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Mary's Surprising Journey

An Anthology of Short Stories for the Medical Laboratory

About this Anthology

This collection of short stories is about Mary and her journey from being “just a tech” to becoming much more. You will see how she starts out with very little knowledge of computers and even less confidence in her ability to learn much about them. Working on the 11-7 shift has her buried in the same mundane existence of processing samples, running tests, maintaining instruments and releasing results. When presented with an instrument interface problem she has no idea of what to do or even how to begin. Vicky, her friend, who works in the Hematology department is more knowledgeable about computers and goes to the Chemistry department to help Mary with a problem. This gets Mary started on her journey to become more knowledgeable about computers.

Vicky, who would like to see her friend Mary, become more interested in her job, decides that rather than just fixing the problem for her or telling her to call Lab Support instead spends a little time to prompt her through some trouble shooting steps. Thinking that if she can get Mary to have more confidence it will boost her self-esteem as well as help her solve more of the problems she encounters. She decides to only guide her and not give her the solutions outright.

So it begins, Vicky and Mary start a Journey not knowing exactly where it will lead them.

Do not read ahead to the end, or you will spoil your journey alongside Mary as she pursues hers. Keep in mind how intimidated Mary is in the first story by the computer system. She also has little confidence in herself when it comes to the computer system.

With that thought in mind by the time you get to the last chapter you will understand the caption on the cover picture. “There are things in this World that we cannot see. But it doesn’t mean they aren’t there.”

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Preface

This collection of educational short stories is centered on the workers in the Medical Laboratory of a hospital. The intent is to provide reading material for the Medical Technologist and others that are working in this environment. There is a scarcity of stories for workers in this field. Those that do exist are rarely at the same time both entertaining and educational. Actually, there are not that many stories centered on those who work in medical laboratories at all. In most stories where the medical laboratory is included, it has been as a scene or two but never that I have seen as the entire focus of the story.

I hope the intended audience finds these stories entertaining enough to capture their attention. It has been shown in previous studies done by others that people learn best when they are taught by being told a story. In most fields of endeavor there are certainly manuals of some sort that puts forth the methods of doing things and/or solving problems. I have found that in nearly all cases the manuals end up being so cut and dry that the intention fails. The reader will not bother, become confused, fall asleep, or just decide it's so boring they would rather have a root canal done. Think to yourself, count how many times you have seen a laboratory worker carry a manual off and become so interested that they cannot put it down. Well, there is the occasional one, but they are the exception. I have endeavored to make each short story both a story and an educational topic that will, because it has been read as a story, be retained by the reader. If my aim succeeds the reader will subconsciously have learned something they may find very useful in performing their jobs.

The reader should not concentrate on the lesson in each short story, but instead put themselves in the character's shoes and live the story as it's told. The reader should see themselves in their own mind as being one of the characters interacting with the others. I feel that if you become part of the story, you will remember the lesson without even thinking about it.

I fully appreciate the fact that no collection of short stories such as this could ever tell anyone everything they need to know. I do sincerely hope though, that these stories will lay the groundwork for the reader to apply the principles shown here, and in effect be able to develop solutions to new situations they may encounter.

Disclaimer

While the scenarios described are drawn from real experiences, the people, places and institutions in these stories are fictitious and are not representative of anyone in real life. The only parallels to actual people, places or institutions are strictly coincidental.

Mary had a little problem

...and her test results did not go.

Mary is a Technologist working in the Chemistry department of Hosplab Medical Center and has been a tech for many years, so suffice to say Mary is not a spring chicken but she can push out large volumes of accurate test results. She has a co-worker, Vicky, who works in the Hematology department and they both work the 11 to 7 shift. Mary has just walked over to Hematology to speak with Vicky.

“Vicky, are you having any problems getting results to cross to the LabApp?”

LabApp is the software the laboratory uses to manage their testing and reporting. It receives orders from the hospital system (HIS) and after the specimens are collected and the tests have been completed the LabApp software sends the results back to the HIS.

“No, mine are crossing normally, what kind of problems are you having?”

“I run the tests and nothing shows up in LabApp.”

Vicky responds, “Do you have any idea what might be causing the problem, what have you checked?”

“Vicky how am I supposed to know what the problem is, I don’t know what to check? I am just a lab tech not a computer person. I don’t know anything about computers!”

“Ok Mary, calm down. Now about ‘being just a tech’, think about that for a moment. When you first began training to be a Technologist you didn’t know anything about running chemistry tests either, correct?”

“Well yes, but I still don’t know anything about computers, and I am too old to learn.”

“Mary you’re never too old to learn. When you get a new test added to what you do in chemistry you learn how it works and how to do the test don’t you?”

“Yes, but that’s different.”

“Not really, it’s still basically the same; you still do steps to get a result. In the case of your results not crossing to LabApp it’s still just steps, and it’s not that hard to solve the problem most of the time. Sure there are times when you will still need to call support. I know there is a tech support person at *Lab Applications* that is much older than either of us, in fact most people his age have already retired, but he is still learning. So keeping that in mind you should not think that you’re too old to learn.”

“Yea, but he has probably been doing computer work all his life!”

“Mary you might naturally think that, but in fact he spent most of his career in the medical laboratory working 11-7 shift just like us. So buck up and let’s look at this problem.”

Walking over to the Chemistry department Vicky began showing Mary some of the things that she should check herself before calling for support, explaining that in most cases it would be quicker for them to check for obvious problems and fix the problem themselves rather than to just call support.

“Ok Mary let’s begin by checking if the barcodes are being read by the instrument. Ok I see the correct tests were run for this sample and we can see on the printout from the instrument the order number and a result so that means the input side of the instrument is working Ok.”

“Well, let’s call support then. We have checked it all.”

“Not so fast Mary, there are other things that need to be checked as well. We know the instrument is getting orders and producing test results, and the order number and results show on the printout. Next we will look to make sure the interface for this instrument is running, which when I look in LabApp and check the interface status I see that indeed it’s running. Mary have you thought of anywhere we could look next?”

“Well we know the instrument is Ok, the barcodes are Ok and the interface is running Ok, so I would think there is a problem in between the instrument and the interface.”

“Very good Mary, see you can learn new things, even if they are computer things.”

“Yea I guess so”, as she playfully punches Vicky’s arm.

“Well I am not a computer expert either. What do you think we might check next?”

Pondering the situation for a moment Mary says, “Let me see, the instrument has to be connected to SoftLab somehow so I guess we need to check that. There must be some kind of electrical connection. I will look behind the instrument data manager for some kind of electrical cords. Ok, there is a power cord connected to an electrical outlet, there is a rather fat cord connected between the data manager and the instrument and it looks like it’s plugged in good on both ends. There is one more cord that looks like a fat telephone cord and it goes from the back of the data manager to the wall and plugs in there. So it all looks good to me.”

“Ok Mary let’s check a little closer on the instrument data manager first. When you check the screen on the data manager are there any messages?”

“Yes, there is a message saying ‘Host communication failure’, but I am not sure what that means.”

“Mary if you think about it a little harder you should realize that is why you’re not seeing any results in LabApp and that is a very good clue as to the problem.”

“But we checked the cables and the interface!”

“Yes, we checked the interface, but we only looked at the cables, sometimes a cable can go bad or there is a problem with the connection between the plug on the end of the cable and where it plugs into either the data manager or the wall so we need to physically check the cable.”

They both move behind the instrument and when they check the cable connection at the wall it literally falls out into Mary’s hand.

“My goodness that cord just fell out of the wall”, exclaims Mary.

“Looks like we found the problem Mary look at the plug, the little tab that is supposed to hold the cable in the socket is broken nearly all the way off. Lets plug it back in tightly to the socket and put a piece of tape across it to hold it in securely. Now recheck the instrument to see if the results cross to SoftLab now.”

Mary having put a piece of tape over the cable at the wall plug goes around to the front of the data manager and resends some results.

“Yea, I did not get any errors and it looks like the results crossed! Let me check in LabApp to see if they really did. Yes, the results are there now!”

Vicky slaps Mary on the back lightly saying, “There you go, with a little thinking about the situation and checking a few things you were able to solve the problem and get back to work”

“I guess I should be more open to things relating to computers. This experience has made me much more comfortable with dealing with these computer problems, Thanks Vicky for helping me with this.”

“No problem, glad I could help you. You do have one more thing to do though.”

“Really, what is that, the instrument is working Ok now.”

“Well Mary, think about it, you put a piece of tape on the wall to hold the connection in.”

“Duh, guess I should leave a note for the Laboratory Information System Administrator telling her what happened, how we fixed it and that IT should replace the cable to prevent this happening to someone else.”

“Right on sister, now I have to get back to checking some diff’s.”

