

LETTER TO EDITOR

Diagnostic Relabelling and Concordance in Emergency Departments: A Comment on Mattoo et al. Study

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Dear Editor,

I read the article by Mattoo et al. on diagnostic agreement between emergency department (ED) admission and hospital discharge with great interest (1). Their findings offer useful insight into how diagnostic pathways evolve during hospital admission, particularly in busy tertiary settings where early decisions must often be made with incomplete data.

The reported mismatch rate of 18.01%, including a 7.2% complete mismatch, is clinically significant (1). The study's large sample and clear stratification by age and specialty add weight to its conclusions. One of the most striking results is the frequency of relabelling chronic conditions as discharge diagnoses, which accounted for over a third of all mismatches (1).

This raises an important point. Relabelling is not necessarily diagnostic error. Instead, it might reflect semantic differences in documentation or coding practices between ED and inpatient teams. For example, a child with acute wheeze may be treated appropriately in the ED, yet discharged with a label of asthma. These decisions may be clinically appropriate but could obscure the ED team's diagnostic accuracy if viewed in binary terms.

Would the authors consider whether coding or discharge summary templates could be contributing to this issue? Could aligning diagnostic terminology between ED and inpatient teams help improve perceived agreement without altering clinical care?

The higher mismatch rate in paediatric patients is another notable finding. This contrasts with previous studies that more often associate diagnostic inconsistency with older adults (2). Could this be due to greater reliance on clinical judgment in children where investigations are often minimized, or might it reflect a higher tendency for relabelling in paediatrics, as the authors suggest?

The mismatch rate in neurology also stood out. At 28.55%, it

was markedly higher than in other specialties (1). While diagnostic uncertainty is more common in neurology, particularly with non-specific presentations, the result does suggest an area for potential quality improvement. Might earlier access to computed tomography (CT) or magnetic resonance imaging (MRI) or formalized clinical decision tools reduce this rate? Were mismatch rates affected by whether neurology input occurred early or late during the admission?

It is reassuring that most mismatches did not lead to harm, although 8.39% did alter outcomes. The 3.02% that led to changes in management and the 3.26% associated with delay in care are modest but real (1). These results support efforts to track and learn from such mismatches rather than viewing them as simply statistical noise.

A future direction could involve prospective analysis where ED teams indicate their diagnostic confidence at admission, with discharge summaries coded by clinical stage rather than International Classification of Diseases, Tenth Revision (ICD-10) terms alone. This might allow better distinction between true misdiagnosis and clinically appropriate evolution of diagnosis. The authors' findings already lay the groundwork for this kind of approach.

I also note that the study was conducted within a Healthcare Information and Management Systems Society (HIMSS)-7 electronic record system (1). That setting offers an excellent opportunity to track decision points in real time. Has any work been done at the authors' centre to link mismatch rates with time to diagnostic testing such as imaging or specialty referral?

Overall, this article contributes meaningfully to discussions on diagnostic accuracy and continuity of care. Its findings are relevant to emergency clinicians, inpatient teams and quality improvement groups. I thank the authors for their work and hope this letter helps to continue the conversation.

Conclusions

Diagnostic mismatch between admission and discharge is not always an error but often a reflection of evolving clinical understanding or coding practices. The study by Mattoo et al. highlights areas for improvement, particularly in paediatric

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iatrics and neurology. Addressing documentation processes, aligning terminology, and improving access to timely investigations may reduce perceived discordance and enhance continuity of care.

Abbreviations

ED: Emergency Department

CT: Computed Tomography

MRI: Magnetic Resonance Imaging

ICD-10: International Classification of Diseases, Tenth Revision

HIMSS: Healthcare Information and Management Systems Society

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Competing interests

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Using Artificial Intelligence Tools

No artificial intelligence tools were used in the preparation of this article.

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