

The Epidemic of Yawning Falls

It began towards the end of April. Father Samuel White's aging mother, Comfort, was the first to become seriously ill with an unknown disease. Little Justina George and her sister, Helena, were next. Within a few days, over sixty residents were showing symptoms of the mysterious disease. Symptoms began with mild nausea, but were soon followed by high fever, swelling of the extremities, and widespread bruising and discoloration of the skin. Most bouts of the illness lasted 8 or 9 days, but a few patients, particularly the elderly, were unable to leave bed for two weeks.

By the second week of May, the disease seemed to have vanished, and daily life in Yawning Falls returned to normal. Only a week later, however, the citizens of Yawning Falls were horrified to observe a new wave of the illness racing through their quiet town, inflicting twice as many residents as the April bout of the disease.

The situation became dire with a significant percentage of the workforce indisposed for more than a week. Production in McCarthy's Gristmill nearly came to a halt, and healthy employees of Ricker's Quarry had to take double shifts to cover the workload of their ill coworkers. So many children suffered from the disease that there was talk of shutting the doors of the primary school for a month or two. Even on Sunday, the churches were practically empty. Only forty people attended mass, much to Father White's concern.

Again, after two weeks, the disease was nowhere to be found. This time, however, residents knew it was likely to be back. Indeed, during the third week of June, several more residents began to show signs of the illness.

Dr. Glenn, having worked tirelessly to combat the disease, determined that the Epidemic has an incubation time of four weeks. In other words, the disease sat in the body for about a month before the body began to be ill. He also surmised that victims of the Epidemic were most contagious immediately before showing symptoms. Luckily, it appeared that once a person had suffered the disease, they were not able to contract it again. Furthermore, since none of the June patients belonged to the same household as an April patient, Dr. Glenn concluded that if a person did not contract the illness on their first exposure, they would not in the future.

To some, it seemed as if Yawning Falls would simply have to let the illness run its course. Others, however, sought a way to halt its spread. To achieve this end, someone would have to discover exactly *how* the Epidemic spread.

Amelia Fox and Marie James

As schoolteachers in the town of Yawning Falls, you were surrounded by the Epidemic during spring of 1867. While several of your students contracted the illness during April, nothing could have prepared you for the number of absences due to the Epidemic that occurred in May. Fourteen of the secondary students and fifty-four of the primary students came down with the Epidemic, causing them to miss more than a week of school.

As spring dragged on, you noticed that the students who visit the drinking pail most often were more likely to suffer from the Epidemic than those who rarely visit the drinking pail. Concerned, you boiled the ladle for both drinking pails, neither of which had been washed in quite some time, but students continued to contract the Epidemic.

You recall that some diseases can infect an entire well. You most often draw your water for the school drinking pails from Well 4. If, indeed, Well 4 is the source of the Epidemic, the households surrounding Well 4 would have been the earliest victims of the Epidemic.

Using your school records and the provided map, determine which households suffered from the Epidemic in April, May, and June. If a student was absent for five or more days in **April**, color their house **Purple**. If a student was absent for five or more days in **May**, color their house **Yellow**. If a student was absent for five or more days in **June**, color their house **Pink**. Markers are provided in your envelope. When finished, use the map you've made together with the maps made by the town religious leaders and business owners to answer the questions on the question sheet.

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Derrick McCarthy and Emmon Rickers

Everyone in Yawning Falls knows that the McCarthys and Cantwells have been rivals for over a decade. Thus, it was no great surprise when Abraham Cantwell took the opportunity to accuse the McCarthy's of creating the Epidemic with unsanitary conditions at their Gristmill. Everyone in Yawning Falls got their flour from the McCarthy's, after all, and more than half of the McCarthy employees had contracted the disease by the end of May.

While you, Derrick McCarthy, were annoyed at the absurd allegations, you were shocked to observe the fury your lifelong friend displayed at the accusations. Emmon Rickers, you could barely keep yourself from marching down to the Cantwell's Sawmill when you heard the allegations. Having grown up with Derrick McCarthy in Ireland and immigrating together as young men, you had never known him to be irresponsible in any way.

Still, both of you have noticed that a remarkably large percentage of the McCarthy workforce contracted the disease. You are convinced, however, that there must be another explanation for this.

Compare the number of illness at each of the four production businesses in Yawning Falls. Attach the blank transparency to the front of the provided map using the four paper clips in the envelope. Then, using your employee records, find the homes of all the workers who fell ill during the spring. If they worked at the **Copper Mine**, draw a **orange** circle (on the transparency) around their house. If they worked at **Ricker's Quarry**, draw a **black** circle around their house. If they worked at **Cantwell's Sawmill**, draw a **green** circle around their house. If they worked at the **McCarthy's Gristmill**, draw a **brown** circle around their house. When finished, attach the transparency made by the town religious leaders on top of your transparency and map. Examine the result and then attach both transparencies to the front of the map made by the town schoolteachers. Use the maps to answer the questions on the question sheet.

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Father Samuel and Pastor Thompson

As town religious leaders, you are both deeply troubled by the misery the Epidemic has caused. You, Father Samuel, were one of the earliest victims of the disease and, thus, fully understand how your parishioners are suffering. Pastor Thompson, two of your own children were some of the Epidemic's most recent victims. While both Sylvia and James are on the mend, you want to ensure that no other children have to experience the disease, so you decree that the Baptist church will not take communion for the next two months to help stop the spread of the illness. You urge Father Samuel to do the same, particularly because Catholics drink communion wine from the same cup instead of each person dipping a bite of bread in the wine like the Protestants. However, you, Father Samuel, are reluctant to abandon the Holy Eucharist without further knowledge of how the disease is spread.

In talking with each other, both of you observe that it seems more Catholic parishioners have gotten ill than Baptists. However, since the Catholic congregation is about twice the size of the Baptist congregation, it could just be a matter of odds. You borrow a list of the Presbyterian members from Reverend Bennett and use that in conjunction with your own congregation lists to analyze the religious affiliation of the Epidemic victims.

Attach the transparency to the provided map by using the paper clips in the envelope. Then color (on the transparency) the houses of each congregation member. Color the houses of the **Catholic** parishioners **blue**. Color the houses of the **Baptists** and **Presbyterians** **red**. Then carefully remove the transparency from your map and place it on top of the map and transparency made by the town business owners. Examine the result and then attach both transparencies to the front of the map made by the town schoolteachers. Use the maps to answer the questions on the question sheet.