Appendix 2: Interview guide

Kugler et al: Anticipated effects of centralising complex gastrointestinal surgery in a rural area in Germany - perspective of health professionals: A qualitative study

Comment: The interview guide was translated to English. For outpatient physicians and patient representatives Part 2 (What impact do you expect the increased minimum volume standards for oesophageal [pancreatic] surgery to have on your hospital?) was skipped. There were minor adjustments in the interview guide for patient representatives. All interview guides in their German versions are available on: https://osf.io/gqbmp/?view_only=bb1438c155da4b73b7f61e2e46034653

Checking aspects	Concretising questions	Questions for maintenance and control
Introduction		
Presentation Background of the project	I am (name, position, Institute for Health Services and Health Systems Research) For many services and procedures, there is a relationship between the frequency of the service performed, i.e. the service volume, and the quality of treatment. Also, for complex oesophageal and pancreatic procedures, studies show that hospitals with a higher volume provide better quality of treatment (e.g. lower mortality). For this reason, minimum volume standards have been introduced in Germany since 2004. According to these regulations, hospitals may only provide certain services if they can provide proof of a certain volume of services. For oesophageal and pancreatic procedures, the current minimum volume standards are 10 procedures per hospital per year respectively. This means that hospitals must perform at least 10 procedures per year respectively in order to be authorised and to receive reimbursement for these procedures. The minimum volume standard for oesophageal procedures will be increased to 26 procedures from 2023 and the minimum volume standard for pancreatic procedures to 20 procedures per hospital from 2025. Simulations show that the increased minimum volume standards will have an impact on healthcare in the federal state of Brandenburg: some hospitals that currently perform complex oesophageal and/or pancreatic procedures are unlikely to reach the minimum volume standards and will no longer be allowed to offer these operations by law.	
Project aim	The aim of this study is to investigate which effects those currently involved in care anticipate by the new minimum volume standards and how they think the federal state of Brandenburg can prepare for the introduction of the new minimum volume standards. Furthermore, we would like to find out which patient pathways you think should be established or restructured as a result of the new minimum volume standards.	

Checking aspects	Concretising questions	Questions for maintenance and control
Skip questions or stop interview	You always have the right to skip questions or cancel the interview. The results will of course be published anonymously, i.e. it won't be possible to draw any conclusions about you or your hospital.	
Structure Interview	The interview will be structured in such a way that we first ask questions about current care, then about changes and finally about your suggested solutions. The questions will always relate to both oesophageal and pancreatic operations. I would ask you to always answer for oesophageal procedures first and then describe the differences for pancreatic procedures.	
Questions?	Before we start the interview, do you have any questions?	
Personal data		
Position, hospital	Can you tell me about your position, your speciality and your hospital?	
START RECORDING		
Key question 1: **Can you please describe the current care pathway from symptoms to diagnosis and treatment of patients receiving complex oesophageal [pancreatic] surgery?**		
Indications	For which indications do patients receive complex oesophageal [pancreas] surgery?	
Care pathway	Can you describe the care pathway from symptoms to diagnosis to surgery?	
Follow-up	How does follow-up care take place? And where?	
Specialties	Which professions are involved in providing care?	
Key question 2: **What impact do you expect the increased minimum volume standards for oesophageal [pancreatic] surgery to have on your hospital?**		
Offer surgery currently	Are oesophageal [pancreatic] procedures currently offered at your hospital?	Can you tell me more about this?
Offer surgery in the future	Will oesophageal [pancreas] procedures (still) be offered at your hospital after the increase of minimum volume standards?	Could you please give an example?
Incentives for surgeries	To what extent will the new minimum volume standards affect the medical decision making of critical cases? [Example if not understandable: More surgeries to achieve the minimum volume standard]	What do you mean specifically?
Other similar procedures	Are there other similar surgeries (e.g. emergencies) that could be affected by no longer offering these procedures? Which ones? [Example if not clear: aortic aneurysms: if the elective ones are centralised, this will also have an impact on emergency care].	Can you describe ... in a little more detail?

Checking aspects	Concretising questions	Questions for maintenance and control
Other therapies Alternative therapies	To what extent could patients be treated differently at your hospital as a result of the increased minimum volume standards? What other alternative solutions could be established in your hospital?	Does ... play a role? Do you mean ... (summarise)?
Key question 3: **What impact do you expect the increased minimum volume standards for oesophageal [pancreatic surgery] to have on care in Brandenburg in general?**		
Hospitals Patients Longer distances Prevention and follow-up care Relatives Medical training Other impacts	What effects do you expect for other hospitals? To what extent will patient care change? What effects do you expect by partly longer travel distances for patients? What effects do you expect on diagnostics, and post-discharge follow-ups? To what extent do you expect effects for relatives? To what extent do you expect effects on medical specialty training? What other effects do you expect?	Can you tell me more about this? Could you please give an example? What do you mean specifically?
Key question 4: **What solutions and approaches come to your mind for the care of oesophageal and pancreatic patients in Brandenburg with the new minimum volume standards?**		
Restructuring of care pathways Cooperation between hospitals • Yes • No Service providers (transport services) Other service providers Digitalisation	In your opinion, how should the care pathways from diagnosis to treatment be established or restructured due to the new minimum volume standards? Can you imagine that there could be cooperations with specialised hospitals that continue to offer these procedures? What could a cooperation look like? Do you already know with which hospitals you could cooperate? What would the care pathway look like? For what reasons can you not imagine cooperations between hospitals? To what extent could other service providers, such as transport services, provide support here? Can you think of any other examples of services? To what extent could digitalisation play a role in ensuring the provision of care in Brandenburg?	
Block 5: Conclusion	**Is there anything else you would like to add to our conversation?**	
STOPP RECORDING		

Checking aspects	Concretising questions	Questions for maintenance and control
Other contacts Contact again Participation further steps	Do you have any contacts who are also involved in the care of this patient population that I can contact and could you provide their contact details? Can I contact you again if I have any further questions? Would you be willing to continue participating in the project when it comes to planning further steps? (e.g. to implement your suggested solutions)	