

# Explaining Ethnic Disparities in Patient Safety: A Qualitative Analysis

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Patient safety is generally seen as one of the most pressing health care challenges. Research in the United States has shown that between 44 000 and 98 000 Americans die in hospitals each year as a result of adverse events, which are defined as an injury caused by the medical management rather than the underlying disease.<sup>1,2</sup> A recent systematic review study showed that adverse events affect nearly 1 in 10 patients during hospital stays.<sup>3</sup> Several studies in the United States pointed to ethnic differences playing a role in patient safety, with patient safety events in hospitals occurring more often in the care for immigrant patients in comparison with US-born patients.<sup>4–8</sup> Chang et al.<sup>7</sup> found that Black patients were approximately 20% more likely than were White patients to experience a patient safety event. Flores and Ngu<sup>5</sup> systematically reviewed racial/ethnic disparities in pediatric patient safety and found higher rates of newborn birth trauma and infections attributable to negligent medical care.

Little is known about the processes that contribute to ethnic disparities in in-hospital patient safety, as the potential contributions of organizational and individual care characteristics in the prevention of patient safety events involving immigrant patients have rarely been the subject of research.<sup>9</sup> There is, as Johnstone and Kanitsaki<sup>9</sup> put it, a paucity of literature addressing the critical relationship that exists between culture, language, and patient safety. A few studies indicate that language differences between physician and patient lead to a higher risk of incidents.<sup>10–12</sup> The use of family or friends as interpreters instead of professional interpreters may also lead to errors in medical interpretations, with potentially serious clinical consequences.<sup>10,13</sup> Apart from the above-mentioned studies, there is, to our knowledge, no research into different kinds of processes with regard to ethnic disparities in patient safety. Therefore, we explored different processes of in-hospital care and treatment of immigrant patients to better understand the processes underlying ethnic disparities in patient safety.

**Objectives.** We explored characteristics of in-hospital care and treatment of immigrant patients to better understand the processes underlying ethnic disparities in patient safety.

**Methods.** We conducted semistructured interviews with care providers regarding patient safety events involving immigrant patients in in-hospital medical care and treatment, for a total of 30 cases. Interviews were transcribed and qualitatively analyzed with a framework method.

**Results.** Three key patterns were identified from the analysis. Patient safety events occur because of (1) inappropriate responses by health care providers to objective characteristics of immigrant patients, such as low Dutch language proficiency, lack of health insurance, or genetic conditions; (2) misunderstandings between patients and care providers because of differences in illness perceptions and expectations about care and treatment; and (3) inappropriate care because of providers' prejudices against or stereotypical ideas regarding immigrant patients.

**Conclusions.** Our findings suggest that organizational and health professional practices contribute to the higher risk of patient safety events. Descriptive epidemiological research is needed to explore the impact of the 3 patterns on patient safety. (*Am J Public Health.* 2010;100:S113–S117. doi:10.2105/AJPH.2009.167064)

## METHODS

We conducted a qualitative study that incorporated semistructured interviews with health care providers who work with immigrant patients. In the interview, providers described a safety event from their own or from a colleague's practice. We used the WHO definition of a patient safety event, being "a process or act of omission or commission that resulted in hazardous health care conditions and/or unintended harm to the patient."<sup>14</sup> We focused on patient safety events for 2 reasons. First, this classification should be capable of capturing the salient details of all events or circumstances which could have, or did lead to, unintended or unnecessary harm to a patient. Because these events cover a wide range, it was relatively easy to record a large number of them to enable a comprehensive study of processes underlying ethnic disparities in patient safety. Second, events with and without patient harm are believed to share the same underlying failure factors.<sup>15</sup> This makes them as informative about

potential underlying processes as the relatively small number of adverse events. We selected a qualitative study design because of its appropriateness to provide an in-depth understanding of the characteristics of patients, care providers, and health care, which underlie an increased risk involving ethnic minority groups and patient safety events. We agreed with other researchers that valuable lessons can be learned from questions such as: What was the patient safety event? What were the underlying contributory factors?<sup>9</sup>

## Respondents

We interviewed health care providers (N=12) employed in various hospitals in the Netherlands and established a nonprobabilistic, purposive sample to ensure as much variety as possible with regard to different ethnic backgrounds of patients and to medical disciplines and hospitals. Respondents were selected because we knew them to be involved in care for immigrant patients on a regular basis. They were recruited from a network of health care

providers we have established the last few years in relation to other research projects. We stopped approaching health care providers at the point when interviews revealed no new information, i.e., when the data were saturated.<sup>16</sup> Patient ethnicity was classified by the respondents (i.e. they chose a patient they thought was an immigrant), and concerned patients born outside of the Netherlands or who had at least 1 parent born outside of the Netherlands.

