Baylor College of Medicine & Texas Children's Hospital

# Obstetric Fistula Fellowship Program Curriculum

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## Overview

**Novice track**: Eligibility: Candidate will have no or minimal previous fistula surgery experience, but has completed training in either an OB/GYN, Urology, or general Surgery residency.

Goal: Become comfortable with evaluating and screening patients, able to perform straight-forward fistula repairs, able to safely conduct pre- and post-operative care

**Moderate Track**: Eligibility: Candidate will have done 50-400 fistula repairs, comfortable with straight-forward cases.

Goal: Learn how to perform moderately complex cases and assist on abdominal cases including abdominal fistula repairs, bladder stone removals, and ureteral reimplantations.

**Advanced Track**: Eligibility: Candidate will have done > 400 fistula repairs, comfortable with moderately-complex cases.

Goal: Fine-tune techniques for complicated cases including incorporating flaps and muscle grafts. Become comfortable as lead surgeon to do abdominal repairs, ureteral reimplantations, repeat cases, and complex cases.

**Minimum time commitment:** 3 months of concentrated training. Certification will be based on goals met and evaluations by 3 surgical trainees, with supervisory evaluation by Baylor faculty person.

**Reading List:**

To be read prior to or during training: see Appendix for complete list

**Case submission:**

All cases including patient's age, brief history, type of repair done, whether you were lead surgeon or assistant, and outcome are to be logged on a monthly basis. If cases are not logged by the deadline, trainee may have to stop training until they are completed.

**Lectures/didactics:**

Didactics regarding medical care of fistula patients will be held every 3 weeks either live or by video. After watching/participating in the didactics, the trainee is to answer questions and submit them to Baylor Faculty.

**Mentors:**

Jeffrey Wilkinson, Rachel Pope, Andy Norman, Andrew Browning, Charlotte Kaliti,

Tom Raassen, Michael Breen, Itengre Oudrago

**Mentors' responsibilities:** clinical and surgical training, review required reading with trainee, discuss trainee's progress every 4 weeks using evaluation form and face-to-face feedback. Each mentor will give/record at least one lecture to be used for training program.

**Topics:**

-Screening patients for obstetric fistula: history, comprehensive physical exam, and surgical planning.

-How to approach the straight-forward fistula: how to perform a thorough EUA, basic steps to dissection, bladder closure, and vaginal closure.

-How to approach a circumferential fistula

-Peri-operative care: antibiotics, surgical optimization, when to transfuse blood, when to re-dose antibiotics, use of ureteric stents, foley catheter duration.

-Pelvic floor physical therapy for the fistula patient- how kegels work and why, how to cope with residual stress incontinence

-Evaluating a patient for a urinary diversion—when is a patient irreparable

-Techniques to prevent/manage stress incontinence

-Techniques for vaginoplasty/vaginal reconstruction

-Conducting research on obstetric fistula

**Week 1-2:**

**Unit One:** Etiology of fistula formation, socio-cultural implications and history of obstetric fistula surgery

1. **Reading:**
    a. Mahfouz, Naguib. Urinary Fistulae in women. J Obstet Gynaecol Br Emp. 1957
    b. Maulet N, Keita M, Macq J. Medico-social pathways of obstetric fistula patients in Mali and Niger: an 18-month cohort follow-up. Trop Med Int Health. 2013 May.
    c. Wall LL, Arrowsmith Sd, Briggs ND, Browning A, Lassey A. 2005 The obstetric vesicovaginal fistula in the developing world. Obstet Gynecol Surv. 2005 July.
    d. Arrowsmith S, Hamlin EC, Wall LL. Obstructed labor injury complex: obstetric fistula formation and the multifaceted morbidity of maternal birth trauma in the developing world. Obstet. Gynecol Surv. 1996 Sept.
    e. Wall LL. Ethical issues in Obstetric Fistula care and research. Int J Gynaecol Obstet 2007. Nov.
    f. Wall LL. A bill of rights for patients with obstetric fistula. Int J Gynecol Obstet. 2014. Dec.
    g. Wall LL, Wilkinson J, Arrowsmith SD, Ojengbede O, Mabeya H. A code of ethics for the fistula surgeon. Int J Gynecol Obstet 2008. April.

