TABLE 1. Bacterial and Fungal Air Contamination Values in the Monitored Environments before (First 5 Samplings) and after (Sixth Sampling) the Corrective Action

		Active sampling						Passive sampling					
		Bacteria			Fungi			Bacteria			Fungi		
Sampling points	*N*	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median
Before corrective action													
Rooms (ambient air)	15	32.5	60.3	16	20.4	27.7	14	52	48	63	398	161	440
Rooms (HVAC)	15	19.3	16.7	16	12	18	8	...	...	...	...	...	...
Corridor (ambient air)	5	135	103.2	148	2.8	1.1	2	818	1,046	472	0	0	0
After corrective action													
Rooms (ambient air)	3	2.7	3.1	2	0	0	0	0	0	0	0	0	0
Rooms (HVAC)	3	1.3	2.3	0	0	0	0	...	...	...	...	...	...
Corridor (ambient air)	1	10[a]	...	...	0[a]	...	...	0[a]	...	...	0[a]	...	...

NOTE. Active samplings are expressed as colony-forming units per cubic meter; passive samplings are expressed as the index of microbial air contamination, in colony-forming units per square meter per hour. HVAC, heating, ventilation, and air-conditioning.
[a] This figure refers to 1 sample.

planned and should be carried out by skilled personnel using adequate methods. Results should be properly analyzed and effectively communicated, and, most importantly, action should be taken in case of anomalies. We also advocate a closer cooperation between infection control teams and hospital engineering departments.

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The Value of Universal versus Targeted Screening for Methicillin-Resistant *Staphylococcus aureus* among Admission Patients

To the Editor—We read with interest the evaluation by Leonhardt et al[1] of universal versus targeted screening for methicillin-resistant *Staphylococcus aureus* (MRSA) on admission to the hospital, in particular the finding that there was no impact on MRSA transmission rates. Leonhardt and colleagues used polymerase chain reaction (PCR) for detection in 2 hospitals, and their admission prevalence rates were less than 5%—that is, 1.76% and 3.24%—during the control

phase. As part of a larger study of the epidemiology of MRSA in Ireland, we have evaluated the additional yield from screening all patients on admission to 4 acute hospital wards compared with screening only patients at risk over a period of 3 years but by means of culture, not PCR.[2] Overall, 5% of patients were positive, but this declined from 9% in year 1 to 2% in year 3. MRSA was recovered from 4 (1%) of 340 of patients who did not have risk factors normally associated with MRSA—for example, admission to the hospital during the previous 18 months and previous MRSA colonization or infection.[2]

In recent years, the UK government has mandated the screening of all patients admitted to the hospital, starting with elective admissions, but this is associated with many logistical challenges.[3] These include additional pressure on diagnostic laboratories, the requirement for isolation when additional MRSA cases are identified, and whether additional patient screening should be undertaken in preference to other measures, such as screening for MRSA colonization among members of staff.[3] Interim results from universal screening in Scotland have indicated that 7.5% of patients were colonized on admission to the hospital and that 88% of patients were available for screening.[4] Screening was carried out using culture techniques rather than PCR, and the interval between the collection of samples and the identification of an MRSA-positive patient was often greater than the inpatient stay; hence, screening was of less value for instituting isolation and contact precautions and decolonization programs. Consequently, the potential benefits of universal screening as initially anticipated may not be realized because of a failure to achieve 100% uptake and delays in acting on positive results in the absence of molecular methods for screening.

While there remains a strong case for active screening of patients at particular risk on admission to an acute hospital—for example, previously known MRSA patients and transfers from other hospitals—the justification for screening all patients admitted to an acute hospital remains unconvincing. In addition to the low additional yield relative to that obtained from screening only at-risk patients,[2] universal screening results in additional expense that seems hard to justify.[1,2] Nonetheless, individual healthcare institutions need to assess how extensive screening should be, on the basis of the local prevalence over a reasonable period of time (ie, 1 year or more) and the likely impact that additional screening may have. In addition, before undertaking universal screening it is essential to confirm that all patients at risk are already being screened, as 27% of at-risk patients were not being screened before the start of an assessment of the use of PCR to screen for MRSA.[5] However, when universal screening is to be used there is a strong case for using molecular methods, which reduce the turnaround time and thus facilitate early isolation of MRSA-positive patients or the release from preemptive isolation of suspected MRSA-positive patients after a negative result.[5,6]

In conclusion, we agree with the conclusions of Leonhardt et al[1] that while universal screening may increase the rate of detection, the additional expense probably does not justify its widespread implementation in most institutions.

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