

Additional File S1 – Interview Guides

Checklist Physician Assistant/Specialized Nurse:

- **Preoperative:**
 - Which type of patients are seen in the outpatient clinic?
 - Spondylodesis?
 - How many visits to outpatient clinic?
 - Who refers the patients to you?
 - How do you evaluate the transfer of medical information?
 - What information do you provide the patients?
 - Preoperative
 - What is the added value in comparison with consultations by a surgeon?
 - Process of hospitalization
 - Postoperative
 - Are informal caregivers and/or family involved?
 - Use of patient reported questionnaires in outpatient clinic?
 - Use of educational material?
 - Flyers
 - Websites
 - Do you see all patients who receive spodylodesis?
 - Do you get feedback form patients on this consultation?
 - What are common preoperative problems for patients?
 - How are these problems solved?
 - Do you also provide this extra care for other types of surgery?
 - Are there other things you arrange for?
 - Logistic problem solving?
 - Do you have any suggestion for improvement in the preoperative trajectory?
- **Surgery:**
 - Are patients hospitalized one day prior to surgery?
 - Patients' experiences?
 - Do you have any specific tasks during surgery?
 - Tasks on day of surgery?
 - Do you speak with informal caregivers during first hospitalization and surgery?
- **Hospitalization:**
 - What are common peri-hospitalization problems for patients?
 - Are there ways to solve these problems?
 - Tasks during hospitalization?
 - Do you assist/function as the ward physician?
 - Arrangements of post-hospitalization care?
 - Do you visit hospitalized patiens after surgery?
 - Do you arrange homecare if necessary?
 - Do you have any suggestion for improvement in the peri-hospitalization trajectory?

- **Post-hospitalization:**

- Do you see patients in the outpatient clinic after surgery?
 - Wound assessment?
 - Other assessments?
 - How many times do you see patients in the outpatient clinic after surgery?
 - In which cases do you consult the surgeon or supervisor?
 - Is patients have question in between visits, who can they contact?
- Frequently asked questions by patients?
 - How can we overcome/answer these questions?
- What information do you provide the patients post-hospitalization?
 - Frigmin
 - Physical therapy
 - Exercise
 - Sutures
 - Pain medication
 - Homecare
- Use of patient reported questionnaires in outpatient clinic?
- Do you have any suggestion for improvement in the post-hospitalization trajectory?
- Do informal caregivers play a significant role in the postoperative care? Do we underestimate the amount of help informal caregivers provide?
- Do patients report on common problems?
 - Subsequent to surgery
 - Long term
 - Possible solutions?
- Do you have any suggestion for improvement in the post-hospitalization trajectory?

Checklist patients:

- **Preoperative:**

- Visits to outpatient clinic before surgery:

- How many visits?
 - Transfer of medical information
 - Waiting time
- What information did you receive?
 - Different treatment options
 - Complications
 - Expected period of recovery
 - Expectations regarding treatment (leg pain vs. backpain)
 - Was the surgical intervention clearly explained?
 - What will be done?
 - How long will the surgery take?
 - General anesthesia
 - Pain medication with morphine pump or oral medication
- Use of educational material
 - Flyer
 - Websites

- Were all consultations useful?
- Did you remember the important information?
 - Were difficult terms used, was everything explained in an understandable fashion?
- Were there enough opportunities to ask questions?
- Do you have any suggestion for improvement in the pre-hospitalization trajectory?
- **Surgery:**
 - General remarks about day of surgery?
 - How did you experience the admission to the ward?
 - How were you prepared for surgery?
 - How did you experience the transfer to the holding?
 - How did you experience the preparations for anesthesia?
 - How did you experience the interaction in the operating room prior to surgery?
 - Accompaniment
 - Medical information transfer
 - Identification of patient
 - Was it clear why everyone was there and what everyone's role was during surgery?
 - Positive/negative experiences?
 - Do you have any suggestion for improvement?
- **Hospitalization:**
 - How long did you have to stay hospitalized?
 - Experiences?
 - Which doctors did you see during hospitalization?
 - Ward doctor, surgeon?
 - Responsible surgeon(s)?
 - Experience with different doctors
 - Was it clear to you what role each healthcare professional had?
 - Go through protocol:
 - Wound examination
 - Physical therapy (Day after surgery, climbing stairs, educational material about physical therapy)
 - Pain medication (pump, sufficient, pain management, tapering off medication)
 - Fragmin (6 weeks?)
 - X-ray of the lumbar spine during hospitalization?
 - Corset?
 - Information about post-hospitalization trajectory and homecare arranged if necessary?
 - Fragmin
 - Physical therapy
 - Exercise
 - Sutures
 - Pain medication