2. **Didactics:** -Epidemiology and history of obstetric fistula, socio-cultural influences, and global campaign
    -Ethics in fistula surgery

3. **Experience:** Screening and triaging patients for surgery, preoperative optimization

**Unit One Evaluation:** **Evaluator:** **Date:**

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not observed |
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| Trainee expresses understanding of the etiology of obstetric fistula and the means for prevention, repair, and eradication | | | | | | |
| Trainee expresses the ethical code for fistula surgeons | | | | | | |
| Trainee explain the obstructed labor complex | | | | | | |
| Trainee is respectful and professional when examining a new patient | | | | | | |
| Trainee is gentle with examinations and does not use undue force or perform unnecessary elements of an exam | | | | | | |
| Trainee works well with nurses and translators/aides | | | | | | |

Areas of strength:

Areas of weakness to address in the following weeks of training:

**Week 3-4:** **Evaluator:** **Date:**

**Unit Two:** Simple Fistula Repair: Learning how to examine, classify, predict prognosis, and repair low-complexity fistulas

1. **Reading:**
    a. Loposso M, Hakim L, Ndundu J, Lufuma S, Punga A, De Ridder D. Predictors of Recurrence and Successful Treatment Following Obstetric Fistula Surgery. Urology. Nov. 2016.

    b. Bengtson A, Kopp D, Tang J, Chipungu E, Moyo M, Wilkinson J. Identifying patients with vesicovaginal fistula at high risk of urinary incontinence. Obstet Gynecol. Nov 2016.

    c. Goh J, Stanford Ej, Genadry R. Classification of female genito-urinary tract fistula: a comprehensive review. Int Urogyn J Pelvic Floor Dysfunction. 2009. May.

    d. Chapter one of Breen's text

    e. Chapters 1-3 and 6 of Hancock's text

2. **Didactic:** -Screening patients for obstetric fistula: history, comprehensive physical exam, and surgical planning.
    -Approach to a low-complexity fistula repair
    -WHO Surgical time out

3. **Experience:** Begin observing surgeries:
    -Observe 5-10 cases
    -Lead one case
    (log all cases and have mentor sign off)

**Unit 2 Evaluation:** **Evaluator:** **Date:**

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not observed |
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| Trainee accurately describes the Goh and Waaldjik classification | | | | | | |
| Trainee recognizes and discerns low-complexity cases | | | | | | |
| The trainee can differentiate other types of incontinence from a fistula | | | | | | |
| Trainee Can lead/participate in a surgical time-out and understands the importance of them in surgical safety | | | | | | |
| Trainee is gentle with tissue | | | | | | |
| Trainee does not use undue force | | | | | | |
| Trainee recognizes tissue planes for dissection | | | | | | |
| Trainee controls bleeding throughout the procedure | | | | | | |
| Trainee communicates appropriately with the anesthesia and nursing team | | | | | | |

Areas of strength:

Areas of weakness to address in the following weeks of training:

**Week 5-6:**

**Unit Three:** Moderate Complexity Fistulas and Peri-operative care

1. Reading:
    a. Nardos R, Menber B, Browning A. Outcome of obstetric fistula repair after 10 days versus 14- day Foley catheterization. Int J Gynecol Obstet. 2012.
    b. Ruminjo et al. Clinical procedures and practices used in the perioperative treatment of female genital fistula during a prospective cohort study. BMC Pregnancy and Childbirth.2014, 14: 220.
    c. Shephard et al. Effect of HIV infection on outcomes after surgical repair of genital fistula. IJGO. 2017.
    d. Kayondo et al. Predictors and outcoe of surgical repair of obstetric fistula at a regional referral hospital, Mbarara, western Uganda. BMC Urology. 2011, 11:23.
    e. Chapter 4 & 5 Hancock's text

2. Didactic: -Perioperative care: Antibiotics and preparation for surgery including medical optimization
    -Post-operative care & consent in surgery

3. Experience: -Observe 10-20 moderate-complexity cases (juxta-cervical, vault, juxta-urethral but not circumferential)
    - Continue to lead simple fistula cases

    (Log cases and have trainer sign off)

**Unit 3 Evaluation:** **Evaluator:** **Date:**

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not observed |
|---|---|---|---|---|---|---|
| Trainee recognizes and discerns moderate-complexity cases from others | | | | | | |
| The trainee can accurately make pre-operative orders | | | | | | |
| The trainee can appropriately consent a patient for surgery | | | | | | |
| Trainee can accurately make post-op orders, tailoring for patients when needed | | | | | | |
| Trainee is gentle with tissue | | | | | | |
| Trainee does not use undue force | | | | | | |
| Trainee recognizes tissue planes for dissection | | | | | | |
| Trainee controls bleeding throughout the procedure | | | | | | |
| Trainee communicates appropriately with the anesthesia and nursing team | | | | | | |

Areas of strength:

Areas of weakness to address in the following weeks of training:

**Week 7-8:**

**Unit Four:** What makes a fistula complex: circumferential fistulas, vaginal scarring, large fistulas, short urethras, RVF's.