As Vicky begins to leave, Mary says to her, “You know, I wonder if when housekeeping was cleaning back there they bumped that cord, I’ll bet that’s what caused this whole thing. I noticed they were there but didn’t give it a thought at the time the problem appeared, guess I will have to watch for that in the future as well.”

Concluding note:

In this situation the problem was very easy to find and fix and Mary learned something about computers, and more importantly, that she was much more capable of dealing with “computers” than she had previously thought. Mary no longer considers herself to be just a tech, but now is a tech that has began a learning process of dealing with computer problems in the lab. Working with Vicky has been a relationship building situation as well, seeing that they worked together to find and fix the problem. This problem was resolved faster than simply calling tech support at LabApp since the problem was a physical cable they would have had to check themselves anyhow. This knowledge and ability can also be applied to other problems they might encounter in the future as well.

Mary and the cranky printer.

It has been a busy night on third shift, but most of the draws and testing has been finished. Just as Mary was about to catch her breath the phone rings.

“Hello, this is the laboratory, Mary speaking, how can I help you?”

“We are not getting any reports.”

“Can you tell me what your location is and I will check on that for you.”

“Yes, I am on 4 North, and I have not received reports for a while now.”

“Very well, I will check on that for you and get back to you. Who am I speaking with so I will be able to reach the correct person when I call back?”

“This is Ruth. I am the charge nurse on the floor. Please fix this as soon as possible, the doctors will be starting rounds very soon, and we need to have the reports available for them. They don’t like having to look reports up in the computer, plus they like to write notes on the printed reports and stuff them in their pockets for later review.”

“No problem, Ruth, I will call you back just as soon as I can determine the problem.”

Mary logs into the lab application and goes to the check printer function. When she checks the 4N printer it shows the status as *Running*. She walks over to the Hematology department where her co-worker Vicky is working to ask what the message means.

“Hey, Vicky, I got a call from 4 North that their reports are not printing. I checked the printer status and it say *Running*. I am trying to get the hang of trouble shooting these kinds of problems but I wanted to bounce it off you before I go running up to the floor.”

“That’s no problem, I’m glad to see you’re interested in doing this yourself. So what do you think could be causing the problem?”

“Well, since the reports show that they are at the printer to be printed I would assume there is probably nothing wrong with our lab application. My next thought is that the problem is being caused by something at the printer.”

“Very good, you’re starting to get the hang of this trouble shooting procedure. Can you think of some things to check?”

“I guess the printer could be turned off or turned to *Off Line*. I know that has happened here in the lab on occasion. You would think they would notice that though.”

“Yea, you would think that wouldn’t you, but when people get very busy, as they probably are at this time of the day it’s possible to not notice. Since you have ruled out an application problem maybe you should just go up to the floor and take a look at the printer to see for yourself what is physically going on with it. Be sure to check for printer error messages and physical cable connections, remember what we found out about your instrument last week.”

“Ok, I have all my samples on the machine running so I can take a quick run up there. Listen for my phone though.”

“Ok, if you have any questions while you’re up there give me a call”

Mary takes off up the stairs, preferring that over the elevator in order to get the aerobic benefit of the exercise. Arriving on the ward she checks the printer and it’s turned on. It shows the *On Line* indicator is illuminated and the cables are all connected tightly. Out of ideas she calls Vicky in the lab for more help.

“Vicky, I have checked the printer and the cable connections and everything appears to be Ok. Do you have any suggestions?”

“Let me see, I remember calling support for a problem like that a while back. They asked me to check how the printer was connected. Is the cable connected directly to the wall or does it connect to another device first?”

“Ok, the cable connects from the back of the printer directly then to the wall.”

“Turn the printer off with it’s off and on switch and when it shuts down then disconnect the power plug from the wall outlet.”

“Why do I need to disconnect the power plug?”

“The way it was explained to me is that there is a piece inside the printer that connects between the network and the printer itself, the support tech called it a ‘NIC’ and said it was short for ‘Network Interface Card’, so NIC is shorter and easier to remember. Problem is that this card, the NIC, is deliberately designed to still have power applied to it even when the printer is turned off with the switch.”

“Ok, that is all well and good, but that still doesn’t tell me why I have to disconnect the power plug in order to fix this problem.”

“I was told that anytime you see the printer status as ‘Running’ it indicates a problem either with the NIC, the network, or the print job is bad. So to fix a problem with the NIC you have to disconnect the power from it so it will reset and clear the problem. The only way to do that is to turn the printer off and then disconnect the power cord from the wall outlet. Leave the power cord disconnected for ten seconds or longer before plugging it back in.”

“Alright, I have turned the printer off and disconnected the power plug.”

“Good, now plug the power plug back in and turn the printer back on and let’s see what happens.”

Mary plugs the power plug back in the wall socket and turns the printer back on with its power switch. After a couple of minutes it quits growling and shows that it’s on and also “*On Line*” as well but still nothing is printing.

“Vicky, I have done all you said to do but nothing is printing.”

Checking the printer status again, Vicky says, “I see another problem now. Logon at a terminal up there and check the printers again.”

“Wow, now we went from *Running* to *Down*.”

“Yes, and I was told that many times that’s what happens. The tech support guy said to just restart the print job and most of the time the problem will be solved. So just select the printer and tell it to *Restart the jobs.*”

Mary restarted the job as Vicky had advised and lo and behold the printer started humming and reports started printing.

“Ruth, your reports are printing now. You should not have any more problems but if you do call down to the lab and ask for me.”

“Mary, you’re a lifesaver, I really appreciate your coming up and fixing the problem. In the past when we had to call for support it took longer to get the problem resolved. Having someone here in the building that can look at these problems and fix them is really a great help, thank you so much.”

“You’re welcome, but we were lucky, most of the time these problems can be fixed by us but sometimes not and we still need to call Technical Support for help. In this case we just did the leg work first and did not have to wait for support to call back and for them to investigate the problem. In this particular case we would have still had to do the same things we did even after calling support. Since the Technical Support person is not here in the building it would be impossible for them to do what we did this morning to fix this problem. I am very glad I could help, have a good day.”

“I am sure it will be a better day than it was looking to be, thanks again for your help”

Mary makes her way back to the lab feeling very good about being able to resolve the problem. Thinking to herself, “You know, this computer stuff is not as scary as I thought it was.”

Mary makes her way back to the lab and upon arriving back in the lab; Vicky says to her, “So how do you feel about fixing that problem?”

“Vicky, I would never have thought I would be able to do anything related to a computer or printer before now. I guess if you just decide to try and open your mind up you can do a lot of things you didn’t think you could. Maybe I will go buy myself a Harley!”

“Ok, no need to get carried away. Get back to work, your tests are finished.”

Mary goes back to her department smiling and thinking, “This is going to be a great day.”

The Instrument strikes back

“Vicky, are you ready to go on break? Says Mary as she walks into the Hematology department.

“I wish I was, but I have a problem with the Koulder analyzer that I have to resolve. You go on ahead; I am not going to make it.”

“That’s Ok; I will stay and help you out if I can. You have been good enough to always help me. What are you seeing as the problem?”

“I load samples on the instrument and it processes them okay, but then no results are going to the lab application.”

“Yea, I see what you mean, the results are right here on the printout along with the patient demographics. Well, I guess we need to check the same things we did on my chemistry instrument a while back. Have you checked the cable connections?”

“Yes, everything is connected tightly. I am getting the patient demographics; I would think that also indicates the cables are connected Ok.”

“Well, that’s usually a good indication. I assume you have also checked and restarted the interface, as well as making sure the communications is turned on at the instrument.”

“Yes, I’ve checked all those things. I have never run across this situation before. I guess I should call the Koulder help desk to see if I missed anything.”

“Good idea, I am going to run back to chemistry to check on things while you do that.”

Vicky calls the Help Desk at Koulder and speaks with the on-call tech.; He asks her to check a few things on the instrument setup and the communications settings along with checking the cable connections again.

Mary walks back into hematology and asks, “Any news?”

“No, I am afraid not, the Koulder Tech did not find any problems. I am going to call LabApp Technical Support now and see if they can find anything.”

“Hello, this is Hank at LabApp Tech Support, how can I help you today?”

“Hank, this is Vicky at Hosplab Medical Center and we are having a problem with not getting results from our hematology instrument to LabApp. Can you help us?”

“Sure, let me open a ticket and dial in to your system and I will see what I can do for you. I need some information from you first.”

“Ok, what can I tell you?”

“Well, I need to know your site identification code, your name, your telephone number and the interface ID.”

“Ok, my name is Vicky, my telephone number is 777.888.0009, the interface ID is MKOUL but I don’t know the site ID.”

“Vicky, check at the same place as where you found the number to call us and the site ID should be written in bold letters just below the telephone number.”

“Oh, that’s right, I forgot it was there. My site ID is HOSPL.”

