is aging and our baby boomers are going to be the next generation of dependent adults.