1. **Reading:**
    a. Remainder of Breen's chapter 1C
    b. Page 60-67 Hancock's book
    c. Browning A. The circumferential obstetric fistula: characteristics, management and outcomes. Br J Obstet Gynaecol 2007; 114: 1172–6.
    d. Browning A. Risk factors for developing residual urinary incontinence after obstetric fistula repair. BJOG 2006.
    e. Wall and Arrowsmith. The "continence gap," a critical concept in obstetric fistula repair. Int Urogyn J. 2007. 18; 843.

2. **Didactic:** -Approach to circumferential fistulas
    -Approach to short urethras and neourethras
    -Approach to RVF's

3. **Experience:** Observe 5 circumferential repairs, Observe 3 RVF's
    -Continue to perform simple and simple to moderately-complex fistuals per judgment of trainer

    (Log cases and have trainer sign off)

**Unit 4 Evaluation:** **Evaluator:** **Date:**

| | **Strongly Disagree** | **Disagree** | **Neutral** | **Agree** | **Strongly Agree** | **Not observed** |
|---|---|---|---|---|---|---|
| Trainee recognizes and discerns high-complexity cases from others | | | | | | |
| Trainee can accurately describe prognosis/course for circumferential fistulas compared to other | | | | | | |
| Trainee can accurately make pre-op orders for RVF's | | | | | | |
| Trainee can accurately make post-op orders for RVF's | | | | | | |
| Trainee is gentle with tissue | | | | | | |
| Trainee does not use undue force | | | | | | |
| Trainee recognizes tissue planes for dissection | | | | | | |
| Trainee controls bleeding throughout the procedure | | | | | | |
| Trainee communicates appropriately with the anesthesia and nursing team | | | | | | |

Areas of strength:

Areas of weakness to address in the following weeks of training:

**Week 9-10:**

**Unit Five:** Abdominal Cases: Bladder stones, ureteral reimplantation, abdominal approach to fistula repair, and urinary diversions

1. **Reading:**
    a. Page 80- Hancock's book
    b. Chapter 9 Breen's book
    c. Wilkinson et al. Ethical and technical aspects of Urinary Diversion
    d. Kirschner et al. Urinary diversion for patients with inoperable obstetric fistula: the Jos, Nigeria experience
    e. Walker et al. Quality of life among women in Bangladesh following ileal conduit urinary diversion operations for irreparable vesicovaginal fistula and bladder exstrophy: observational study. BJOG April 2017.

2. **Didactics:**
    a. Approach to ureteral reimplantation and abdominal fistula repairs

3. **Experiences:**
    a. Assist on Ureteral reimplantations, and abdominal cases

**Unit 5 Evaluation:** **Evaluator:** **Date:**

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not observed |
|---|---|---|---|---|---|---|
| Trainee can accurately describe prognosis/course for bladder stone | | | | | | |
| Trainee can accurately descreibe prognosis/course for ureteral reimplantation | | | | | | |
| Trainee can order appropriate preop antibiotics | | | | | | |
| Trainee can accurately make post-op orders for ureteral reimplantations | | | | | | |
| Trainee is gentle with tissue | | | | | | |
| Trainee does not use undue force | | | | | | |
| Trainee recognizes tissue planes for dissection | | | | | | |
| Trainee controls bleeding throughout the procedure | | | | | | |
| Trainee communicates appropriately with the anesthesia and nursing team | | | | | | |

Areas of strength:

Areas of weakness to address in the following weeks of training:

**Week 11:**

**Unit Six:** Quality of life issues where surgery can help: Anti-incontinence procedures and vaginal reconstruction

1. **Reading:**
    a. Browning A. Prevention of residual urinary incontinence following successful repair of obstetric vesico-vaginal fistula using a fibro-muscular sling. Br J Obstet Gynaecol 2004
    b. Gutman. Complications of treatment of obstetric fistula in the developing world: Gynatresia, urinary incontinence, and urinary diversion. IJGO. 2007. 99.
    c. Carey et al. Stress urinary incontinence after delayed primary closure of genitourinary fistula: A technique for surgical management. Am J Ob Gyn. 2001. 186, 5.
    d. Ascher-Walsh. Et al. Sling procedures after repair of obstetric vesicovaginal fistula in Niamey, Niger. Int Urogyn J. 2010; 21:1385.
2. **Didactics:** -Slings and anti-incontinence procedures
    -Vaginal reconstruction techniques: Singapore and Gracilis Flaps

3. **Experience:** Assist/observe on anti-incontinence procedures
    -Continue to lead other cases as trainer sees fit