“Very good, I will enter a trouble ticket and check this right away. I will give you a call back as soon as possible.”

“Mary, let’s go for that break if you’re free as it’ll probably take him a few minutes to check everything.”

Mary and Vicky leave to go to the break room for a well deserved cup of coffee and to put their feet up for a few minutes. After the break time is up they return to the lab.

Ring, ring. “Hello, this is Vicky in the hematology lab.”

“Vicky, this is Hank at LabApp support, I have checked everything, logged the communication port and restarted the interface. Actually, I did not find any problems, but I did notice that nothing has been received from the instrument for over two hours. Put a specimen on and let’s give it a try. I will watch for the incoming file to be updated.”

“Ok, I just put a tube on the machine and it read Ok. It will take a minute or two for the results to be done.”

“Ok, I’ll hang on.”

“Well, the results just printed out at the machine but I am still not seeing any results in LabApp.”

“I don’t see any updates to the incoming file either. Have you spoken with the instrument vendor?”

“Yes, I have, but he did not find any problems.”

“This is a Koulder hematology instrument correct?”

“Yes, it’s.”

“Did the Koulder tech ask you to clear the test results memory on the instrument?”

“No, he didn’t, should he have?”

“Yes, that may be your problem. Go ahead and clear the memory on the instrument, and then put another sample on to run. I’ll hang on while you do that.”

A few minutes pass and Vicky returns to the telephone sounding both grouchy and happy at the same time.

“Hank, everything is working great now. What is the deal with this problem?”

“It’s a pretty well known problem as it has been plaguing the Koulder hematology analyzers for quite a long time, and I am surprised the Koulder tech did not think of this. I have been seeing the problem fairly often.”

“Can you tell me a little more why this happens?”

“Sure, the test results and demographics get stored in memory on the instrument as the tests are run. The problem is that when this memory fills up it does not automatically scroll off the oldest results and replace them with the newest. So when the memory fills up, you as the operator have to manually clear the memory so there is a place to put results.”

“Ok, that makes sense, but I still get results printed out.”

“Yes you do, and that is because the way the Koulder instrument handles the result data is to send it to the printer directly when the results are done, but when the results are updated in the memory they are sent to the communications port on the instrument. Since the memory is full and nothing can be written to it, the communications port on the instrument is not given anything to send. That is why nothing is sent to LabApp.”

“Wow, you would have thought the Koulder tech would have checked that. I’m so glad you knew this and were able to pass it on to me. I will definitely be putting that down in my notes in case it ever happens again in the future.”

“That will be good, however, it would probably also be a good idea to pass it on to your co-workers and very importantly to your Lab System Administrator as well. Also, a good preventative measure would be to periodically clear the results memory, maybe as part of your routine maintenance.”

“I will do that for sure.”

“Is there anything else I can do for you?”

“No, everything is good at this point, thanks again.”

“You’re very welcome. If there are any other problems call us. Goodbye.”

“Mary, guess what, everything is working again.”

“You have to tell me how it was fixed.”

“I will, but it will take a few minutes. Let’s get caught up and when we break for dinner I will tell you all about it”

Conclusion:

It’s important to realize that there are many things that can happen to an instrument and/or its interface. It’s equally important to also realize that the person who should have the answer may not actually have it, or remember it. That is really just human nature. So, pursue all your resources, but at the same time remember there are many things that you can check yourself before calling for help.

Pam and her sensitivities

Pam, who works in the Microbiology department walks into the break room muttering to herself.

Mary and Vicky are taking their break and Mary says, “Pam, what’s the matter? You look upset.”

“Well, you can take that to the bank. I have been waiting on my sensitivities to finish so I can get cleared up and go home, nothing seems to be happening”

“Come sit with us”, says Vicky. “Mary here has been doing a great job of troubleshooting computer problems lately. Run the problem by her.”

“Yeah Pam, what are you seeing and what have you done so far?” says Mary.

“Well, I have checked and I can see the tests for all the samples on the MicTek analyzer are finished, but none have shown up in MicApp yet.”

“Tell me what you’ve done so far.”

“Other than wait, pretty much nothing. What should I be doing?”

“You sound like I did a while back.” says Mary. “I used to think that I could never know enough about computers to be able to fix some of my own problems. Then one night, Vicky came over and we worked on a problem with my chemistry analyzer together and we were able to fix the problem ourselves.”

“As soon as break is over, let’s take a look at your problem, I’ll bet we can fix it.”

Walking back to the lab, Vicky goes to check her department and Mary goes on ahead with Pam to look at the Micro problem.

“Okay, we know the samples ran and the results are on the instrument. Let’s check the obvious things first.”

“Maybe obvious to you, but I am not computer guru,” says Pam.

“Like I said, neither am I, but I have got over feeling that way and I am approaching these problems with an inquiring mind. I have found that if I never try, then I will never be able to fix things. So, I just try to fix them by thinking in a different way and just using good old common sense. It’s amazing what common sense can fix.”

“Okay Mary, quit grinning like a Cheshire Cat, I get your point. So let’s get cracking, I need to get these finished so I can get out of here on time.”

“Alright, when Vicky helped me she asked me simply, how the results get from the instrument to LabApp. So how do your results get from MicTek to MicApp?”

“Good question, am I supposed to know that?”

“Well, you aren’t supposed to know it, but you should be able to make an educated guess, using common sense. The results aren’t just going to magically appear, so give it a thought.”

“Okay, I suppose it’s like when you want a piece of toast, you need to plug the toaster in, right?”

“There you go, now you’re thinking about the problem rather than just throwing your hands up in frustration. What should we check?”

“I am going to check behind the data manager to make sure all the cords are plugged in. I see the cord from the instrument to the data manager is connected on both ends and they are tight. I also see the cord from the back of the data manager to the wall is plugged in tight on both ends. All of those connections appear to be Ok.”

“Where else can we check then, Pam?”

“I do know there is an instrument interface that connects the instrument to MicApp, so I guess we should check that.”

“That is a great idea; let’s also check on the instrument for error codes as well.”

“No error codes on the screen. I’ll check the interface. Well, I’ll be – the interface is not running.”

“I guess we should have checked that first, huh,” says Mary.

“Probably would be a good idea to start there. We will have to remember that the next time. That is one of the things you learn when troubleshooting these problems. The order in which you look at things can sometimes get you fixed quicker, but you can never be sure.”

“Okay, I have started the interface running, now let’s check and see if there are any results.”

“That should have fixed it. I am going back to Chemistry and check on my department. I’ll check back with you in a few minutes.”

Going back to Chemistry by way of Hematology, Mary says to Vicky, “looks as though the problem was that the interface for the MicTek was not running”

“That’s great Mary, good job.

A few minutes later Pam walks into Hematology looking glum.

“Hey, what’s the matter Pam, Mary said you guys fixed your problem.”

“I wish, but apparently the not running interface was not the problem. I still don’t have any sensitivity results in MicApp. I am never going to get home this morning.”

“Pam, what’s the matter?” says Mary as she walks into the department.

“The problem still has not been resolved, and I am getting very frustrated”

“Let’s call Lab Support and see if they can help us.”

Dialing the 800 number, Vicky gets connected to voicemail and is asked to leave a message and she will be called right back.

“Well, I guess we will have to wait a while. I tell you what, let’s call the on-call LIS Administrator and see if she can help us with this. We might as well try while we wait for a call back from Lab Support.”

Vicky dials the on-call LIS Administrator's cell phone and after a few rings a sleepy sounding voice answers. "Hello, this is Jen, what's going on?"

"Hello Jen, sorry to wake you but Pam is having a terrible time in Micro this morning and needs some help."

"Did you call Lab Support?"

"Well, yes, but it went to voice mail and we thought we should give you a call while we were waiting in case you could help us sooner."

"Sure, tell me what the problem is."

"Let me give the phone to Pam and she can tell you firsthand."

"Hello, Jen, this is Pam from Micro, I have sensitivities on the MicTek instrument but they are not crossing to MicApp so I can result them. We have checked all the connections and there are no errors on the instrument data manager. We did however, find the instrument interface for the MicTek was not running, I restarted it, but I am still not getting results to cross."

"Oh crap, I know what happened. The Microbiology supervisor was testing a new instrument that is supposed to replace the MicTek and I will bet she failed to stop the interface in the test environment and to make the live interface active again. That happens sometimes."

"That would be great, all we have to do is fix that then?"

"Well, yes, but there is one problem. You do not have access to the test system and I am still fighting with IT to get me cleared to have access to the system from here at home. So, we will have to wait for Lab Support to call you back and have them make the changes. Just ask them to stop the interface in test, make it not-active and then make the live interface active and restart it. If there are any further problems or you can't get a response from Lab Support give me a call back."

"Hold on Jen, Vicky is waving at me. Okay, Lab Support is on the other phone so we will probably be Okay now. Thanks for your help; I am sure glad you knew about the new instrument."