### Data Collection and Analysis

Data were collected over a 5-month period from 2008 and 2009. Health care providers were interviewed according to a semistructured topic list of 3 questions. First, respondents were asked: can you describe from your experience a case of something unintended happening in the clinical care of an immigrant patient? The respondent was prompted by way of other questions to describe the case in full detail: for example, “What happened next?” “Who were present?” Second, respondents were asked: how did the ethnic or cultural background of the patient play a role? Last, respondents were asked: how may the described patient safety event be avoided in the future? The respondent was given the opportunity to describe different cases and was prompted using the same questions. Respondents could also describe a case concerning a colleague if they were well enough acquainted with the details. Interviews were conducted by J.S., and each interview took between 20 and 50 minutes. Some health care providers reported 1 singular case, others told us of up to 6 cases. All interviews were tape-recorded and transcribed verbatim by J.S. and an assistant.

We used a framework approach, consisting of a content and thematic analysis strategy, to analyze the interview data in which, after familiarization with the data, a thematic coding framework was identified.<sup>17,18</sup> Within the coding framework key issues, concepts, and themes by which the data could be analyzed were identified. Subsequently the interviews were systematically coded using the framework. Data were then charted<sup>19</sup> and 3 major charts were used: (1) how was the main problem in the case described?; (2) how were patient characteristics described?; and (3) how were characteristics of

the health care provider and organization described? By using these charts, we could describe patterns and connections through an iterative comparative process of searching and reviewing the texts.<sup>19</sup>

### RESULTS

In total, 12 health care providers described 30 cases; the box on this page provides a brief description of the 5 most illustrative cases (for a description of all 30 cases, see Appendix 1, available as a supplement to the online version of this article at <http://www.ajph.org>). Three key patterns were identified from the analysis. Patient safety events occur because of: (1) inappropriate responses and practices by health care providers in relation to objective characteristics of immigrant patients, such as lack of Dutch language proficiency, lack of health insurance or genetic conditions; (2) misunderstandings between patient and health care professionals as a result of differences in illness perceptions and expectations about treatment and care; and (3) inappropriate

treatment and care because of providers' prejudices against or stereotypical ideas about immigrant patients.

### Inappropriate Response to Objective Patient Characteristics

The first pattern included an inappropriate health care response to the following objective characteristics of immigrant patients: limited Dutch language proficiency, the insurance status of the patient, and genetic characteristics. The response can be regarded as inappropriate because it deviates from accepted professional default guidelines or norms representing appropriate health care.

*Limited Dutch language proficiency.* The case 1 nurse explained the occurrence of the patient safety event:

Nurse: The woman fell out of bed during the night. The evening shift had handed out her sleeping medication, but she had also taken a tablet of her own. She then became so confused that she tried to climb out of her bed when she had to go to the toilet. That's when she fell.

