Supplementary Appendix 3: Quotations Illustrating Themes and Sub-themes in Higher- and Lower-Performing Facilities

Distinguishing themes	**Description of theme/sub theme**	**Illustrative quotes**	
		Higher performers	Lower performers
Pre-intervention context	Facility's pre- intervention context.		
Facility characteristics	Pre-intervention physical infrastructure as described by providers.	"If you tell someone to work on something and they are lacking instruments, the infrastructure isn't good, the ORs are inadequate, they become demoralized and teams suffer, because we want to support each other, but we can't, and patients suffer. This happens because we have problems with equipment like suction machine, the OR lamp is not working, space is not enough." (Surgeon, Facility 2)	"Sometimes you can be operating on an elective patient and you might receive an emergency case, so you have to stop the elective procedure and move the emergency patient in. We have two rooms but only one works. How can communicating between us help with this? We need better infrastructural to improve safe-surgery." (Surgical team leader, Facility 9)
Team orientation	Pre-intervention perceived team relationships.	"We always work as a team. We were using a problem solution tree before SS2020. So, if there was an issue, team members came together, suggested solutions and picked solutions which scored highest and were easiest to implement. The SSC made it easier to coordinate." (Anaesthetist, Facility 2)	"Everyone is very focused on their jobs. If I am busy, the nurse or surgeon can see that the BP is low on the monitor. But they say this is the anaesthetist's job. If patients suffer, they will blame me. But they were in the room and did not say anything. Rather than convincing everyone, if key staff do their jobs well SSC can be implemented to help patients." (Anaesthetist, Facility 8)
Learning orientation	Pre-intervention perceived organizational learning strategies,	"We practice low dose high frequency learning every day before starting our duties, because we	"Physically as a surgical team if we are not given the forms, it becomes difficult. How do we

	extent of experimentation and willingness to learn from others	have to make sure that everybody has gained something new. I think this continuing learning is better, because it is hard to retain information the first time. We experiment with learning strategies but currently this is going well for SS2020." (Anaesthetist, Facility 2)	improve SSC use? We also have other duties so we can't keep reminding each other. If the focal person can print the checklist and provide it in all ORs, if leaders and matron can check this, it would be better." (Surgeon, Facility 8)
Engagement with SS2020 intervention	Engagement and learning from the SS2020 intervention.		
Leadership and SSC Training	Post-intervention perceived learnings from the leadership training intervention.	"The SSC is about communication and learning together while doing. We don't have to hide mistakes, just to be graded as good providers. If you expose your mistake, you can be corrected. And ultimately the team benefits by learning from your mistake." (Surgical Provider, Facility 3)	"Everything in the SSC is about improving surgical outcomes and observation so we are spending so much energy on SSC. Communication is fine, but if I use the form, I am forced to check everything I may forget after a five-hour surgery to give quality care to the patient. We will never leave a gauze behind again." (Surgical Provider, Facility 10)
Capacity building interventions	Post-intervention perceived learnings from the capacity building interventions.	"For eclamptic patients we used to use general anesthesia. But we learnt that if we have arrested the convulsions and managed the blood pressure, then we can do with spinal anesthesia. These new updates help us work better as teams because everyone in the OR is learning, and surgeons and nurses and anesthetists take decisions together." (Anaesthetist, Facility 1)	"I can say practical training which was very nice for us. Now we are learning new techniques like using Joel-Cohen incision from what we were using, the Pfannenstiel incision. This is minimizing infection, letting patients go home, and we use less suture. Our practice is improving every day and we are learning so much." (Surgeon, Facility 10)
Sustained	Post-intervention	"I like the continuous	"I find mentorship to be

learning interventions	perceived learnings from the sustainable learning interventions.	training just like they are doing the ECHO. To me, in project ECHO, you present real cases and how you managed them. So it is not the books and records, you present a real case which is very helpful for long term improvement." (Surgeon, Facility 3)	better than project ECHO because when you talk to someone face to face on health education is better than using the screens. They catch your procedure on the spot and learning is fast and immediate and we are supervised in-person." (Surgeon, Facility 8)
Teamwork and communication	Post-intervention team relationships, mutual support between team members, and extent of open communication.		
Provider buy-in	Post-intervention involvement and participation of providers in the SS2020 intervention.	"People may argue that they know what they are supposed to do, but we know they can be motivated today and lose interest tomorrow. So, we have]team meetings every week, every two weeks, whatever is possible to check progress and let people showing less interest speak up. If someone is having problems, they know we want to all help them, so everyone wants to participate." (Anaesthetist, Facility 3)	"No one listens to staff. But when the SSI was going up, the medical officer ordered that if staff refused to use the checklist, they should be removed from the OR. So everyone thought that they will be noticed if they resist the checklist. So, they started to use it. I think orderly decisions to make SSC use compulsory helps." (Anaesthetist, Facility 10)
Hierarchy and open communication	Post-intervention extent of imbibed hierarchies including perceived comfort of junior team members in expressing opinions to seniors.	"Since I am controlling the checklist, I say attention please and read the points with a sign-in. Then all staff answer according to the questions asked. The doctor waits for me because he trusts that I will remind him if he has forgotten something. There is trust." (Anaesthetist, Facility 1)	"The surgeon was looking for the defective part, which looked like the patient's intestine. I told him what he was trying to remove was actually part of the intestine. The surgeon asked if I had more knowledge than him. He said as a surgeon he knew the difference. After opening, he realized he had