Going to the other phone Pam answers, "Lab Support, this is Pam in Microbiology. We are not getting results to cross from the MicTek to MicApp and our LIS Administrator is pretty sure it's because a replacement instrument was being tested and our live interface was not running. Jen, our LIS Administrator, asked that you check, if that is the case stop and make inactive the interface in test and make the interface in live active and start it."

"No problem, I will open a ticket and check it out for you."

Pam gives the support tech the needed information, breathes a sigh of relief and says "let's take a break."

Coming back from a short break, Pam hears the phone ringing in Micro. Grabbing up the phone and answering it she finds it's the Lab Support Tech calling back.

"Hello Pam, I checked, and yes, your LIS Administrator was correct. The interface in the test environment had been stopped but it was left in active status. That meant that at midnight when the system restarted all the interfaces, that interface in test was then started running again. The interface in

your live system was running until midnight but since it was left marked as not-active when the system stopped it at midnight it was not restarted again. So, all your results went to the test system.”

“Will I be okay now?”

“Yes and No, results from the MicTek will now go to the correct interface and you will be able to result them, but all the previous results that went to the test system interface will have to be resent from the instrument.”

“Actually, that I know how to do. Hold on while I resend the results and check that.”

“Ok.”

“Yippee, I see the results now. Thank you so much.”

“You’re welcome, is there anything else that I can do for you?”

“No, that will do it.”

Conclusion:

This story points out how having motivated staff that is willing to work out of their comfort zone, particularly when able to help their fellow workers is a valuable asset, particularly in an after business hours time period. Also, even though the helpdesk number is provided for assistance with problems the inclusion of the on-call LIS Administrator’s phone number as an additional resource can often be of great benefit. In this case the resolution was reached quicker because the LIS Admin knew there was a new instrument being tested for that department and even had a very good idea of why they were having the problem with getting results to cross.

The Missing Labels – part 1

Phlebotomist are milling about getting their collection trays stocked and in general getting ready to begin collecting the morning samples for the laboratory. It's a typical early morning with the 5am collections about to begin.

Patty, the lead phlebotomist is checking the printers and looking around the area with a puzzled look on her face. "Has anyone seen the collection labels anywhere? They are not on the printer or in the incoming basket."

Now there is a flurry of activity in the department, everybody is scurrying about looking everywhere for the collection labels. The answer from everybody is the same. The labels are nowhere to be found.

"Well, this is not good," says Patty shaking her head. "We have to find them quickly; it's almost time to begin rounds."

Just then, Mary happens to be walking by the department on her way to catch a quick break before all hell breaks loose as it does every morning at this time. Patty flags her down.

"Mary, I know you're on your way to break, but we have a problem."

"What's wrong Patty?"

"We don't have the morning collection labels. We have looked everywhere and can't find them. I know you've been fixing a lot of problems lately and I hope you can help with this one."

"Ok, what have you done so far?"

Patty is becoming visibly agitated. "We have checked the printer where the labels should be and they are not there. We checked the incoming basket and they are not there either."

"Alright, let me check the printer status in the system."

Mary logs into LabApp and goes to the check printers' function, checking the printer the labels normally print on, she find the printer status is at *Ready* and there are no jobs in queue.

"Well, Patty, there are no pending jobs in the printer queue. Are you sure this is the correct printer?"

"Yes, this is the one we always use.

"Have you checked the other barcode printers to make sure they didn't go to the wrong printer?"

"Yes, we have checked everywhere."

"Ok, print a label to the printer where they should be printing and let's see if the printer is working correctly."

Patty finds an order that should have printed and sends the label job to the printer.

"Well, that proves the printer is working correctly," says Patty. "The labels printed fine."

“Yes, you’re correct. This is a strange problem. Let me think on this for a minute.”

Patty goes off to re-check the printers and asks the other phlebotomist to check again to see if they missed anything.

“Patty, I am going to call LabApp Tech Support to see what I have missed or if they need to check something.”

“Okay, we will keep looking.”

Mary dials the number for LabApp Technical Support and after a couple of rings Hank answers.

“Hello, this is Hank with LabApp Technical Support, how can I help you?”

“Hi Hank, this is Mary at Hosplab Medical Center, client ID is HOSPL and I need some help.”

“Sure Mary, what can I help you with?”

“Well, it seems our morning collection labels are missing. They are not stuck in the printer queue and we have checked to make sure they were not sent to a different printer. We looked around to see if they were in the incoming basket or lying on a counter somewhere and we cannot find them anywhere. Do you have any suggestions?”

“Mary, did you get a collection list printed out?”

“Yea, we got the collection list, so we know there should be labels.”

“Okay, then do you have someone new working in the department?”

“Yes, as a matter of fact we do, but how does that affect the labels?”

“Have you checked the trash cans?”

“No! You don’t mean they could have been put in there.”

“Believe me, it wouldn’t be the first time. I will hold on while you do a quick check.”

A couple of minutes later Hank hears a lot of cheering in the background.

“Hank, I just can’t believe it, you were right on target. The labels were in the trash can by the printer. How did you know that?”

“The clue was that no labels could be found, but the collection list printed okay and there were no jobs stuck in the printer queue. That meant that the labels had all been printed previously. If you check the collection list time, you will be able to see when it was printed and then track down who did it. My money is on the newbie.”

“You know, now that I look at the collection list closer, I do see that it was printed well before the normal time these labels are supposed to print. Thanks so much for the help, we were starting to panic.”

“That is quite okay, glad that I could help you. Is there anything else that I can help you with this morning?”

“No, I think that’s the only problem we have this morning. Hopefully everything will be okay from here out. Bye”

Mary hangs the phone up and goes to find Patty so she can explain to her exactly what happened.

“Patty, we need to speak with your newbie to confirm just what happened so it doesn’t happen again.”

“Okay, that would be Betsy; she has only been with us for a couple of weeks.”

They walk back through the Phlebotomy department and find Betsy getting ready to leave for the floor to begin collections.

“Betsy, hang on just for a minute,” says Patty. We need to ask you a couple of questions about the labels.”

“Hi Betsy, my name is Mary and I work in Chemistry. Patty asked me to help her find out what happened to this morning’s collection labels. We see that the collection list shows that all the labels were printed a couple of hours early.

“Patty, I am very sorry, I did not think I was doing anything wrong. I needed to print a label for a collection the floor called down about and wanted drawn early. So, I printed the labels but I apparently made a mistake and printed them all. I found the labels that I needed and just threw the rest in the garbage. I thought they would print again when the right time came for them to print. I am so sorry.”

“Patty, I think you have this under control now so I have to get back to chemistry.”

“Mary, thanks for your help, I really appreciate it. If I can do anything for you in the future, please don’t hesitate to ask.”

“Now, Betsy, we need to go over the procedure for how to print just the labels you need in the future. I think you fully understand that printing all the labels the way you did caused them to not print at the correct time. Since we have a lot of collections to get caught up now, we will go over this later. In the meantime, if you need a label get one of us to help you with it.”

“Okay Patty, thanks for being understanding. I promise that I will never do that again.”

Conclusion:

As you can see in this story, sometimes the stickiest of problems can come from the simplest things done wrong. It’s important to go over the procedures with new hires but it’s also important for them to be cautious as well as tell you about anything unexpected or unusual. This also points out that when trouble shooting a problem, one must be sure to check the little things as well. In this case the time on the collection list as to when it was printed was a key point.

NO Orders

The phone rings and Patty in phlebotomy picks it up to answer. “Hello, this is Patty in the laboratory, how may I help you?”

“This is Jolene in the emergency room. I have ordered some tests but no one has come to draw them yet. Is there some problem?”

“Jo, we have not received any labels recently. Who were the orders on?”

“We ordered a CBC and Urinalysis on billing number H00014298409. Did you not get the orders?”

“Give me a minute and let me check.”

Patty brings up the order entry screen to search for the orders. After searching for a couple of minutes she doesn’t find any orders on the patient.

“I’m sorry Jo, but I do not see any orders in the system and we did not get any labels printed on the STAT label printer.”

“Well please come over and collect the specimens, we need the results for the doctor.”

“I will send someone right over, and I will see if we can find out what’s causing us to not get the orders.”

“Good, I will have the test requests here at the desk.”

Patty sends a phlebotomist to the ER to collect the specimens and goes to look for Mary to get her help in investigating the problem with the missing orders.

“Mary, I am so glad you’re here tonight. I need your help again.”

“What’s the matter Patty?”

“Well, I got a call from Jo over at the ER and she says they ordered tests on a patient, but we never got the labels and there are no orders showing in LabApp order entry. Do you have any ideas?”

“Thinking back to the missing labels issue from a while back, I have to ask if all the printers have been checked.”