### Five Illustrative Cases of Ethnicity-Related Patient Safety Events

	Description
Case 1	A Turkish female patient with very low Dutch proficiency was admitted to the hospital for knee surgery. When trying to get up to go to the bathroom, she fell out of bed. She did not hurt herself, but her roommates were alarmed.
Case 2	A Polish female patient, who was illegally in the Netherlands, broke her leg in a moped accident. She was uninsured. The patient received a cast, but the leg got infected. An operation was needed; after the operation, the patient remained crippled.
Case 3	An Afro-Caribbean patient with thalassemia $\beta$ was in need of a blood transfusion. Because of rare antibodies and a shortage of immigrant blood donors, the patient had to wait longer than usual for a blood transfusion. After a week, a matching blood type was found.
Case 4	An Afro-Caribbean baby was diagnosed with sickle cell disease a few weeks after his birth. When the child was 6 months old the pediatrician prescribed an antibiotic according to the standard recommendation and advised the mother to give this to the child daily to avoid a crisis. A few months later the baby was admitted to the hospital in a crisis condition, and his mother admitted that she never gave him the antibiotic.
Case 5	An Armenian man broke his hip, was admitted to the hospital, and during surgery a $\gamma$ nail was placed in his hip. Soon after the operation the man started complaining about severe pain and not being able to move his leg. After 3 days, when the patient was still complaining about pain, his hip was examined and an X-ray revealed that the wrong $\gamma$ nail had been used. A second operation was needed to correct the error.

Interviewer: And she did not speak Dutch?

Nurse: No, because when you asked her anything she only gave a smile as an answer. So that made things really difficult.

In the following part of the interview, the nurse explained that because it was so hard to communicate with the patient, it had not been checked whether she had taken other medication. Several other health care providers also presented us with a case involving an immigrant patient whose Dutch language skills were limited (cases 1–5). Other cases were of a patient who unexpectedly refused a biopsy; a patient who did not understand the unfavorable test result of prenatal screening for Down syndrome; and a patient who did not understand that he needed to have fasted before an operation. The health care providers said they had the option of using a professional interpreter at any time but did not do so. In general, they did not use interpreters, because as one nurse explained:

I think because . . . this may sound awful, but with Turkish people, there are always a lot of visitors, always a lot of family, and . . . then it is easy just to ask them.

Even though a professional interpretation service is free of charge in the Netherlands and every patient is entitled by law to be informed in a language that he or she understands, health care professionals preferred ad hoc interpreters or no interpreter at all. In addition, in the hospitals there often were no translated information leaflets on health, disease, and available treatment. This may also have caused misunderstandings: for example, about the need to fast before an operation.

*No insurance.* Insurance status was recognized as another objective patient characteristic that put immigrant patients at a higher risk of patient safety events (cases 6–8). The pattern was the same: the patient was uninsured and the health care organization provided inappropriate care. A care provider (case 6) explained how such an patient safety event could occur:

A Polish woman who was in the Netherlands illegally had a moped accident. Her major injury [was] an open fracture of the leg and the surgeon said she needed an operation, which is standard procedure. Everything for the operation had been prepared, but then the surgeon returned and told her “I am sorry, but the operation has

been cancelled because you are not insured. You will be given a cast instead.”

Cancellation of the operation because the patient was uninsured was in fact against her right, because uninsured patients in The Netherlands are entitled to receive appropriate health care, as was explained by the health care provider:

The surgeon has the legal obligation to treat the patient according to the standards, or according to the way he knows that he needs to act, and he is an autonomous professional. That means that he may absolutely not allow himself to be influenced by economic considerations, unless he is really convinced that the result will be the same.

#### *Genetic and other physical characteristics.*

Finally, genetic and other physical characteristics may put immigrant patients at risk when they are different from those with which health care providers and health care organizations are familiar (cases 9–12). An example is the difference in frequency of some blood group antigens, such as the Duffy antigens. A Duffy-negative blood recipient may have a transfusion reaction if the donor is Duffy-positive. Because most Duffy-negative people are of African descent, blood donations from people of Black African origin are important to transfusion banks. Duffy-negative donor blood may be insufficiently available if Black donors are insufficiently represented in the pool of donors. Several cases were described to us, such as the Afro-Caribbean patient in case 10 who was in need of a blood transfusion but had to wait because no matching blood could be found. Another case, but with a similar pattern, was that of a Black patient whose skin had been stitched with black sutures. The nurse had great difficulty removing them because they were not easily distinguishable. In most of these patient safety events, organizational shortcomings contributed to the provision of inappropriate care or treatment. For example, despite increasing numbers of immigrant patients, health care organizations could not anticipate the growing numbers by recruiting immigrant blood donors to have sufficient blood supply matching non-White patients.

