The practice of STI treatment among chemists and druggists in Pokhara, Nepal

Chemists and druggists working in “medical shops” play a significant part in the treatment of sexually transmitted infections (STIs) in resource poor countries. In some settings, chemists and druggists are consulted for first line treatment of STI symptoms more often than hospitals and clinics designed specifically to service such clients. Recent unpublished data from Pokhara, Nepal, suggest that in up to 80% of cases, treatment provided by chemists and druggists was inappropriate or incomplete. We report here on the quality of STI case management among a random sample of chemists and druggists from the 75 medical shops in Pokhara Municipality Area, Nepal.

Chemists and druggists working in all Pokhara medical shops, 65% of whom had received previous training in the national STI case management guidelines, based on WHO syndromic algorithms, were trained and motivated to initiate a register of all STI client visits and their treatment. Registry data from January to December 1999 were reviewed. Thirty seven registered medical shops were randomly selected for visits using the simulated client method (SCM) presenting 22 urethral and vaginal discharge, at 37 medical shops in Pokhara, Nepal. (*Correct drug and dosage, as per Nepal national STD case management guidelines.*)

![Figure 1](https://example.com/figure1.png)

**Figure 1** Treatment recommended by chemists and druggists to simulated clients presenting with urethral and vaginal discharge, at 37 medical shops in Pokhara, Nepal. (*Correct drug and dosage, as per Nepal national STD case management guidelines.*)

Correct dosage of correct drug: 24%  
Over dosage of correct drug: 22%  
Partial or incomplete dosage of correct drug: 5%  
Incorrect treatment: 5%  
No drugs offered: 43%  

The authors would like to thank Mr Bishwa Bandhu Bandyal, coordinator for the NCDA programme in Pokhara, for his help in collecting the reports from each of the 75 medical halls, the Gandaki Zonal Branch of the Nepal Chemist and Druggists Association (NCDA), Pokhara, and the Nepal Chemist and Druggists Association, Central Office, Kathmandu, for their cooperation, and all chemists and druggists in Pokhara who participated in the training, data collection, and study.

Acknowledgements
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There are no conflicts of interest.

References
1. Zeeb DH. Provision of care for patients with sexually transmitted diseases in Pokhara, Nepal. A research report for the degree of Postgraduate Master of Science in Community Health and Health Management in Developing Countries offered by the University of Heidelberg, Germany, May-June, 1996.

**Hepatitis, syphilis, and HIV sentinel surveillance in Mongolia 1999–2000**

Mongolia has undergone healthcare modifications because of political changes resulting from the dissolution of the former Soviet Union. Dramatic increases in unemployment, alcoholism, commercial sex, homelessness, and sexually transmitted infections (STIs) have occurred. There has been rapid spread of HIV infection in neighbouring countries. Mongolia also has a high prevalence of hepatitis B. Although the Mongolian ministry of...
health is eager to perform surveillance for STIs, including viral hepatitis, resources for collection, storage, and testing of specimens are meagre. We evaluated the utility of a filter paper blood collection technique for determining rates of HIV, syphilis, and viral hepatitis B and C in this resource limited setting. The study was approved by the institutional review boards at the University of Alabama at Birmingham and the Mongolian ministry of health. Volunteers including commercial sex workers, itinerant traders, homeless people, and attendees at the STI clinic were sampled in Ulaanbaatar, Mongolia. All subjects completed a questionnaire and provided blood via a finger stick. Blood was collected as filter paper spots using Schleicher and Schuell (Keene, NH, USA) no 903 filter paper following the National Committee for Clinical Laboratory Standards protocol. Samples were dried, stored at room temperature for the duration of the 2 week visit to Mongolia, and then refrigerated upon arrival to the testing laboratory. For every blood spot, a basic questionnaire and attended in writing the manuscript; MA organised and facilitated the study in Mongolia and analysis, and drafted the manuscript; SJ helped design the project, and organized and facilitated the study in Mongolia and assisted in writing the manuscript. SV helped design the project, and organized and facilitated the study in Mongolia and assisted in writing the manuscript.