“Yes and the STAT label printer is working. I tested it by sending a label to it and it printed fine. I also checked with Betsy and the trash can by the printer.”

“Since you say you could not find any orders in order entry, that makes sense, but it’s always good to check everywhere. Let me check the interfaces to make sure they are all running.”

Mary logs into LabApp and goes to the interface menu. Checking, she does not find any interfaces that are not running.

“Well. It looks like there are no problems with the interfaces, so I guess we need to call LabApp Technical Support for help on this one.”

Mary dials the number for LabApp Technical Support and Hank answers.

“LabApp Technical Support, Hank speaking, how may I help you?”

“Hank, this is Mary at HOSPL. Sorry to bother you, but I need your help again.”

“Sure, what seems to be the problem?”

“Our emergency room ordered some tests on a patient and they are not showing up in our system.”

Just then Patty tells Mary she has just got a call from the nurse on 4 North that they have ordered some test that are not showing up in the system as well.

“Hank, Patty just told me that one of the floors is having the same problem, so it’s not just the ER.”

“Actually, that helps eliminate some possibilities. I need to connect to your system to investigate the problem. So I need to open a trouble ticket and will need your information.”

Mary gives Hank the requested information and they hang up the call. Hank is going to connect and see what he can find. Mary walks down to phlebotomy to see Patty.

“Patty, Hank at LabApp Technical Support is going to connect to our system and see if he can find the problem. I will get back to you as soon as he calls back. Meanwhile if you get anymore calls let them know we are working on it.”

“Okay, I will call Jo in the ER to let her know since they are the ones most likely to enter more orders at this time. I will ask her to call us as soon as they enter any new orders so we can keep the delays under control.”

About fifteen minutes later, Hank calls back and gives Mary the news.

“Mary, Hank here, I found the reason you’re not getting any orders. Actually you’re getting the orders to the system; they are just not being processed.”

“Okay, you got me, what do you mean not processed?”

“Well, the orders are received by the RCV interface in your system directly from the hospital system, and then they are processed by several more interfaces. They end up at their last stop in the OEHS interface where the order is actually created in LabApp.”

“Okay, but I checked all the interfaces and they were all running.”

“You’re absolutely correct, but sometimes interfaces are like people. They may be up moving around but that doesn’t mean they are doing any work.”

Mary chuckles, “You sure got that right. So, which one is goofing off?”

“It’s your OEHS interface. I know you’re trying to learn more about the system, so I did not fix the problem yet, I wanted you to be able to see it first.”

“That’s great; I love to learn more about this system. So where do you want me to go?”

“I want you to go to the instrument setup menu, then to the Order Entry section.”

“Okay, I am there.”

“Now, select the OEHS interface and display the trace file on your screen.”

“Got it, what next?”

“Go to the bottom of the file and look at the last line. On that line you will see the message <invalid dates> and right after that you will see the number 2102.”

“Yes, I see that. What does that mean?”

“Well the number is part of a date and it should read 2012.”

“So the date was entered for 90 years in the future?”

“You’re correct, and that was caught by the OEHS interface which caused the interface to hang on that order, that then caused no more orders to be processed. I am going to skip that order and restart the OEHS interface and then we can recheck it. Give me a minute.”

Hank goes to the order entry utility and skips the order causing the problem.

“Okay Mary I have skipped the bad order and restarted the interface. You should see orders crossing now.”

“I hear the label printer cranking away so you’re correct.”

“The billing number for the order that caused the problem is H00014298409 and that order will have to be re-ordered with the correct date information.”

“Hold on. Let me check my note here, that number seems familiar. Would you believe that is the same order the ER was complaining about. Does that mean they are the ones that entered the incorrect date?”

“Yes, and their hospital system should be doing date checking when they enter the orders so this doesn’t happen.”

“Couldn’t LabApp just ignore the bad date?”

“Well, it could, but would you want incorrect information in the patient’s record. What if that date was for the date of birth for the patient? You know that some tests that you run have normal ranges based on age and that could cause the wrong information to be given to the doctor. Having the wrong information about a test result might end up causing incorrect treatment to be given to the patient.”

“You’re right, and there are enough problems already without creating anymore. That could cause a serious problem for the patient.”

“Unfortunately, the hospital system you have at your hospital is also used at some others and I see this problem more times than I care too.”

“I am sure glad that LabApp is set up to catch these errors. It causes a problem with a delay in getting the orders, but that is better than causing a potential life threatening situation for a patient.”

Patty walks up and tells Mary that all the orders are showing up in the system now.

“Patty, you need to drop over and speak to Jo in the ER and let her know the problem was an invalid date that was entered by them. They need to be more careful and check the dates before they finish entering the orders”

“I know she is going to tell me they are too busy to take the time to check everything they enter twice.”

“Well, impress on her the possibility of causing harm to a patient if the information is incorrect. Also tell her that she should let the ER doctor know about this and maybe he can bring some pressure to bear on the hospital system staff to get the software fixed on their side to prevent this from happening.”

“I will pass that on to her. I will also let her know that a mistake like this affects all the orders for the entire hospital, not just the ER.”

“Okay Hank, thanks again for your help and also for the lesson.”

“Glad to help out, you have a good night Mary, bye.”

Conclusion:

Just because an interface is running doesn't mean it's processing any data. So, all interfaces that qualify as a suspect should be checked. People many times are in a hurry and make mistakes during data entry and that is why computer systems should have validation rules setup on data entry fields. This is just one of several reasons that can cause no orders to make it to the laboratory.

The Missing Labels – Part 2

It has been a couple of weeks now since there had been any problems in the lab that has required Mary's involvement, but that apparently is going to change abruptly.

"Mary, I need your help again," says Patty.

"Okay, what can I help you with?"

"Our collection labels are supposed to print at 1 A.M. and we have not seen them yet and it's already 1:30. I'm worried that we will be missing some of the early collections."

"I guess you have checked the printers as well as the around the department, including the trash cans. We don't want to miss them if they were already printed like the last time."

"Right, I did check all of those places, no luck."

"Just to be sure I will recheck some things."

Mary continues back to chemistry to drop off her samples and get them started running. Vicky drops by to say hello.

"Hello Mary, how's it going tonight?"

"I am doing fine, but Patty is having a problem with collection labels again. I am going to recheck the printers in a minute."

"Go ahead and load your samples, I have a few minutes, I'll do a quick check."

"Thanks Vicky that will be a big help. Patty has already checked once and has also looked around the department. And yes, she did check the trash cans."

With a chuckle, "I don't think Patty will ever forget that," Says Vicky.

"I don't think we will either."

"Okay, I have checked the printer the labels should print on, and I have also checked all the other printers. I don't see any jobs queued up on any of them. We will have to look at something else."

"Do you have any suggestions Vicky?" I don't know where else to look, guess we will have to call either LabApp Technical Support or Jen for help."

"Let's give LabApp Technical Support a call to see if they have something we or they can check before we wake Jen up."

"Okay, I will give them a call."

Mary calls LabApp Technical Support and speaks with the on-call tech, and describes the problem. The tech tells her that she will open a ticket, do a check of their system and give her a call back.

"Patty, glad you stopped by, Vicky and I checked and we do not see a problem anywhere. I called LabApp Technical Support and they are going to look into the problem and give us a call back."

“Good, I am really starting to worry. We just got a call from the floor and we missed picking up a timed specimen. The nurse was not happy, but she did understand. We don’t want to be doing that again if possible.”

It has been about fifteen minutes, the phone rings and Mary picks it up.

“Hello, Chemistry department, Mary speaking.”

“Hello Mary, this is Glenda at LabApp Technical Support calling you back about the collection label problem you reported. I have checked the printers again as well as the interfaces. Everything appears to be working correctly. I don’t see any problems. Maybe the orders were not sent from the hospital system. Have you checked an example to see if the orders are in the lab system?”

“No, but I will get an example from the floor and check that. Thanks for checking and for the suggestion.”

“No problem, give me a call back if you need more help. If you don’t mind could you call me back if you fix the problem so I can document it in the task? Plus, I will be worried about you guys if I don’t hear that you have it fixed.”

“Thanks, I will call you back either way. Bye.”

Vicky goes back to hematology to catch up on her work and Mary walks down to Specimen Processing to speak with Patty.

“Patty can you check with one of the wards and get an example of an order that we should have received but didn’t? I need to check and see if the order is in our system. If it’s not here then that explains why we did not get the labels and we will have to get with the hospital IT department.”

“Okay, give me a few minutes and I will run upstairs and see what I can get for you.”

A few minutes later Patty walks into the Chemistry department.

“Mary, I have two example orders that we should have received orders on and didn’t. Here they are.”

“Alright, let me check in order entry to just confirm again that we did not get the orders. No, neither one is in our lab system. Let me check the interfaces to make sure they are running.”

