A Safety Lesson for the Ages

The first thing you noticed about "Señora R," were her eyes. The 82 year-old woman's frame had a frailty that evinced her age, but her eyes sparkled with youthfulness and vigor. Señora R had been brought to our Emergency Department (ED) by her "nieta," or granddaughter, but in truth, Señora R could have been any of our grandmothers. Her chief complaints were simple enough, and the intervention should have had her home the next day. But the next few hours would not be simple ones for Señora R, as basic safety measures failed to prevent an error that dampened that sparkle in her eyes and could have cost the Señora her life.

"Me quema cuando uso el bano," Señora R explained to me, as I began my evaluation that evening in the ED. "My abuelita says it's burning while she urinates," her granddaughter interjected in English, smiling and glad to be of help. Her translation was a welcome resource as the ED translator stepped inside to assist. I continued the exam, inquiring whether Señora R had pain in her back or lower abdomen. "Si, tengo," she confirmed, adding that she had also been particularly fatigued for the past few days. I explained to the Señora and her nieta that the symptoms pointed towards a fairly straightforward urinary tract infection (UTI), but because of her back pain and tenderness on exam, we would need to use laboratory testing to rule out a more serious condition. I paused as our translator conveyed the message, and then wrapped up our encounter by reassuring them that their stay in the inpatient unit would be brief as we administered an antibiotic. Señora R clasped me with her wrinkled hands and with smiling eyes, whispered "que Dios te bendiga," or bless you, as I left the exam room.

Our team admitted Señora R to the floor with a general order set and a course of antibiotics, then left for the day. Later that night, complaining of an itch around her IV site, the Señora was given diphenhydramine, more commonly known as Benadryl. For those routinely involved in care for the elderly, this innocuous medication is a red flag. But our care team erred in judgment and neglected to account for the toxicity of this drug to an elderly woman. Señora R's speech became slurred, as her eyes glossed over and the antihistamine began to crowd out normal cognitive function. Her nieta looked on helplessly as Señora R struggled to focus her once-vivacious eyes, knocking over a glass of water. What began as a simple diagnosis escalated into an emergent situation when Señora R deliriously attempted to acquit herself of the hospital, nearly falling in the process. Cries of "Ayuda!" filled the corridors as our team rushed to the scene of the near-fall, her neita begging for help as all parties puzzled over the quick turn-of-events. Subsequent examination of her medical record revealed the cause of her altered state, and with a great sigh of relief Señora R was declared to have no serious injury from the incident. She and her nieta made it home a few days later, victims of the consequences of non-standardized safety protocols in geriatric medicine.

Our oversight, as we were to find out, was one of many challenges that hospitals struggle with across the country as they care for the elderly. The aging of the American population has presented an immediate and formidable challenge to health care providers – namely, ensuring that hundreds of care processes are adjusted to account for the medical specificity of elderly

patients. As our team reflected on the event, we found ourselves returning to the same set of questions. Were there fail-safes that could have been in place to prevent the ordeal suffered by Señora R and her granddaughter? How could we, as young providers, educate ourselves on the intricacies of geriatric care and be agents of change as we moved into our residencies across the country?

To address many of these questions, the hospital collaborated with geriatric specialists to draft standardized order sets for the geriatric patient that omitted common precipitating drugs such as diphenhydramines, opioid analgesics, and H2 blockers. A literature review revealed that medications, including Benadryl, accounted for 12-39% of all delirium cases, and that the primary cause was lack of education or awareness by the healthcare team.[1] Of the approximately one million falls that take place annually in US hospitals, it is estimated that 1/3 are preventable, and interventions on medications that cause disorientation and confusion are among those preventions.[2] Delirium, as Señora R experienced, is the most common hazard of hospitalization in the elderly, and the best way to treat it is to prevent it. With associated mortality rates of 10-65%, delirium is a serious complication that requires serious prevention measures.[3]

As the hospital expanded its geriatric protocols, the impact of the initiative reached beyond standardized order sets and eventually encompassed a new interdisciplinary unit devoted to care for the hospitalized elderly. Founded on best-practices in geriatric care, the Acute Care for the Elders (ACE) unit combines the expertise of physicians, physical therapists, occupational therapists, nursing, nutritionists, and pharmacists to ensure that care is optimized for our elderly patients. Clinical learning on the ACE unit provides young physicians with a foundational understanding of quality indicators for geriatric care and has been proven to decrease duration of delirium and mortality in hospitalized patients.[4,5]

As I move forward with my medical training, I carry Señora R's story with me. I recall the confusion in her eyes – eyes that taught me to watch diligently for preventable medical errors. I remember her near-fall, a demonstration of how quickly these errors can compound and endanger life. And most perhaps importantly, I carry the experiential lesson that safety is not just about personal diligence, but about designing systems that eliminate the *potential* for those errors that would endanger my future patients.

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3. Inouye, S.K. (1994). The dilemma of delirium: Clinical and research controversies regarding diagnosis and evaluation of delirium in hospitalized elderly medical patients. *Am J Med, 97(3),* 278-288.

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