### **Incongruent Beliefs and Expectations of Care Providers and Patients**

Misunderstandings between care providers and patients because of different cultural

beliefs and expectations about health and disease provided a second pattern to understand the increased risk of patient safety events (cases 13–25). In contrast to the first pattern, patients’ beliefs and expectations were subjective rather than objective. Thus, patients displayed unexpected behavior in this pattern and hence played active roles in the chain of events. We recorded several cases that demonstrated how patients’ expectations about treatment and care and their cultural beliefs about health and illness were different to those shared by health professionals. For example, case 13 concerned an Afro-Caribbean baby whose mother declined to give it antibiotics. As the pediatrician explained:

We told the mother how important it was to give antibiotics to the baby. The mother agreed, and so we prescribed [an antibiotic] for the child, who was six months old. The woman had two further appointments but she cancelled them, saying that her child was in Surinam with her mother because she [the woman] had to return to work and that was difficult with a child. But after a while she brought the child back [to The Netherlands] because she missed him a lot. One night the baby was admitted to our hospital with high fever, very ill, at the age of nine months. The mother told us then that she had not given [the antibiotic] to the baby and that she felt very guilty about it now. She also said the reason the baby had been taken back to Surinam was because her mother had told her that, with herbs, Surinamese-style voodoo, she could “make sure that he is not bothered any more by sickle cell disease.”

This pattern illustrates differences between the perspectives of the health care provider and the patient. This difference has already been well described by medical anthropologist Arthur Kleinman, who referred to it as the difference between an illness perspective of the patient and a disease perspective of the health care provider.<sup>20</sup> The variation between perspectives was difficult for health care providers, because in their eyes patients act in irrational and unexpected ways. It was also difficult because the health care provider cannot always meet patients’ expectations. As a result, patients may become disappointed and lose confidence in the health care provider. For example, as another pediatrician explained (case 14):

Children from 2 to 3 years old are in a denying phase and just don’t eat well. As a western pediatrician you say, well that is part of their development and we do not worry about it very much. But in the parents’ eyes you are a bad doctor and so they go to Turkey or Morocco and

there they get hold of tablets. And you ask them “Oh that is interesting, what kind of tablets are they?” Often they turn out to be corticosteroids, which make you eat a lot. I think that is something very unsafe to do. Nevertheless, these parents are quite satisfied with the results and are actually mad at you for not coming up with the idea yourself. So as far as patient safety is concerned, in their eyes you are not doing your job because you cannot do anything about their problem. And they cannot accept your explanation; they are not reassured when you tell them that not eating well is a phase specific for the child’s age.

Disparity in perspectives also caused differences in notions about patient safety. Situations seen by the health care providers as safe sometimes were seen by the patient as unsafe and vice versa. Other cases we found concerned a Moroccan woman who, because of religious beliefs, refused to have her leg amputated and a Moroccan child with diabetes whose parents stopped giving her insulin because a Moroccan healer had given herbs and pronounced the child healthy.

### Care Provider Prejudices and Presumptions

Prejudices and presumptions on the part of health care professionals provided a third pattern that played a role in patient safety events (cases 26–30). One example can be seen in case 26. A postoperative patient’s pain was not taken seriously and was ignored. A care provider explained why:

The nurses and the orthopedist paid no attention to his complaints of pain. And afterwards they admitted that they thought the patient was simply expressing his pain more adamantly, in a manner they felt may have been the norm in his cultural context. But he kept on complaining, and three days after the operation they examined him and saw that his leg was in a strange position. They took an x-ray and it turned out a wrong gamma nail had been used in the operation, so he had to go back to surgery.

In this particular instance, the health care provider described a patient whose complaints of pain had been underestimated because of the presumption that his cultural background involved expressing his pain more intensely. Several other care providers have described this theme in which presumptions about the cultural background of the patient resulted in the provision of inadequate care. One example is of an Afro-Caribbean woman whose early symptoms of cervical cancer were not taken

seriously because she could not communicate well and was seen as an exaggerating patient. Another example was of a Moroccan man who was removed from the kidney transplantation list because his passionate and—in the eyes of the care providers—irrational refusal of a parathyroidectomy had been wrongly interpreted as a sign of dementia.