Mary checks the interfaces and everything is running as it should be.

“I checked everything, including the OEHS interface that gave us a problem a couple of weeks ago. I don’t see any problems in the OEHS interface, there are current orders showing at the bottom of the trace. I will call the IT department to make sure everything is Okay on their side.”

Mary looks up the helpdesk number and gives them a call.

“Hello, this is Dick.”

“Dick this is Mary in the lab. We are having some problems with our collection labels not printing. We have checked and the orders are not in the lab system. Do you see any problems on the hospital side?”

“Let me check. No, all the outbound interfaces to lab are running Ok. It must be something on the lab side.”

“I don’t think so. We had the lab vendor dial in and check the lab system and they did not find any problems. We are getting orders in LabApp. We are just not getting the orders for our morning collections. Can you think of anything else?”

“Sorry, all I can tell you is that the outbound interfaces are all running and they are not showing any backups. So there is nothing that I can do for you. You will need to contact your lab vendor again.”

Mary, Patty and Vicky discuss the issue and all agree they will need more help. The decision is made to call Jen, the LIS Administrator and bring the big gun to bear on the problem.

“Jen, this is Mary, I am sorry to bother you in the middle of the night but we have a problem with the morning collection labels.”

“Okay, tell me about it and what you have checked so far.”

“We have checked the printers, all of them, including the specimen processing area and the trash cans. I checked the interfaces and all are running. The OEHis interface that caused problems a couple of weeks ago is fine. I can see new orders in the bottom of the trace file and those labels are printing okay, but the orders for this morning’s collections are not in LabApp. It seems the problem is because the orders are not in LabApp. I spoke with Dick at the helpdesk and he says there are no problems on the hospital side.”

“Let me run this back at you. Everything is okay except for the orders for this morning’s collections are not in the lab system, correct?”

“That’s correct Jen.”

“Well then, I know what the problem is.”

“Great, is it something we can fix then?”

“No, the hospital staff will have to fix it. The problem is, and here is something for your notes, all the timed specimens are held in the hospital computer system until midnight and then the orders for those timed collections are sent by the hospital computer to the lab computer for that day’s collection.”

“But Dick said everything was running okay on their side.”

“He is correct, to a degree. His interface lines are showing they are running and there is no backup of orders waiting to be sent. Problem is though, the hospital computer for one reason or another, did not send that batch of orders that was waiting for midnight. Dick will have to contact his department manager to get that corrected. The helpdesk operators don’t have access to do that and as you have seen it’s very unlikely they even know about this batch delivery operation.”

“Jen, thank you, I will call Dick back and give him the information.”

“No problem. I am just glad it was not something serious. This should be very easy for them to fix. By the way, I am going to leave a LabApp User Manual for you today when I come to work. So when you get in on your next shift, look for it. Since you have been doing such a good job of handling a lot of these problems you might be able to learn even more by reading through the manual.”

“Great. You know a while back I would have never even considered doing anything like this. Now that I have been getting involved I find that I really enjoy it. Thank you, I will look forward to going through the manual. Goodbye.”

Armed with the new information from Jen, Mary calls Dick at the helpdesk.

“Dick, this is Mary in the lab again. I called my LIS Administrator, Jen, and she explained that the next day’s orders are held in the hospital computer system until midnight and then the hospital computer sends them in a batch to our laboratory computer. Jen says you will need to call your manager to have the batch resent since it appears that for some reason it did not get sent.”

“Okay, I did not know we had anything like that set up. I will call my boss and see if this can be taken care of. I will call you back after I talk with him.”

Its ten minutes later and Patty is jumping up and down with joy. The collection labels are printing.

“Mary, this is Dick at the helpdesk, Jen was correct, the batch did not get sent. We had some unscheduled maintenance done tonight on our system and the interfaces were all down for 45 minutes. That did not cause any problems, we thought. However, since the batch was scheduled to be sent right after we started the maintenance it failed to cross over. My boss logged into the system and resent the batch.”

“Thanks for calling me back. Patty just now told me we are getting the expected labels now. I guess we both need to make a note of this, so if it happens again, we will not lose so much time in getting it fixed.”

“I have already put a note on our communication board about this so everyone working the helpdesk will know. Have a good rest of the morning. Bye.”

Mary remembers that Glenda at LabApp Technical Support had asked her to call her back. Mary dials the LabApp Technical Support number and Glenda answers.

“Glenda, this is Mary at HOSPL. I just wanted to let you know we found the problem and it was fixed. The orders for next day’s collection are sent in a batch at midnight from the hospital system to our system. Problem was that the hospital system was having some unscheduled maintenance done and the batch did not get sent. They resent the batch and all is okay now.”

“Mary that is good news, I guess that is something I need to ask about in this kind of situation. I will put that in my notes in case I see this again. Bye and have a good morning”

Conclusion:

The unknown is what will bite you. As shown in this case, neither Mary nor Patty knew about the batch send of orders at midnight. Also, Dick at the helpdesk didn't know either. This was a procedure ran by the hospital computer that is done automatically every night. It had been running for months with no problem. Procedures like this that are done automatically are many times forgotten about, for no other reason than they run day after day without incident. Fortunately, since the LIS Administrator was available to be contacted, this was resolved sooner than it might have been otherwise. This points out that the most knowledgeable person may be the only person with a quick answer. Since Jen had been the leading person in setting up the lab system she was well aware of how the timed collections were handled. Since Dick's boss was also intimately involved in setting the batch process up, he was also quick with the answer and also with the solution. It's important to be able to contact knowledgeable staff in addition to calling the lab system vendor. That contact information should be readily available to those in the laboratory as it was in this situation. Fortunately Dick has the needed contact information for his boss as well.

Mysterious Messages

It has been a busy night and Mary is getting ready to release another batch of results. As she clicks on Enter to post the results for the first sample a message pops up on her workstation screen reading “37 results pending on Auto Reporting queue, press any key to continue.”

“Okay, that is something new. I wonder what it means,” Mary thinks to herself.

Vicky is walking by chemistry and Mary calls to her, “Vicky have you seen this message before?”

“Yes, I was just releasing some test results. I was going to ask you if you were seeing the same message. What were you doing when it popped up?”

“I was releasing results on a sample and when I pressed the enter button it just came up.”

“Well, I have never seen that message before, so I don’t know what to tell you.”

Just then Pam from Micro walks by.

“Pam, are you seeing any popup messages like this on your screen when you release results?”

“Nope, can’t say that I am. I just finished releasing several results before I walked over this way.”

“Jen left me a copy of the LabApp User Manual to look through so I will take a look at that,” Mary said.

“What happens when you press a key?” Vicky asks.

“Well the message goes away and it lets me release the next results. I checked to see if the results had actually been released and they were, so I am not sure what effect the message is having. I will check the manual. I do see that each time I enter more results the message is indicating the number is bigger.”

“Okay, let me know what you find out.”

Vicky goes back to hematology to run some more samples through. Mary gets the User Manual out to see if she can determine the reason for the popup message. She then walks over to hematology with the manual in hand.

“Vicky, I found a section in the User Manual that talks about Auto Reporting. It appears that it’s through an interface.”

“What does it do?”

“According to the manual, the Auto Reporting interface is what sends the chart report to the floor where the patient is. It creates a paper copy of the results that are in the hospital computer system.”

“And they need a paper copy when they have it in the computer, why?” Vicky asks.

“When we had that printer problem up on 4 North a while back I remember Ruth, the charge nurse, saying the doctors wanted a paper copy because they liked to carry it around with them. They also like to make notes on them. I guess that helps them when they have to update the patient chart and also gives them time to gather their thoughts on paper before entering them into the computer.”

“That seems like extra work to me.”

“I’m sure it’s.”, Mary said, “We have to remember that computers have not been used this way very long. The new doctors are probably not using the paper copies and are just entering directly into the computer. Our older doctors did not grow up with computers like the younger ones and have not fully adjusted to using them yet.”

“You’re probably right. I do see the younger docs sitting at the computer more often. I guess it’s hard to teach an old doc new tricks.”

“Yea, but it’s not impossible, just look at me,” says Mary with a chuckle and a grin.

“But what do we do about the popup message?”

“I think we should check the interface screen and see if we can find this interface. It shows in the manual that the short identification is most often *AUTOR*.”

Mary brings up the interface listing and behold there is the *AUTOR* interface, and it’s not running.

“Well, I’ll be, the darn interface isn’t running. I’ll start it and release some more results and see what happens.”

Mary goes back to her workstation and releases another test result.

“Yippee, no popup message this time.”

Going back over to hematology, Mary wants to see if Vicky is Ok now.

“Vicky, are you okay now? I am not seeing any more popup messages in chemistry.”

“Let me check. Nope, no more messages. I guess restarting that interface fixed it.”

