## Appendix

### Table 1  Risk factors predispose expectant mothers to ASB including:

<table>
<thead>
<tr>
<th>Factor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td>The highest rate of ASB was reported in the maternal age of ( \geq 35 ) years; another study reported in age-group between 21-30 years.(^{[40]})</td>
</tr>
<tr>
<td><strong>Gestational stage</strong></td>
<td>ASB is more common during the second half of pregnancy.(^{[10]})</td>
</tr>
<tr>
<td><strong>Multiparity</strong></td>
<td>High parity leads to the descent of pelvic organs which lead to a widening of the urethral orifice that influences the ascent of the microbes.(^{[38,39]})</td>
</tr>
<tr>
<td><strong>Socioeconomic level</strong></td>
<td>ASB was 2% in non-indigent compared to 6.5% of indigent pregnant women.(^{[9]})</td>
</tr>
<tr>
<td><strong>Sexual activities</strong></td>
<td>Sexual pressure thrust the bacteria from vagina up to the urethra.(^{[33]})</td>
</tr>
<tr>
<td><strong>Genital hygiene</strong></td>
<td>Pregnant women find it problematic to clean their anus properly after defecating, the direction of cleaning and drying of the perineum after a bowel movement is another risk factor.(^{[35]})</td>
</tr>
<tr>
<td><strong>HIV</strong></td>
<td>ASB was (20.4%) in HIV-positive cases compared with (3%) in HIV-negative patients.(^{[28]})</td>
</tr>
<tr>
<td><strong>Race-related demographics</strong></td>
<td>ASB was 10% in Iran and 1.7% in Saudi Arabia.(^{[7]}) These may be because of different personal hygiene, sexual practices, and clothing.</td>
</tr>
<tr>
<td><strong>Other factors</strong></td>
<td>Anatomical anomalies, sickle cell anaemia, DM and body mass index.(^{[52,54]})</td>
</tr>
</tbody>
</table>
Figure 1: Questionnaire

#OBSTETRIC HISTORY#

- #Pregnancies:__
- #Deliveries:__
- #Gestational Age:
- #Type:__
- #Duration:__

#PAST OR CURRENT MEDICAL PROBLEMS#

<table>
<thead>
<tr>
<th>Disease Description</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>History of previous UTI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diagnosed by:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treated with:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of antibiotic therapy within the last two weeks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C/O dysuria, frequency and urgency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C/O pyrexia of unknown origin</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of congenital anomalies of the urinary tract</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of hypertension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>History of DM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kidney or bladder disease</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#SOCIAL HISTORY#

- Highest level of education: Elementary, Junior High, High School, College, Graduate School
- Have you ever smoked: Yes, No, Current smoker, Quit (month/year):
  1. The socioeconomic level:
  2. Personal Hygiene:
     - The regularity of bathing and changing of underwear:
     - The direction of washing the genital region after urination:

#INFECTION SCREENING#

<table>
<thead>
<tr>
<th>Infection</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexually transmitted disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#MEDICATIONS#

Prescriptions, medications, birth control, aspirin, vitamins/herbals, supplements, Everything since your last period:

<table>
<thead>
<tr>
<th>Medication</th>
<th>Dosage (mg)</th>
<th>Times per day</th>
<th>Medication</th>
<th>Dosage (mg)</th>
<th>Times per day</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#OTHER MEDICAL PROBLEMS:

Details of positive responses:

Other risk factors:

1. Frequency of sexual intercourse per week:
2. The regularity of antenatal visits to gynecologist:

Patient Signature: __________________________ Date: ____________
**Figure 2: Flow diagram of Selection of Study Subjects**

- **Exclusion Criteria:**
  - With history of UTI symptoms.
  - Pregnancy induced DM/hypertension.
  - Antibiotic taken within two weeks before.
  - Patients who do not give their consent.
  - Aged more than 41 years.

- **Inclusion Criteria**
- Pregnant aged 18 - 41Y
  - 3 Groups:
    - 1st trimester.
    - 2nd trimester.
    - 3rd trimester.

