one antibiotic will often select for resistance to other unrelated agents. Moreover, selection of these bacteria results in the selection of resistance genes that can spread and propagate to other bacteria by transformation, transduction, conjugation, or transposition.[3]

Figure 1 clearly shows that *Escherichia coli* strains isolated from outpatients with suspected urinary tract infection in our hospital displayed a clinically significant resistance (>25%) to most commonly used oral antibiotics to treat urinary tract infection. Moreover, there was an alarming increase in resistance to third-generation cephalosporins, which may be attributed to the increasing prevalence of extended spectrum β-lactamases producing strains in the community. During a 6-year period study, a growing resistance trend has also been found in *E coli* isolates from both inpatient and outpatient settings from a neighboring hospital.[4] Memish et al[5] reviewed the literature and concluded that the emergence and spread of penicillin-resistant *Streptococcus pneumoniae* strains in Saudi Arabia may have been driven by the excessive use and misuse of antimicrobial agents made possible by the easy availability of these agents, often frequently obtainable OTC.

November 18, 2010, was the third Antibiotic Resistance Awareness Day in Europe and America and was the first in Canada, where different governmental bodies had collaborative effort to educate the public and prescribers about the importance of appropriate antibiotic use in both community and health care settings. It is surprising that, until now, antibiotics are available freely OTC in Saudi Arabia despite the fact that this practice was banned more than decade ago in most developed countries. Of course, regulation by prescription is no guarantee of prudent use—and antibiotics are overprescribed in the health care settings—but would prevent self-medication and limit the inappropriate use in colds and upper respiratory tract symptoms. Responsible use of antibiotics can help reverse the growing trend of antimicrobial resistance and keep antibiotics effective for the use of future generations.

In conclusion, with the quantity of antibiotic use linked to antibiotic resistance, there is a public health need to seek to preserve the use of this irreplaceable resource by education and regulation. We need regulations classifying antibiotics as prescription-only medicines and not OTC available drugs, and the economic impact should not justify their OTC delivery. Analogously, and perhaps with the involvement of World Health Organization, developing countries should adopt an annual Antibiotic Resistance Awareness Day to encourage prudent antibiotic use, with materials and activities targeting both the public and prescribers. If we fail to mount a more serious effort to delay the emergence and subsequent dissemination of resistant bacteria or resistance genes, antimicrobial resistance will increasingly threaten to send the world back to the "pre-antibiotic" age.[6]

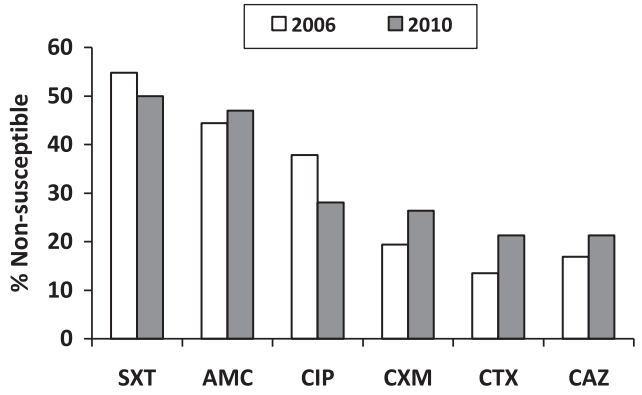

Fig 1. Resistance pattern of *E coli* urine isolates recovered from outpatients in 2006 and 2010. *AMC*, co-amoxiclav; *CAZ*, ceftazidime; *CIP*, ciprofloxacin; *CTX*, cefotaxime; *CXM*, cefuroxime; *SXT*, co-trimoxazole.

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Rapid screening method for multiple gastroenteric pathogens also detects novel enterohemorrhagic *Escherichia coli* O104:H4

To the Editor:

We have read a current article by Frank et al[1] reporting the preliminary data on the current outbreak of a new aggressive enterohemorrhagic *Escherichia coli* (EHEC) strain in Germany with great interest. During the last phase of the outbreak, our hospital also treated several patients suspected of being infected with said novel EHEC strain *E coli O104:H4*. The patients were suffering from hemorrhagic diarrhea and at the risk of developing the serious and life-threatening hemolytic-uremic syndrome and thus needed a rapid differential diagnosis. To avoid misdiagnosis potentially leading to incorrect initial therapy or infection control measures, rapid screening diagnostic methods were required because it was difficult to contact specialized laboratories for rapid confirmation of suspected strains.[2] However, the hype of the mass media led to an exponential increase in the number of newly suspected cases, the majority of laboratories were overloaded, and the risk of delayed diagnosis increased proportionally, respectively.

