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Brief report

Attitudes and perceptions of health care workers in Northeastern Germany about multidrug-resistant organisms

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There were 256 health care workers in 39 facilities who were interviewed about their perceptions of the quality of care of patients with and without multidrug-resistant organisms based on a standardized questionnaire. There are remarkable differences in the responses between facility types (acute care hospitals, long-term care hospitals, rehabilitation hospitals, and home care services). Hygiene management must be specifically tailored to the requirements of each facility.

Empirical research has enabled a deeper understanding of the role of the patient's environment in harboring and transmitting multidrug-resistant organisms (MDROs).[1] Evidence suggests that contact precautions are of crucial significance to prevent the spread of MDROs.[2] However, the impact of precautions strongly depends on the compliance of health care workers (HCWs). Interventions are also suspected to induce some adverse effects,[3] such as shorter contact times by HCWs and less visitor contacts, compared with nonisolated patients.[4] This may negatively influence direct patient care. However, the existing literature only covers implications of isolation-related effects at 1 type of health care facility.[5,6]

The main objective of this study was to evaluate perceptions, expectations, and attitudes of HCWs in different types of health care settings to determine whether isolation of patients with MDROs is perceived to have an impact on their care.

METHODS

The AWARENESS study was performed in Northeast Germany (Western Pomerania). Consent to participate was requested of the management of acute care hospitals, long-term care facilities, rehabilitation hospitals, and home care services. After the facility agreed, the standardized questionnaires were distributed to HCWs of every qualification level (Table 1). The questionnaire included 34 items to determine HCWs' attitudes and perception of quality of care, outcomes, and additional workload associated with patients isolated because of MDROs versus nonisolated patients. Generally, Likert-type items with 5 fixed-response alternatives were used as a measurement tool for capturing individual perceptions.

Overall, results were checked using descriptive statistics. Systematic differences in response behavior between the facility type and the professional background of the HCWs were analyzed using parametric and nonparametric statistical techniques. To take the ordinal nature of the Likert-type data into account, the Kruskal-Wallis H test and χ^2 test were used, and the corresponding P values were checked. Results were considered to be statistically significant at $P < .05$.

RESULTS

Most HCWs (86.7%) worked in a setting where MDRO carriers were cared for, and 38.5% of them had permanent or continuous

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Table 1
Characteristics of HCWs surveyed

HCW group	Acute care hospitals	Long-term care hospitals	Rehabilitation hospitals	Home care services	Total
No. of participants	56	146	23	31	256
Proportion of total sample, %	21.9	57.0	9.0	12.1	100
Age (y), %					
18-25	16.1	4.8	0.0	16.1	8.2
26-35	28.6	16.4	21.7	12.9	19.2
36-45	28.6	26.0	34.8	32.3	28.1
46-55	16.1	32.9	34.8	35.5	29.7
≥56	10.6	19.9	8.7	3.2	14.8
Sex, %					
Women	87.5	85.6	73.9	83.9	84.8
Men	12.5	14.4	26.1	16.1	15.2
Education, %					
Completed university	1.8	2.8	0.0	0.0	2.0
3 y of vocational training	92.9	71.5	91.3	80.0	79.1
<3 y of vocational training	1.8	12.5	8.7	3.3	8.7
Other qualification	3.6	13.2	0.0	16.7	10.3
Professional experience (y)					
Range	1-40	0.5-43	6-25	2-35	0.5-43
Mean ± SD	14.0 ± 10.4	15.5 ± 9.7	16.7 ± 4.7	10.2 ± 9.2	14.6 ± 9.6
Work status, %					
Full time	91.1	60.4	91.3	77.4	72.0
Part time	8.9	39.6	8.7	22.6	28.0

HCW, health care worker.

contact with patients with MDROs. The frequency of MDRO treatment differed by facility type.

Most HCWs rated the quality of care for patients with MDRO in their facility as very good (51.8%) or excellent (29.0%). However, the comparison between facility types showed that workers in some types of care institutions felt that they provided better care for MRDO patients than did other institutions. Furthermore, HCWs reported that care of MDRO-affected patients in their own facility could be rated as very good (56.1%) or excellent (22.2%).

Most of the HCWs (55.6%) stated that isolated patients—apart from MDRO-related problems—do not have a greater need for care compared with nonisolated patients. However, 32.7% (10.1%) were of the opinion that patients with MDRO are in poorer (much poorer) health. Overall, 54.6% of the attending HCWs expressed the attitude that the need for care was similar between patients with and without MDROs, whereas 32.1% assumed that isolated patients were more ill, or even considerably more ill, than nonisolated patients.

The response behavior was quite similar in the case of perceived differences about the length of stay on the given ward where the HCW was working. In comparison with the other options, a higher percentage of HCWs agreed that they did not perceive any difference at all (47.0%). However, there was a general tendency toward a slightly longer stay for isolated patients.

The perception of HCWs about deliberate violation of the isolation precaution by health personnel was rather divided: in general, 57.4% were of the opinion that this would never happen. There was no significant difference between respondents from different types of health care facilities. Of the participants, 39.8% felt that medical doctors were the professional category most likely to violate isolation precautions. Qualified nurses (26.9%), assistant nurses (21.4%), and apprentices (11.9%) were less frequently mentioned.

In general, most of the HCWs (57.1%) thought that isolated patients have the same chances to communicate with their environment as nonisolated patients. A comparison of facility types clearly shows that these perceptions differ significantly. In terms of individual contact with patients with MDROs, most of those surveyed (60.7%) indicated that they never avoided contact with isolated patients.

DISCUSSION

In general, many of our findings support the existing literature (eg, regarding compliance, contact precautions, quality of care).[7,8] However, differences between facility types must be recognized, understood, and approached adequately to provide good care for both isolated and nonisolated patients. Guidelines should be adjusted according to the given setting. Starting points of hygiene management for quality improvement must be carefully identified (eg, standards for medical care).

Differences between the facility types in implementing isolation measures are obvious and understandable. In contrast, contact frequencies between isolated and nonisolated patients in long-term care facilities, rehabilitation hospitals, and home care are rather similar. The survey shows that HCWs are aware of the problems in providing patients with MDROs the same quality of care as noncarriers.

The present findings may be biased because of the sample size, its composition, and missing values. Moreover, perceptions are individual reflections of reality and should not be confused with reality itself. It is also possible that HCWs do not have a clear picture of conditions in other types of health care facilities. Finally, the current study has a regional focus, and the results may not be representative for other settings or regions.

As shown by the relatively high percentages of frequent and occasional deliberate violations of isolation (Table 2), this study illustrates the need to improve the quality of care for patients with MDROs without cutting back infection control procedures. Patients with MDROs must be assured of receiving the same quality of care as patients without MDROs. To achieve this objective, further research is needed.