Table 1 Prevalence of hepatitis B, hepatitis C, HIV-1, and syphilis among groups

<table>
<thead>
<tr>
<th>Group</th>
<th>No</th>
<th>Hepatitis B surface antigen (%)</th>
<th>Hepatitis C antibody (%)</th>
<th>HIV-1 ELISA (%)</th>
<th>Syphilis</th>
</tr>
</thead>
<tbody>
<tr>
<td>STI</td>
<td>374</td>
<td>86 (23)</td>
<td>36 (9.6)</td>
<td>3 (0.8)*</td>
<td>6 (1.6)</td>
</tr>
<tr>
<td>CSW</td>
<td>72</td>
<td>8 (11)</td>
<td>7 (9.7)</td>
<td>0 (0)</td>
<td>3 (4.2)</td>
</tr>
<tr>
<td>Traders</td>
<td>76</td>
<td>18 (23.7)</td>
<td>4 (5.2)</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Homeless</td>
<td>71</td>
<td>16 (22.5)</td>
<td>15 (21.3)</td>
<td>0 (0)</td>
<td>2 (2.8)</td>
</tr>
<tr>
<td>Total</td>
<td>593</td>
<td>128 (21.4)</td>
<td>62 (10.5)</td>
<td>3 (0.5)</td>
<td>11 (1.9)</td>
</tr>
</tbody>
</table>

*Repetitively reactive to HIV-1 ELISA but negative to western blot. Group TALL subjects were RPR and FTA-ABS reactive, 10 subjects had RPR titres of ≤1:4.

Acknowledgements
This project was funded through the World AIDS Foundation (WAF No 175 98-054). This work was presented in part at the 40th Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAAC Meeting) in Toronto, Ontario, Canada, September 2000.

Contributors
IT helped design the project, organised and participated in specimen collection, performed data entry and analysis, and drafted the manuscript; MA organised and facilitated the study in Mongolia and reviewed the manuscript; SV helped design the project, reviewed the manuscript and managed the budget and manuscript preparation; JW processed laboratory specimens for HIV testing and monitored IT in all aspects of the project, reviewed the manuscript; MJ helped design the project, was the principal mentor for IT for all aspects of the project, and assisted in writing the manuscript.

1 Tellez*
The Public Health Institute, Ulanbataar, Mongolia

M Altankhuu
The Public Health Institute, Ulanbataar, Mongolia

S Verrun
Division of Geographical Medicine, Department of Medicine, University of Alabama at Birmingham, Birmingham, AL, USA

J W Gnann, E H Hook, J Schwabke
Division of Infectious Diseases, Department of Medicine, University of Alabama at Birmingham, Birmingham, AL, USA

Correspondence to: Dr Jane Schwabke, University of Alabama at Birmingham, 703 19th St South, Zeigler Research Building #239, Birmingham, AL 35294-0007, USA; schwabke@uab.edu

*Current address: Hospital Angeles Lomas, Via de la Barranca s/n, Consultorio # 430, Cal Valle de las Palmas, CP 52763 Huixquilucan, Edo de Mexico

References

Congoential syphilis—missed opportunities for prenatal intervention
The changes in political, economic, and social life in the eastern European countries—that is, greater group mobility, substantial rise in travel activity, changes of the sexual behaviour are all related to the increased syphilis morbidity. The incidence of congenital syphilis morbidity in Bulgaria in 1999 compared with 1990—that is, 2628 vs 378 diagnosed cases respectively—in 2000 there were 1605 cases. An increased number of syphilis patients among adults, especially elderly people, reflected the growing incidence of congenital syphilis. The incidence of congenital syphilis in Bulgaria increased from one case in 1990 to 31 in 2000. This is observed as one of the most alarming trends in morbidity.

We report four infants with congenital syphilis—a 20 day old male infant, two male newborns, and a 2 month old female. The children were in quite a bad condition. They were presented with disseminated lesions (case 1), erythrasma and papulosquamous lesions, and prematurity (cases 2 and 3), rhinitis, conjunctivitis, oedema of the skin in all newborns (case 1, 2, and 3), and hepatitis B virus. Case 2 had asphyxia perinatalis, bradypnoea, bradycardia, atelectases pulmonum, hypothermia, respiratory acidosis with hypoxaemia, and neurological symptoms. Osteochondritis of the long bones on x ray was found in cases 1, 2, and 3. Patient 4 had polysyndactyly—Parrot (the roentgenogram of the upper right extremity showed typical changes in the distal metaphysis of the humerus, and in the proximal metaphysis of the radius). Severe anaemia, leucocytosis, thrombocytopenia, elevated erythrocyte sedimentation rate, hypoproteinaemia, hypophaemia, elevated AST, ALAT, and LDH were noted in cases 1, 2, 3. The TFS of patient 1 revealed features of vasculitis. The serological blood tests (VDRL, TPHA, IgM-FTA ABS) were positive, but CSF tests were negative. The children were treated with penicillin successfully. The mothers of the children had positive syphilis serology; they have not been treated for syphilis.
Condom access does not ensure condom use: you've got to be putting me on