“Ya know Vicky; I am still wondering why Pam in Micro was not having the same problem. I think I will give LabApp Technical Support a call and see what they tell me.”

Mary calls LabApp Technical Support and Hank answers the phone.

“Hello Hank, this is Mary at HOSPL. I just have a quick question for you.”

“No problem, what can I help you with?”

“Well, I was releasing results and got a popup message that there were results pending on the auto reporting queue. I found the problem was that the *AUTOR* interface was not running. When I restarted it the problem was gone. We did not get anymore popup messages.”

“That’s great; you were able to fix your own problem. What is your question though?”

“Okay, I fixed the problem for chemistry and hematology, but Pam in microbiology never had the problem. I was just wondering why if we had the problem, why didn’t she have it as well.”

“Mary, that’s a good question with a very simple answer. You see microbiology is a separate module and it has its own auto reporting interface.”

“I guess that explains it simply enough. What would the interface for micro be called?”

“That interface would be normally called AUTOM. Now you guys are a single site running off one server that is installed at your hospital. In your case the interface for both will be following the default.”

“There are other ways that hospital labs are set up?”

“Yes, and it can get a little messy depending on how many labs are using the same server”

“Hank, before we go any further, maybe you should tell what you mean by ‘server’?”

“Oh right, sorry, I didn’t mean to use words that you didn’t understand.”

“That’s Okay Hank, I have been reading the User Manual and I have seen the word used. As I understand it, that is the computer that everything else connects to and it does all the result and report handling.”

“Yes, you’re correct. You can expand on that but essentially that is all you really need to know for most purposes.”

“Okay, back to the auto reporting interfaces. What else can you tell me about it Hank?”

“Well, as I was saying the interfaces at your hospital follows the default names because you have only the one laboratory using the server. However, when you have other labs using the same server you will have slightly different names for the interfaces for each different laboratory. It makes it simpler that way.”

“Can you give me an example?”

“Alright, assume you have two labs using the one server. You could use the default for the auto reporting interface for the lab at your site where the server is located. Then you could name the interface for the other lab slightly different to indicate the other lab. You might use AUTOR for your lab and something like AUTRA for the laboratory at hospital ‘A’.” You would do the same thing for microbiology auto reporting if there is more than one microbiology lab using the same server. In that case you could use AUTOM for your main micro interface and maybe AUTMA for the micro lab at hospital ‘A’.”

“Ok, I see, that makes a lot of sense. Thanks for taking the time to explain that for me. I am beginning to see that in many cases this computer stuff is using a lot of common sense.”

“Right you’re Mary. Anything else I can help you with?”

“Nope, that takes care of it, thanks again. Bye.”

Conclusion:

Many times having access to a user manual is of great help in solving some of the problem that you run into. Knowing that the different parts of your lab software may have different names for similar functions is also very helpful. There is never anything wrong with asking for more information or a clarification.

The Case of the Missing Results

The helpdesk has just called the lab to tell them the floors are not seeing any lab results in the hospital computers system for at least two hours now.

“Mary, this is Dick at the helpdesk. I have had several calls from the floors saying they are not getting any lab results. I don’t see any problems on the hospital side other than we have not received anything from you for quite a while. Can you look at your interfaces?”

“Sure, I’ll check the interfaces and get back with you.”

Mary goes to the other departments and asks if anyone has had any problems with releasing results. She has not forgotten about the messages on the auto reporting queue from last week.

It seems the other techs are on break. Sticking her head in the break room she asks, “Have any of you folks had any problems with releasing results?”

The answer from all is, No.

Checking the interfaces Mary first looks at the result reporting interface (RR) since the LabApp User Manual shows that is the first interface to get the results after they have been released by the techs. The RR interface is running okay. Checking back with the User Manual again, she finds the results are then sent to the sending interface (SND) next and that interface then sends the results to the hospital system. She figures it must be in the SND interface where the problem lies.

Vicky, who has just returned from break says, “Mary, have you found anything?”

“I’m just about to check the SND interface.”

“Is that the only one that could be the problem?”

“No, it could have been a problem with the result reporting interface, the RR, but it’s running Ok.”

“Looks as though the SND is running Ok as well,” says Vicky.

“You’re right. Okay, let’s look at the trace file. The User Manual indicates that sometimes there are error messages in there that might be helpful.”

Mary opens the trace file from the interface setup screen and jumps to the bottom of the file.

“Well, this might be an indication of a problem but I don’t know what *errno*=79 means. I guess I will have to call LabApp Technical Support to see if this is the problem.”

“Okay, I am going back to Hematology, let me know if I can help you.”

Mary says okay and that she will let her know what she finds out. She dials the LabApp Technical Support number.

“Hello, LabApp Technical Support, Hank speaking, how may I help you?”

“Hello Hank, this is Mary at HOSPL and I have a problem with results not crossing to the hospital system.”

“What have you looked at so far?”

“I looked at the RR and SND interfaces since the User Manual says those interfaces are the ones that send the results to the hospital. In the SND trace file, I see *errno=79* repeating over and over. Could that be the problem?”

“It’s not actually the problem, but it does indicate what the problem is.”

“Oh good, what can I do to fix this?”

“Well, you can’t fix it; the hospital side will have to. That error message is telling you that the SND interface is trying to talk to the receiving interface on the hospital system, and it’s not getting an answer. The SND interface will not try to send any results until the hospital interface answers and lets the SND know it’s ready to accept results.”

“I guess I will have to call Dick and have him recheck. He already told me there were no problems on the hospital system. Thanks Hank, I appreciate the information. Bye.”

Mary calls Dick at the helpdesk to tell him what she has found out.

“Dick, this is Mary in the lab. I checked our interfaces and there is an error message in our sending interface that according to LabApp Technical Support indicates the problem is on your side.”

“Let me check again Mary.... Nope, I still don’t see any problems with my interfaces and I still don’t see any results coming from the lab system.”

“Alright, I will call Jen, our LIS Administrator to see what she can tell me.”

Vicky walks into the department to see what Mary has found so far. “Mary, did you find out what the problem is yet?”

“I spoke with Hank at LabApp Technical Support; he told me the error we are seeing in the SND interface means the problem is on the hospital system. I spoke with Dick and he rechecked, but is still saying it’s not a problem on their side. I am going to call Jen for some help with this one.”

Mary finds Jen’s home phone number and dials it.

“Hello, this is Jen.”

“Jen, I am sorry to wake you up, but I ran into a dead end.”

“What’s the problem?”

“Well, the floors are complaining they’re not getting results in the hospital system. I spoke with Dick at the helpdesk and he checked and says there are no problems on their side. I also spoke with Hank at LabApp Technical Support and he tells me the error I am seeing in the SND interface means the problem is on the hospital side. So now I am not sure what to do.”

“Mary, what’s the error that you’re seeing?”

“In the trace file, I see a repeating message that says *errno=79*. Hank says that means the interface on the hospital side is not answering our interface.”

“He’s correct, and the problem is on the hospital side. Call Dick back and ask him to have someone check the *interface engine*.”

“I know Dick well enough that he’s probably not going to know what an “*interface engine*” is. What should I tell him?”

“Tell him, it’s another computer that’s in their department that sits in between the two systems and translates the data between the lab and hospital computer systems. Normally it’s not a problem, and is not something that he will most likely be able to check or fix himself. He most likely will need to call his manager to get it checked. That should fix the problem, but call me back if you don’t get results, and I will call someone for you.”

“Thanks Jen, I’ll call Dick right now. Bye.”

Mary dials the helpdesk and Dick answers.

“Dick, this is Mary in the lab again. I spoke with Jen and she says the problem is with the interface engine. It’s a separate computer that is on the hospital side and sits between the two systems. Can you check it?”

“Mary, I have no idea what an interface engine is, but I will call my boss and wake him up. I hope you know what you’re talking about, or I might get my butt chewed for waking him up. I will call you back after I talk with him.”

“Thanks. Bye.”

“Well, Vicky, I guess we might as well get a cup of coffee. I have all my samples running. How about you, are all yours running?”

“Yep, let’s go get a cup.”

Dick calls his boss to see if he can help resolve the problem with interface engine.

“Hello, this is Bob.”

“Hi Bob, this is Dick at the helpdesk and we have a problem with results not crossing from the lab and I need your help.”

“Okay, what have you checked?”

“I checked the incoming lines and I do not see any problems, but there has not been any results show up on them for quite a while now. Mary in the lab called LabApp Technical Support. They said the problem was on our side. Mary then called Jen, the LIS Admin., who told her to have us check the interface engine.”

“Alright, give me a few minutes and I will connect to the system and check the engine. I will call you back.”

“Okay, thanks Bob. Bye”

It has been half an hour and finally Bob calls back.

“Dick, this is Bob, I found the interface engine incoming port was hung. I had to reboot the computer to get the port cleared. It should be okay now. Check your incoming lines.”