- **Laboratory Samples**
  - Blood samples
    - Glucose Level
    - CBC
    - HIV Test
    - Macroscopic Ex
  - Urine samples
    - Microscopic Ex
    - Culture & sensitivity
**Figure 3** Sample Size selection

Sample Size:

Sample size was determined using the formula:

\[ N = \frac{z^2pq}{d^2} \]

| "Z" | Standard deviate by CL = 95% for normal distribution.  
95% – Z-Score = 1.96 |
|----|-------------------------------------------------------------|
| "p" | Expected proportions in populations based on previous studies 
prevalence of 7.8% obtained from a similar study |
| "q" | absolute error or precision 
q = 1 – p = 0.92 |
| "d" | degree of precision of the estimate = 0.05. |
| "N" | sample size 
\[ \frac{1.96^2 \times 0.078 \times 0.92}{0.05^2} = 3.84 \times 0.078 \times 0.92 = 110 \text{ cases} \] |
Figure 4: The hospital's ethical committee informed consent

Al-Azhar University
Faculty of Medicine
Medical Research Ethics Committee

Investigator Application Form

Title of the research
"Prevalence of Asymptomatic bacteriuria among pregnant females attending gynecology and obstetrics clinic of El Hussein and Sayed Galal Hospitals of Al-Azhar University in Egypt"

Name of principle investigator
Mohamed Abdel Aziz Abdel Moneim Elzayat

Department
Department of Public Health (International Master of Public Health).

Affiliation of the Principle Investigator
Public Health center, School of Medicine, Tsinghua University - China

Phone Number of the Principle Investigator
+20 1063503330 (Egypt). +86 13051325262 (China). Email: mud15@mails.tsinghua.edu.cn

Name(s) of the Supervisors / Co-investigator(s)
Prof. Feng Cheng
Global Health Program Director & CASSH President
Research Center for Public Health, School of Medicine, Tsinghua University, Beijing 100084, China
Tel: +8610 62794936 Fax: +8610 62794536

Grade of the Study:
International Master of Public Health (IMPH) in School of Medicine, Tsinghua University.

Type of research:
Thesis: Cross sectional study combining the use of questionnaires and laboratory analysis of samples.

Subjects of research:
All pregnant female attending Ante Natal Care(ANC) clinic of El Hussein and Sayed Galal Hospitals of Al-Azhar University in Cairo-Egypt

List the risks of the study: No risks

List the potential benefits to the subjects:
The participant will be screened for asymptomatic bacteriuria and if you are positive you will receive the treatment to prevent the complications on mother and infant.

The research is for the good of society: YES If yes, specify:
- Superior attention to the pregnant women is one of the most central points in health care. One of the harms during pregnancy is asymptomatic bacteriuria. Therefore, it is imperative to determine the prevalence of ASB to address this serious condition during pregnancy.
- There is a much higher risk (up to 40%) of progression of asymptomatic bacteriuria to pyelonephritis at the late pregnancy which has been associated with many perinatal complications including hypertension, respiratory insufficiency, renal disease and bacteremia. Also, it has been associated with preterm delivery; Preterm labor is the main cause of the neonatal mortality and morbidity worldwide. While the interventions of screening and early antimicrobial treatment will improve these outcomes, prevent pyelonephritis and avoid up to 20% of preterm deliveries.
- Few studies have been published in asymptomatic bacteriuria and available data are scanty.

Facilities for The Research Are Available in Your Department:
1. library resources,
2. photocopying facilities.
3. Statistical software and graphics packages, electronic mail and internet access.

Funding/Support and role of the sponsor:
There is no funding from Tsinghua or Al-Azhar Universities.

Attachments:
Informed consent form:
Protocol
Signature of Principle Investigator
نموذج الموافقة المستقبلة لأي إجراء يبحث به على مشاركة متطوعين

جامعة الأزهر
كلية الطب
لجنة أخلاقيات البحث الطبي

"تتم الموافقة المستقبلة لأي إجراء يبحث به على مشاركة متطوعين...

جامعة الأزهر
كلية الطب
لجنة أخلاقيات البحث الطبي

د. إمام أحمد
ر.علوم
1430

الصحة العامة والوقاية

1. الحصول على موافقة جمعية الأزهر - القاهرة - مصر
2. التأكد من أن المشاركون جامعيين أو أفراد من جمعية الأزهر - القاهرة - مصر
3. التأكد من أن المشاركون جامعيين أو أفراد من جمعية الأزهر - القاهرة - مصر
4. التأكد من أن المشاركون جامعيين أو أفراد من جمعية الأزهر - القاهرة - مصر

الملاحظات المطلوبة...

1. التأكد من أن المشاركون جامعيين أو أفراد من جمعية الأزهر - القاهرة - مصر
2. التأكد من أن المشاركون جامعيين أو أفراد من جمعية الأزهر - القاهرة - مصر
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الرقم العام:
1430

التاريخ:
1430

التوقيع:
د. إمام أحمد
ر.علوم
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