Approximately 15 million incident cases of sexually transmitted infections (STIs) occur in the United States each year. These figures are troubling given the high frequency of primary prevention measures that sexually active people can use to avoid unprotected intercourse, including latex condoms. Although considerable attention has focused on making condoms widely available, surprisingly little research has examined whether condom availability is sufficient to ensure condom use. We recruited a convenience sample of 98 male students through advertisements posted to two university campuses to evaluate sexual risk-taking behaviour. Men were required to be aged 18-29 years, full-time students, and to have used condoms for >3 episodes of vaginal intercourse. After providing informed consent, eligible men participated in a standardized interview about their experiences with condoms. The study was approved by the institutional review board of Emory University.

The 98 respondents averaged 22 years of age (SD 3). Sixty four (65%) were white, 27 (28%) were African-American, five (5%) were Asian American, and two (2%) were of mixed race. Men reported a mean of 18 lifetime sex partners (median 9 partners, range 1-190); most (96%) reported having vaginal intercourse during the previous year. Eighty five men (87%) used condoms because of concern about acquiring STIs; of these, most men were also concerned about pregnancy. However, 73 men (74%) reported having vaginal sex without a condom when they “felt one should have been used” to protect against pregnancy and/or infection (median lifetime number of times without condom; range 1-450). Among men acknowledging unsafe sex (52%) admitted ever having unprotected intercourse despite ready access to condoms “within the same room” (median 5 times; range 1-300). Overall, condoms, although readily available, were not used in more than one third (37%) of lifetime acts of intercourse where risk of pregnancy or infection was perceived (in 1763 acts). Reason: for men’s most recent failure to use condoms, despite accessibility, included unwillingness to interrupt foreplay (48%), fear of loss of sensation or erection (17%), and ineptitude (17%).

Among all 98 participants, 58 men (59%) also reported occasions in which they intended to use a condom, only to find that they did not have a condom with them. At the most recent occasion when condoms were not available, 34 men (58%) chose to have unprotected intercourse. The remaining 24 men (42%) abstained from intercourse and instead participated in non-penetrative sexual activities posing less risk for STI acquisition, or waited until a condom could be obtained. Despite the small size and self-selected nature of our population, these findings point to formidable barriers to “safer sex,” at least in this heterosexual setting. Condom availability did not ensure condom use, even when condoms were needed. Similarly, the lack of availability of condoms did not deter most men from having intercourse. Avoiding sexual intercourse with an infected partner is the most effective way to prevent STIs. However, for socially active people, condoms can only reduce the risk of infection when they are both readily available and actually put on.

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Contributors

Both authors have made substantial contributions to the intellectual content of the paper. DM was responsible for the conception and design of the study, locating funding for the study, acquisition of study data, analysis and interpretation, and drafting and revision of the research letter; MS was involved with the conception and design of the analysis and interpretation and drafting and revision of the research letter.

L Warner
Centers for Disease Control and Prevention, Atlanta, GA, USA

M J Steiner
Family Health International, PO Box 13950, Research Triangle Park, NC 27709, USA

Correspondence to: Lee Warner, Centers for Disease Control and Prevention, Division of HIV/AIDS Prevention, Prevention Services Research Branch, 1600 Clifton Road NE, Mailstop E46, Atlanta, GA 30333, USA; dlw7@cdc.gov

References


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Resolution of the recent performance problem of Abbott LCx Chlamydia trachomatis assay. Issues of repeat testing for confirmation of chlamydial infection

In February 2001, Abbott Laboratories issued a device correction notice to users of their LCx Chlamydia trachomatis assay regarding LCR tests that initially reactive ligase chain reaction (LCR) tests should be repeated on the same sample to validate the test result. A recent alert (December 2001) from the Medical Devices Advisory Agency (MDA, DA2001(09)) indicates that the device correction is still in force and points out the resource implications where retesting is required. We offer some data on LCR performance characteristics during this period and before.

www.sextransinf.com
The Department of Health pilot study on “Opportunistic screening for genital chlamydial infection in Portsmouth and Wirral” ran for a year up to October 2000. During that study, the standard adopted for reporting chlamydial infection included a repeat LCR test on all first catch urine samples that were initially LCR positive. Samples giving discrepant LCR results were further tested by Roche Cobas (PCR) polymerase chain reaction. Chlamydia LCR urine screening, with repeat LCR/PCR testing of positives, has continued in the Wirral pilot area and is also being used in other research projects locally.