**Unit 6 Evaluation:** **Evaluator:** **Date:**

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not observed |
|---|---|---|---|---|---|---|
| Trainee can accurately describe candidates for anti-incontinence procedures | | | | | | |
| Trainee can accurately describe candidates for vaginal reconstruction | | | | | | |
| Trainee can appropriately consent patients for these procedures | | | | | | |
| Trainee is gentle with tissue | | | | | | |
| Trainee does not use undue force | | | | | | |
| Trainee recognizes tissue planes for dissection | | | | | | |
| Trainee controls bleeding throughout the procedure | | | | | | |
| Trainee communicates appropriately with the anesthesia and nursing team | | | | | | |

Areas of strength:

Areas of weakness to address in the following weeks of training:

**Week 12:**

**Unit Seven:** Research in OF:

1. **Reading:** Research Gaps and Needs in Obstetric Fistula Surgery
   -Research Design/Methods: Grimes and Schulz. Clinical Research in Obstetrics and Gynecology: More Tips for Busy Clinicians. Ob and Gyn Survey.
   -Schultz. Case-Control studies: research in reverse. Lancet. 359l934.
   -Grimes. Descriptive studies: what they can and cannot do. Lancet 2002. Jan.

2. **Didactics:** -What evidence do we have? What do we need?
   -How to start a research project? (Ethical review, research design, statistics)

3.**Experience:** Design a research study using an outline: Hypothesis, objectives, and methods.

[No evaluation form necessary]

**Summative Evaluation by Trainer # 1: Evaluator:** **Date:**

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not observed |
|---|---|---|---|---|---|---|
| Trainee performs safe surgery utilizing time outs, professional communication, and appropriate precautions. | | | | | | |
| Trainee can accurately screen fistula patients and identify those appropriate to his/her skill level for repair | | | | | | |
| Trainee demonstrates preoperative optimization of health | | | | | | |
| Trainee performs rounds thoroughly and compassionately | | | | | | |
| Trainee is professional and courteous with all team members | | | | | | |
| Trainee can proficiently perform a simple fistula repair | | | | | | |
| Trainee can proficiently perform a moderately-complex fistula repair | | | | | | |
| Trainee can proficiently perform a bladder stone removal | | | | | | |
| Trainee can proficiently | | | | | | |

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| perform a ureteral reimplantation | | | | | | |
| Trainee can proficiently perform a high-complexity fistula repair | | | | | | |

Areas of strength:

Areas of weakness to address in the future:

Signed:_____ Date:_____

**Summative Evaluation by Trainer # 2:. Evaluator:** **Date:**

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not observed |
|---|---|---|---|---|---|---|
| Trainee performs safe surgery utilizing time outs, professional communication, and appropriate precautions. | | | | | | |
| Trainee can accurately screen fistula patients and identify those appropriate to his/her skill level for repair | | | | | | |
| Trainee demonstrates preoperative optimization of health | | | | | | |
| Trainee performs rounds thoroughly and compassionately | | | | | | |
| Trainee is professional and courteous with all team members | | | | | | |
| Trainee can proficiently perform a simple fistula repair | | | | | | |
| Trainee can proficiently perform a moderately-complex fistula repair | | | | | | |
| Trainee can proficiently perform a bladder stone removal | | | | | | |
| Trainee can proficiently perform a ureteral reimplantation | | | | | | |
| Trainee can proficiently perform a high-complexity fistula repair | | | | | | |

Areas of strength:

Areas of weakness to address in the future:

Signed:_____ Date:_____

**Summative Evaluation by Trainer # 3:**

| | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Not observed |
|---|---|---|---|---|---|---|
| Trainee performs safe surgery utilizing time outs, professional communication, and appropriate precautions. | | | | | | |
| Trainee can accurately screen fistula patients and identify those appropriate to his/her skill level for repair | | | | | | |
| Trainee demonstrates preoperative optimization of health | | | | | | |
| Trainee performs rounds thoroughly and compassionately | | | | | | |
| Trainee is professional and courteous with all team members | | | | | | |
| Trainee can proficiently perform a simple fistula repair | | | | | | |
| Trainee can proficiently perform a moderately-complex fistula repair | | | | | | |
| Trainee can proficiently perform a bladder stone removal | | | | | | |
| Trainee can proficiently perform a ureteral reimplantation | | | | | | |
| Trainee can proficiently perform a high-complexity fistula repair | | | | | | |

Areas of strength:

Areas of weakness to address in the future:

Signed:_____ Date:_____

**Case Logs**

(no signature is needed for a case that was observed, but still log the observed case)

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| | Date | Patient Name | Age | G/P | Type of VVF | Assist/ Lead | Outcome | Trainer signature |
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