To overcome this general European health care problem, which originated in Germany, we tested the novel Gastrointestinal Pathogen Panel (xTAG GPP) assay (Luminex, Toronto, Canada). This assay was developed to simultaneously detect the most important and serious viral, bacterial, and parasitic pathogens in a single reaction.[3] Pathogens to be detected include Shiga-like toxin producing *E coli*; thus, we assumed that the new strain, which is Shigatoxin 1 negative but Shigatoxin 2 positive, could also be identified.

To date, a total number of 20 patients suffering from hemorrhagic diarrhea or suspected to be infected with the new EHEC strain were tested. The multiplex testing revealed 4 patients positive for the new EHEC O104:H4 strain, of which 2 were already independently confirmed by an external laboratory. Two additional patients suffered from severe Campylobacter infections and tested negative for EHEC, and 1 patient tested positive for another EHEC strain that produced Shigatoxins 1 and 2.

We conclude that the assay is useful to prescreen patients suffering from the new EHEC strain. Patients can be monitored more closely by the clinicians and test results associated to the clinical course of hemolytic-uremic syndrome. Additional beneficiary effects are that only a preselected cohort of clinical samples has to be analyzed by the specialized laboratories and that those patients who are negative for EHEC but positive for pathogens like *Campylobacter* spp or *Clostridium difficile* can be administered the correct antibiotic therapy. The assay is suitable for high throughput analyses and thus will cover the peaks in the epidemiologic outbreak situation.

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Vancomycin-resistant enterococci rectal colonization in an intensive care unit: A report from Turkey

To the Editor:

The prevalance of vancomycin-resistant enterococcus (VRE) nosocomial infections has dramatically increased in recent years throughout the world.[1] Current recommendations for hospital infection control include VRE fecal surveillance cultures obtaining from high-risk patients, such as those in intensive care units, hematology-oncology wards, and transplant units.[1]

Table 1
The distribution of potential risk factors in VRE-positive and -negative patients

Risk factors	VRE (+)	VRE (−)
Renal failure	-	12
Operation	-	28
Diabetes mellitus	-	-
Malignancy	-	34
Corticosteroids use	-	45
Mechanic ventilation	2	180
Central venous catheter	-	117
Feeding tube	2	59
Urinary catheter	2	188
Antibiotic use	2	164

VRE, vancomycin-resistant enterococcus.

We carried out a prospective study in our hospital to compare the carriage of VRE with the other countries. Rectal swab specimens were obtained from all patients in the intensive care units within 72 hours after admission and then once weekly until the end of hospitalization. Basic demographic and health data were recorded. The statistical analysis was done using the package program Statistical Package for Social Sciences (SPSS, Inc, Chicago, IL) for Windows 13.0 (Microsoft Inc, Redmond, WA). Results of the basic demographic and health data were analyzed with χ^2 test. Probability levels less than .05 were considered significant.

During 1 year, a total of 528 perirectal swabs from the 226 patients was cultured. VRE was found in 2 of 226 patients (0.9%) in 6 of 528 perirectal swabs cultures (1.1%). All of these isolates were identified as *Enterococcus faecalis*. The vancomycin susceptibility of these isolates was multiplicity of infection >256 μg/mL and multiplicity of infection >64 μg/mL, respectively. These results were not statistically significant as analyzed by χ^2 test ($P > .05$). Presence of the risk factors was reported in all patients (Table 1).

VRE colonization, predominantly of the gastrointestinal tract, precedes infection. VRE colonization may last for long periods, and there are no effective methods for decolonization of VRE.[2,3] Thus, it serves as a reservoir for transmission of VRE to other patients. Controlling the spread of VRE colonization and preventing colonized patients from becoming infected are important aims.

VRE were first isolated in 1986 in Europe, and, since then, their presence has increasingly been detected throughout the world.[4,5] Colonization with VRE has only recently become a significant nosocomial problem in Turkey, and the epidemiology of VRE appears to be different from the United States and Europe. We decided to perform point prevalence studies on the patients who have high-risk factors because our VRE colonization rate was very low, contrary to that in other parts of the world.

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