“Okay, I see results crossing now. I will notify the lab. Thanks Bob, I appreciate your help.”

“If you have any more problems with this give me a call back and I will drive in, but it should be okay from here on. Bye.”

Dick calls the lab to let Mary know the problem appears to be resolved now.

“Mary, this is Dick at the helpdesk. I spoke with my boss and he rebooted the interface engine and I can see results crossing over now. So, everything should be okay.”

“Thanks for the call back, Dick. I’ll check to make sure everything looks good on this side.”

Mary checks the SND interface trace file again and sees that the error message is now gone and the interface appears to be working normally.

Walking over to Hematology she tells Vicky, “It looks like the problem is fixed so the floors should be getting their results now.”

“That is good, maybe now I can get some work done now instead of answering the phone calls from the floors constantly. Thanks for letting me know.”

Conclusion:

Mary is definitely honing her trouble shooting skills and getting better as time passes. Having the User Manual has been a great asset for her. In this case it was seen that both the lab and the hospital interfaces were running, but the error in the SND trace was the best clue. Also noteworthy is the fact that the hospital system afterhours staff will in most cases not know about the interface engine and therefore will think everything on their side is fine. You can sometimes get arguments from the hospital IT staff and may need to get your LIS Admin. involved in order to convince them. In this case the fact that Mary quoted what Jen had said they needed to do was convincing enough for Dick to escalate the problem on his side and get it resolved.

No logins to LabApp

The night was quiet and work has been going well, but its coming time to start collection rounds soon. Mary is taking a break before the morning hell breaks loose when just then Vicky walks into the break room wearing a deep frown... looks like hell has arrived early.

“Mary, has anyone told you they were having problems logging into LabApp?”

“Why no, they haven’t Vicky. Are you having problems logging in?”

“Yep, been trying for fifteen minutes and it just keeps hanging.”

“Have you tried rebooting your workstation?” says Mary.

“Tried it, no luck with that either.”

“Okay, how about trying on another workstation?”

“Actually, no, I haven’t tried that yet; let me run over to your department and see if the same thing is happening on the chemistry workstations.”

“Go on ahead Vicky, I am going to finish this cup of coffee, and I will be right over.”

Vicky leaves and goes to the Chemistry department, a few minutes later Mary joins her there.

“So, Vicky, any luck?”

“Afraid not, I get the same response here. I click on the icon to login to LabApp and I get this rather multipurpose error message giving me a host of things that might be wrong, such as no network connection and others.”

“Well, let me try so we can make sure it’s not related to your login.”

Vicky cancels her connection attempt and Mary tries to login.

“I can’t login either so I guess we can rule out a problem with the user logins, and since we tried more than one workstation we can rule out a problem with the workstation computer.”

“Mary, you have been going over the user manual a lot lately, so you’re ahead of me on this. What do you think we should do at this point?” says Vicky.

Scratching her head, Mary responds, “I am not sure, but there should be some way to check a little deeper. Since we are so close to morning collections we should probably not waste any time though. I will call LabApp Technical Support and see what they have to suggest.”

Mary picks up the phone and dials the LabApp Technical Support number.

“Hello, this is Marge at LabApp Technical Support, how can I help you?”

“Hey Marge, this is Mary at HOSPL and we are having a problem with logging into LabApp. Can you help us, and maybe dial in and take a look around. We are getting close to the busy time of the morning, so we need to get this fixed quickly.”

“Sure, no problem Mary, I will open up a ticket and check your system. I’ll call you back to let you know what I find.”

Mary gives Marge her phone number, client ID, and hangs up.

“Vicky, while Marge is checking I am going to walk over to check with Pam in micro to see if she is having any problems with her login. I’ll be back in a few minutes. If the phone rings before I get back can you get it for me?”

“Sure, I’ll be able to hear it ring from here. Take your time Mary.”

Mary walks over to micro and Pam is busily setting up culture plates.

“Hey Pam, we are having problems logging into LabApp in the rest of the lab and I wondered if you were having the same problem?”

“Couldn’t say, I’ve been busy streaking culture plates for quite awhile. Give me a minute and I will try logging into MicApp and see.”

Pam finishes streaking a stack of plates and goes to the workstation in her department to see if she can login to MicApp.

“Sorry, Mary, it looks as though I can’t login to MicApp either.”

“Go ahead and try to login to LabApp and see if you can get in.”

“Nope, can’t login to LabApp either”

Just then Vicky walks in and tells Mary that Marge is on the phone in chemistry. They both leave Pam to finish setting up the rest of her cultures.

“Pam, we are going back to speak with LabApp Technical Support. Maybe they will have an answer for us.”

Arriving back in chemistry Mary picks up the telephone, “Hello Marge, what have you found out? A solution, I hope.”

“Sorry, but unfortunately the programmer and I have not found any problems with the system. We can reproduce the problem though. When we connect to one of your workstations we get the same error. This appears to be a network issue. I was able to determine that several printers that I tried to ping did not respond. I am afraid you need to contact your network staff there on site and have them check the network.”

“Okay, I will call the helpdesk and see what they can tell me. Thanks for checking our software.”

It’s getting very close to the time to start specimen collections on the wards and Patty has just walked up.

“Mary, we are not getting our morning collection labels from the last batch. Is that related to the problem with logging into LabApp?”

“Most likely, yes, it’s all one big problem. How many collection labels do you think we are missing?”

“We got the first batch that prints at 4A.M., and those will take us through the five o’clock collections, but the 6A.M. labels did not make it. It looks like it might be a light morning so hopefully we won’t be too bad off if the problem gets resolved soon.”

“I’m calling the helpdesk now and hopefully they will have an answer.” Mary says as she picks up the phone and dials.

Dick answers sounding rather stressed, “Helpdesk, this is Dick.”

“Dick, this is Mary in the lab, we cannot login to LabApp. Do you know of any problems that might be responsible?”

“Most likely I do. I got several calls from the floors complaining they could not get into the hospital system as well. It’s probably all related to the same problem. I have paged our network on-call person and I am waiting to hear back from him.”

“Okay, let me know something as soon as you can. We’re getting behind, and the doctors and nurses will be screaming their heads off soon.”

“Don’t worry; I want to get this fixed as soon as possible. You won’t be the only ones getting screamed at if we don’t.”

Twenty minutes later, Dick calls and says they should be Ok.

“Mary, Dick here, try your logins now.”

“Alright! We can login Ok now. What was the problem?”

“Well, talking with the network guy, it appears there was a switch that died, he fixed that, and now all is okay.”

“Great, now we can get caught up. Thank goodness it was not down much longer. Thanks for calling to let me know. Bye”

Walking up to specimen collection she sees that Patty is pulling the last of the collection labels off the printer and everybody is ready to hit the floors.

“Patty, I guess we will make it in spite of the delay. Anything I can help you with?”

“No, we have it covered, but thanks for asking Mary.”

Conclusion:

This shows that although it could have been a problem caused by several different reasons it was something completely outside of the laboratory. The key point was that the hospital system was experiencing network issues as well. Although Mary took a route to check everything she could within the lab system, the time spent was not wasted because Dick at the helpdesk was already aware there was a problem and had notified his network on-call person. It could just as well have been a hardware problem on the lab server or a software problem with LabApp, and the helpdesk would not be of any help in that regard. Checking the obvious and then calling LabApp Technical Support was the correct thing to do. Checking with the helpdesk to just ask about a network issue could also have been done.

About the author



Eric Warden is a new writer and this is his first anthology of educational short stories for the Medical Laboratory Professional. He has previously published two short technical writings; *Eric's Guide to ASCII Troubleshooting* and *So, You're On Call*. These were published for and by his employer.

Eric began his career in Medical Technology in 1965 while serving in the United States Air Force where he was trained as a Laboratory Technician. After leaving the U.S.A.F in

1968 he began college to obtain his degree, graduating from West Virginia State University in 1978.

In 1998 he began two new career directions. His first direction, when he enrolled in a Masters Degree level program at the Florida Institute of Chinese Medicine where he studied to become an Acupuncture Physician. He graduated in January of 2001 having completed a four year program in three years and was subsequently licensed to practice in the state of Florida.

His second direction, which began at the same time as the first, was to begin working for a major Laboratory Information Systems vendor. His position there is to work as a Technical Support Specialist. Having a rather good computer background already he was then exposed to UNIX computer systems in small to very large hospitals. This meant he was learning a new computer system, acupuncture points, herbs, herbal formulas, Traditional Chinese Medicine principles and theory along with Western pathology, physiology and anatomy. It's important to note that being born in 1942 and beginning this intense learning period at the age of fifty-six years of age shows that you're never too old to learn.

Now at the age of seventy years he is still active in both careers and is beginning a new one of being a writer and teacher as well

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