### DISCUSSION

We found 3 distinct patterns that gave valuable insights into potential processes that placed immigrant patients at higher risks for patient safety events. We have described them as singular, but of course they may accumulate to become what Reason has called “a trajectory of accident opportunity,”<sup>21(pix)</sup> for example, when language differences between a patient and care provider, as well as incongruent perspectives, play a role.

Disparities in safety do not merely exist because of ethnic characteristics of patients. Often because health organizations and health professionals have not acquired cultural competence (e.g., cultural knowledge, attitudes, skills, and resources), ethnic disparities in patient safety occur. For example, 1 important outcome involved the impact of not using official interpreters. Former studies have indicated that professional interpreters improve clinical care for patients with limited English proficiency.<sup>22</sup> A recent study, however, also revealed that medical residents found it easier to “get by” without a professional interpreter even though they were aware of negative implications for the quality of care.<sup>23</sup> This is not only a question of time constraints or lack of availability but also of health care providers’ sense of morality and cultural competence, that is, attitudes, knowledge, and skills.<sup>23</sup>

Our findings also revealed the risk of patient safety events for uninsured patients. US studies disclosed similar results, confirming that the way patients are insured puts them at different risks for patient safety events.<sup>24,25</sup> The cases that were reported to us all occurred several years ago, when Dutch law did not provide opportunities for reimbursement for hospitals that had made costs for care and treatment delivered to uninsured patients. In the Netherlands, this may have been solved since January 2009 by pointing out certain hospitals who are

entitled to the reimbursement of the costs of care and treatment provided to patients who are uninsured because they are illegally in The Netherlands. Still, care providers need to be aware of the rights on health care for all uninsured patients and act accordingly.

The patterns we found help to understand increased risks of patient safety events for immigrant patients, but epidemiological studies are now needed to quantify the impact of each of the 3 patterns on the frequency and severity of patient safety events in ethnic minority populations. As the landmark report “To Err is Human” concludes, mistakes can best be prevented by making it harder for people to do things wrong and easier to do things right.<sup>26</sup> Our results give reasons to believe that specific training for individual care providers should be developed. It is important for the safety of patients to ensure that health organizations and health professionals become culturally competent to be able to provide safe treatment and care to all patients. Care providers could be educated in cultural competences specific for the care of immigrant patients.<sup>27,28</sup> For example, they may be trained in working with interpreters<sup>23</sup> and in other cultural competences to enable them to practice effectively and safely in a multicultural society.<sup>29</sup> Similar to health care providers’ individual cultural competences, organizational cultural competences need also to be increased. A culturally competent health care setting includes the provision of interpreters, clear policies and procedures about how to use them effectively, and cultural competency education for health service providers that contains education about how culture (including their own) affects their institutions, their practices, and their attitudes. It also should consist of signage and instructional literature in the patient’s language<sup>30</sup> and a diverse supply of materials such as white suture material, as well as a diverse supply of different blood types.

Participants made up a convenience sample and found cases may not be representative for other health care settings. More research is needed to study the impact of found patterns. Furthermore, we did not describe patients’ perspectives, even though it is known that they may offer valuable insights into patient safety.<sup>31</sup>

This study is one of the few to examine patterns contributing to ethnic differences in patient safety, and it contributes to the

literature by identifying specific processes. Further research is needed to investigate the quantitative importance of each of these patterns to ethnic disparities in patient safety. ■

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### Contributions

J. Suurmond conducted the interviews, analyzed and interpreted the data and wrote the article. E. Uiters, M. C. de Bruijne, K. Stronks and M.-L. Essink-Bot contributed to the analysis, the interpretation of the data and the preparation of the article. K. Stronks and M.-L. Essink-Bot originated and designed the study. M.-L. Essink-Bot supervised the study.

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### Human Participant Protection

According to the Medical Research Involving Human Subjects Act, in the Netherlands, medical ethical approval of this study was not required. First, no patients were involved. Second, this was not an intervention study and respondents were only interviewed. Nevertheless, we took great efforts to deal adequately with ethical considerations such as anonymity of all the collected data and informed consent of the involved care providers. The anonymity of the respondents was guaranteed by using codes to designate them. During the interviews patients remained anonymous. A priori informed consent was obtained from the care providers to participate in this study.

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