Following the original device correction, we carried out a repeat LCR but additionally included a PCR test on all initially positive LCR urine samples. Analysis of our data (table 1) suggests that compared to the baseline (satisfactory) performance during the Wirral pilot, there was indeed a noticeable LCR reproducibility problem when the device correction notice was issued. Since then however, the LCR performance has improved gradually to be at least as good as in the pilot period.

The MDA alert properly deals with kit performance in generating a valid test result. However, this incident also prompted us to consider the wider issues of repeat testing for confirmation of chlamydia diagnosis. We sense that there may be a mistaken view adopted by some clinicians that all nucleic acid amplification tests (NAAT) are infallible for sensitivity and specificity. It is important that patients should be made aware (as we did during the screening pilot) that no test is 100% accurate. Problems of reproducibility have been reported for both LCR and PCR. We recognise the dilemma in repeat testing of samples that give positive reactions in chlamydia NAATs; on the one hand, a low organism load in the specimen makes repeat positivity a matter of statistical chance of retesting a portion with detectable numbers—and cases will be missed. On the other hand, repeat confirmation ensures a more robust diagnosis is made which is so important in the light of the major implications of a chlamydia diagnosis for those who consider themselves well but decide to take a screening test. We would welcome debate on the need for retesting or independent confirmation of a positive chlamydia NAAT and support the need for continuous monitoring of all tests to ensure their consistent optimal performance.

H Mallinson, J Hopwood, K Mutton
PHLS Liverpool, University Hospital at Aintree, Lower Lane, Liverpool L9 7AL, UK
Correspondence to: Dr Mallinson; hmallinson@nw.phls.nhs.uk

References

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Table 1 Repeat LCR testing and PCR testing of initially positive LCR urines during the Wirral Chlamydia Pilot (Sept 1999 to Oct 2000, baseline) and for 3 month periods since the issue of the device correction (February 2001)

<table>
<thead>
<tr>
<th></th>
<th>Initial LCR positive (Sep–Nov 01)</th>
<th>Initial LCR positive (Jun–Aug 01)</th>
<th>Initial LCR positive (Mar–May 01)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of urines</td>
<td>Repeat LCR:</td>
<td>Repeat LCR:</td>
<td>Repeat LCR:</td>
</tr>
<tr>
<td></td>
<td>Positive</td>
<td>Positive</td>
<td>Positive</td>
</tr>
<tr>
<td></td>
<td>(96.6%)</td>
<td>(79%)</td>
<td>(55%)</td>
</tr>
<tr>
<td></td>
<td>(2.2%)</td>
<td>(1.7%)</td>
<td>(1.1%)</td>
</tr>
<tr>
<td></td>
<td>(1%)</td>
<td>(0.5–0.99)</td>
<td>(0.5–0.99)</td>
</tr>
<tr>
<td></td>
<td>Negative</td>
<td>Negative</td>
<td>Negative</td>
</tr>
<tr>
<td></td>
<td>74 (55%)</td>
<td>92 (79%)</td>
<td>74 (55%)</td>
</tr>
<tr>
<td></td>
<td>18 (1.1%)</td>
<td>2 (1.7%)</td>
<td>2 (1.7%)</td>
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<tr>
<td></td>
<td>42 (3.1%)</td>
<td>24 (19.8%)</td>
<td>42 (3.1%)</td>
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<tr>
<td></td>
<td>87 (96.6%)</td>
<td>95 (79%)</td>
<td>87 (96.6%)</td>
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<td></td>
<td>2 (2.2%)</td>
<td>2 (1.7%)</td>
<td>2 (1.7%)</td>
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<td>82 (82%)</td>
<td>90 (90%)</td>
<td>82 (82%)</td>
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<td>1 (1%)</td>
<td>3 (3%)</td>
<td>1 (1%)</td>
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<td>16 (16%)</td>
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<td>6 (6%)</td>
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<td>65 (6.8%)</td>
<td>36 (36%)</td>
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<td>12 (1.3%)</td>
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<td>6 (6%)</td>
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<td>988 (92%)</td>
<td>134</td>
<td>988 (92%)</td>
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<tr>
<td></td>
<td>2</td>
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<td>2</td>
</tr>
</tbody>
</table>

(a) Inhibitory, (b) insufficient.
Congenital syphilis—missed opportunities for prenatal intervention

Krasimira Chudomirova, Elena Mihajlova, Ivan Ivanov, Stefan Lasarov and Penka Stefanova

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