ISRCTN10376975 https://doi.org/10.1186/ISRCTN10376975

# Dilute povidone-iodine irrigation versus normal saline irrigation in preventing surgical site infection after appendectomy for perforated appendicitis

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| **Submission date**<br>21/03/2026 | **Recruitment status**<br>No longer recruiting | [_] Prospectively registered<br>[X] Protocol |
| **Registration date**<br>04/04/2026 | **Overall study status**<br>Completed | [_] Statistical analysis plan<br>[_] Results |
| **Last Edited**<br>07/05/2026 | **Condition category**<br>Digestive System | [_] Individual participant data<br>[X] Record updated in last year |

**Plain English summary of protocol**
Plain English summary of protocol not provided at time of registration

## Contact information

**Type(s)**
Principal investigator, Scientific, Public

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## Additional identifiers

## Study information

## Scientific Title
Dilute povidone-iodine irrigation versus normal saline irrigation in preventing surgical site infection after appendectomy for perforated appendicitis: a randomized controlled trial

## Acronym
POVI-SSI

## Study objectives
This study aims to compare two commonly used solutions, dilute povidone-iodine and normal saline, for cleaning the surgical wound during appendectomy in patients with perforated appendicitis. Surgical site infection is a common complication after this type of surgery, especially in severe cases. Patients were randomly assigned to receive either povidone-iodine or normal saline irrigation during surgery. The study evaluates which method is more effective in reducing wound infections and improving patient outcomes after surgery.

## Ethics approval required
Ethics approval required

## Ethics approval(s)
Approved 27/02/2017, The Ethics and Research Committee at the University of Port Harcourt Teaching Hospital (UPTH) (East-West Road, Port Harcourt, 500102, Nigeria; -; info@upthng.com), ref: UPTH/ADM/90/S.II/VOL.XI/374

## Primary study design
Interventional

## Allocation
Randomized controlled trial

## Masking
Blinded (masking used)

## Control
Active

## Assignment
Parallel

## Purpose
Treatment

## Study type(s)

## Health condition(s) or problem(s) studied
Perforated appendicitis requiring appendectomy

## Interventions
Randomisation was performed using a computer-generated random sequence with allocation concealment via sealed opaque envelopes. Participants were randomly assigned to one of two groups:
Group A received dilute povidone-iodine irrigation of the surgical wound before closure, while

Group B received normal saline irrigation before wound closure during appendectomy for perforated appendicitis.

### Intervention Type
Procedure/Surgery

### Primary outcome(s)
1. Surgical site infection within 30 days following appendectomy measured using clinical assessment data, based on standard diagnostic criteria, including the presence of purulent discharge, wound erythema, swelling, tenderness, or wound dehiscence at one timepoint at the end of the trial

### Key secondary outcome(s)
1. Length of hospital stay and postoperative complications during the hospital stay and within 30 days postoperatively measured using data recording the number of days from surgery to discharge, and clinical assessment data, based on the occurrence of any adverse events following surgery, at one timepoint at the end of the trial

### Completion date
31/12/2021

## Eligibility

### Key inclusion criteria
1. Adult patients (≥18 years)
2. Diagnosed with perforated appendicitis, undergoing emergency appendectomy
3. Provided informed consent

### Healthy volunteers allowed
No

### Age group
Mixed

### Lower age limit
18 Years

### Upper age limit
100 Years

### Sex
All

### Total final enrolment
120

### Key exclusion criteria

1. Patients with non-perforated appendicitis
2. Those with previous abdominal surgery
3. Patients with significant immunosuppression or severe comorbidities
4. Those who did not provide informed consent

### Date of first enrolment
01/12/2019

### Date of final enrolment
31/12/2020

## Locations

### Countries of recruitment
Nigeria

## Sponsor information

### Organisation
University of Port Harcourt Teaching Hospital

### ROR
https://ror.org/01qv3ba61

## Funder(s)

### Funder type

### Funder Name
University of Port Harcourt Teaching Hospital

## Results and Publications

### Individual participant data (IPD) sharing plan

### IPD sharing plan summary
Not expected to be made available

### Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|---|---|---|---|---|
| Protocol file | | | 07/05/2026 | No | No |