			cut the intestine." (Nurse, Facility 9)
Collective responsibility	Extent of collective ownership of SS2020, including sharing of responsibilities with non-surgeon providers in surgical teams.	"A patient does not belong to a person. If person is brought in the theater, everybody gets busy. Earlier everyone did what they felt obligated to in the OR. So if there was a problem in the anaesthesia site, the surgeon would just wait for you to go through the complication. But now the surgeon works with us, and in turn, if the surgeon faces problems due to complications during surgery, the anaesthetist helps. (Anaesthetist, Facility 2)	"If surgeons are not motivated and don't drive the ward nurse and skip the SSC in a hurry, we can't remind them in the middle of surgery. The higher educated have to instruct the lower educated subordinates. And sometimes the staff with low cadres can ask questions, but with caution to not offend staff with higher education. (Nurse, Facility 8)
Collective learning	Post intervention group learning, including the balance of individual learning aspirations against team learning goals, translation of knowledge to colleagues, use of data as a learning tool, extent of learning together as teams, and evaluation.		
Knowledge translation	Post-intervention sharing of knowledge by SS2020 training attendees with colleagues who did not attend trainings and new recruits.	"Those of us that went for the leadership training found time to teach others within a week. People argued that they knew their jobs, or that it would be impossible to complete the SSC while operating. But what we did, and it is a continuing process, was to sit down and repeatedly explain research on surgical errors, and the importance of each step in the SSC." (Surgical Provider, Facility 2)	"Staff who attended leadership and clinical training are champions of SS2020. But others feel it is a waste of time. And unless there is pressure from above, why should they listen to us?" (Surgical Provider, Facility 8).
Data and monitoring	Post-intervention perceived need for and nature of use	"In the past we didn't have time to discuss our data and never knew the	"Data is important, but we can do it after surgery improvement. We need

	of data for learning, monitoring and decision-making.	importance of the data we collect. We thought we collected data to send to the government, nowadays we know this data belongs to us, they help us catch our mistakes to know where we are and plan targets for where we want to go." (Surgical provider, Facility 3)	training on how data can be used. Right now, the surgeons ask us to look for templates and apply them. But I find this is difficult, and I also don't know what to do with this data." (Nurse, Facility 9)
Team learning	Post-intervention extent of mutual support and collaboration in intervention tasks to achieve common goals.	"We knew helping each other was good but after SS2020 we channelized growing together because we know how critical it is. We divide roles frequently so everyone is familiar with tasks. We were bad with emergency cases. But nowadays since people have seen each other's jobs, we are like a machine, there are no delays with emergency cases and people respond quickly to their role.", Surgical provider, Facility 2)	"Our attitude has changed and we are now sensitive to see complications. It has changed our thinking about surgery- sterilization training, Project ECHO, antibiotic use. Now we only give antibiotics when we suspect sepsis. I did not know you could do safe surgery without antibiotics. So, we have gained so much knowledge and training, it is a great opportunity." (Surgeon, Facility 8)
Role of leadership	Post-intervention leadership engagement with SS2020 and staff expectations about leadership support for intervention functions.		
Expectations from leadership	Post-intervention staff expectations about leader's involvement.	"The hospital management has to make time for daily problems in a big project. We go to discuss strategies about how people are performing, if someone is resisting. Another example is when a staff is missing from the theater team or there are two procedures at the same time, the hospital	"He cares but he usually cannot concentrate because he has so much to manage. But if you convince him that I will take only ten minutes he will listen but beyond that is hard. Or we can discuss while we are walking. Even if we have so many things, we can discuss one issue, and

		management may assist to call another member of the staff to assist." (Anaesthetist, Facility 3)	leave others for tomorrow." (Anaesthetist, Facility 9)
Leadership engagement	Post-intervention leader's engagement with SS2020.	"I am monitoring the daily reports. Every morning we have reports from each department, they tell us how many surgeries they have done and how. I also speak with dissenters. There is a very stubborn nurse who does not like the SS2020 changes. So, I insisted that she attend the training. Special effort is needed for those who are disturbing others." (Medical Officer-in-Charge, Facility 2)	"I am too busy to check if one-third files aren't available or one-third aren't documented. I ask them to come to me with specific problems. They were having problems with purchasing antibiotics since our routine antibiotics were not ascribed by SS2020. So as management I intervened." (Medical Officer-in-Charge, Facility 10)
Perceived impact of SS2020 and beyond	Post-intervention perceived impact of SS2020, and suggestions for improvement.	"Everyone is a watch dog and mentor to each other. Our golden strategy was focusing on everyone, the head of the OR, the anaesthetist and the nurses. If I am not following the SSC, someone will always remind me. We previously collected data to send to the government, but now we know it belongs to us, to help us know where we are and where we want to go." (Surgical Provider, Facility 1)	"We have made good progress in infrastructure with modern equipment and renovation of the ORs. Doctors and nurses have been trained in sterilization and better surgical skills. Now we need more trainings or mentorship. If you know that next month a mentor will come, it makes you practice more and achieve more, so we need supportive supervision." (Anaesthetist, Facility 9)

*Quotes edited for language and flow.