- Homecare
 - Medical rehabilitation
- Did you remember the important information?
 - Were difficult terms used, was everything explained in an understandable fashion?
- Were there enough opportunities to ask questions?
- Do you have any suggestion for improvement during hospitalization?
- **Post-hospitalization:**
 - What were the first days at home?
 - Did you need any help?
 - Medication (Pain medication, fragmin).
 - Physical therapy
 - Homecare
 - Medical rehabilitation
 - Sufficient care?
 - Setting goals and achieving them (what were the biggest obstacles or barriers)
 - Did you recover as you expected?
 - How many times do you visit the outpatient clinic after surgery?
 - Wound examinations?
 - Visits with the responsible surgeon
 - Recovery
 - Goals and difficulties
 - X-ray
 - Follow-up appointments
 - Useful?
 - Did you remember the important information?
 - Were difficult terms used, was everything explained in an understandable fashion?
 - Do you have any suggestion for improvement during hospitalization?
 - Do you think outpatient visits 6 and 12 months after surgery are useful?

Checklist informal caregivers:

- **Preoperative:**
 - Visits to outpatient clinic before surgery
 - Were you present at all appointments?
 - What are your experiences?
 - What information did you receive?
 - Different treatment options
 - Complications
 - Expected period of recovery
 - Expectations regarding treatment (leg pain vs. backpain)
 - Was the surgical intervention clearly explained?
 - What will be done?

- How long will the surgery take?
 - General anesthesia
 - Pain medication with morphine pump or oral medication
- Were all consultations useful?
- Did you remember the important information?
 - Were difficult terms used, was everything explained in an understandable fashion?
- Were there enough opportunities to ask questions?
- Do you have any suggestion for improvement in the pre-hospitalization trajectory?
- **Surgery:**
 - Were you informed about the surgery?
 - Communication
 - How did you experience the day of surgery?
 - Which services were provided?
 - Were you informed about services you could use?
 - Do you have any suggestion for improvement?
- **Hospitalization:**
 - Experiences?
 - Which doctors did you see during hospitalization?
 - Ward doctor, surgeon?
 - Responsible surgeon(s)?
 - Experience with different doctors
 - Was it clear to you what role each healthcare professional had?
 - Did you receive information about the post-operative care?
 - Were you involved in the postoperative care?
 - Useful services for informal caregivers?
 - Were you informed about services you could use?
 - What went well?
 - What would have been useful?
 - Do you have any suggestion for improvement?
- **Post- hospitalization:**
 - Did you have a significant role during recovery?
 - Did you receive enough support/help with providing care (e.g. fragmin)?
 - Do we underestimate the amount of help informal caregivers provide?
 - Were you present at postoperative outpatient clinic visits?
 - Experiences?
 - Useful?
 - Did you remember the important information?
 - Were difficult terms used, was everything explained in an understandable fashion?
 - Were there enough opportunities to ask questions?
 - Do you have any suggestion for improvement in the post-hospitalization trajectory?
 - Do you think outpatient visits 6 and 12 months after surgery are useful?

Checklist surgeons:

- **Preoperative:**

- How many times do you see a patient before surgery?
- How much time do you have every visit?
- What information did you give the patients?
 - Different treatment options
 - Complications
 - Expected period of recovery
 - Expectations regarding treatment (leg pain vs. backpain)
- Patient reported questionnaires in outpatient clinic?
 - Do you use them?
 - Are they useful?
 - Do you have questionnaires on the pain experience?
- Use of educational material?
 - Flyers
 - Websites
- Are all visits useful?
- Do you have any suggestion for improvement in the pre-hospitalization trajectory?

- **Surgery:**

- Preference for TLIF or PLIF?*
- Why?
- Would you consider choosing the most cost-effective alternative?*
- Why?
- How do you plan surgeries? How do you optimize the process and use time effectively?
 - Do you perform the surgery alone or with two surgeons (neurosurgeon/orthopedic surgeon)?
 - Room for improvement?
 - Time schedule of surgery, including anesthetist and radiology
 - How long does the surgery take?
 - How do you manage these types of surgery?
 - Room for improvement?
 - Radiology
 - Which system is used?
 - When is radiology performed? How long does it take?
 - How do you manage the imaging?
 - Room for improvement?
 - Door movement?
 - Strict policy
 - Room for improvement?

- **(Post) Hospitalization:**

- How many times and at what interval do you want patients to visit the outpatient clinic after surgery?
 - Wound examinations?

- How is this interval chosen?
 - Is this recorded in protocols?
 - Do you use (radiographic) imaging? When and why?
- Visits 1- and 2-year post-operative?
 - Why or why not??
 - Useful?
- Questionnaires
 - Useful?
 - How do you use the outcomes?
- How is the post-hospitalization care arranged?
 - Do you visit the hospitalized patient after surgery?
 - Which types of additional care are needed (e.g. physical therapy)?
- Do you have any suggestion for improvement in the (post)hospitalization trajectory?

* Study-specific questions. Fragments regarding these questions are not relevant nor useful for the process evaluation of lumbar interbody fusion surgery, and were therefore not included in this study.