



Invited Editorial

Undiagnosing: Correcting the medical record to prevent over-intervention



HIGHLIGHTS

- Over-diagnosis can lead to over-intervention and over-prescribing, particularly among older adults.
- Undiagnosing is a strategy to review diagnostic labels and remove those that are unnecessary or no longer beneficial.
- Undiagnosing relies on accurate and comprehensive medical records to inform a thorough review of diagnoses
- Effective communication and collaborative decision making regarding undiagnosing are essential to ensure consumer centered care.

A diagnosis is a tool to guide interventions to improve consumer wellbeing by understanding the prognosis and progression of the disease and facilitating the development of a management strategy. Overdiagnosing can lead to over-intervention including over-prescribing. This concern is magnified among older adults as they are more likely to live with multiple chronic diseases (multimorbidity) that are likely to be managed with one or more medications. In recent years, healthcare providers have placed an emphasis on reducing over-prescribing. This process relies on a medication review, comparing a list of diagnoses to current medications to optimise medication use. Using this method alone, an inappropriate or unnecessary diagnosis could still result in over-prescribing. This indicates the need to also review diagnoses in efforts to reduce unnecessary medication use.

There is a clear public health benefit associated with identifying and appropriately managing chronic conditions where treatment is both necessary and beneficial. However, a diagnosis may be unnecessary where there are limited evidence-based treatments that have demonstrated morbidity or mortality benefits and favourable safety profiles. For example, establishing diagnostic criteria for people with depression and subsequent management with antidepressant medications has resulted in improved health outcomes for many [1]. However, for consumers with co-morbid depression and dementia, antidepressants do not appear to be as effective. Thus, while it is necessary to diagnose and treat consumers with depression demonstrating overt depressive symptoms, broader screening programs may lead to overtreatment with medications that may produce more harm than benefit.

Further, unnecessary overdiagnosis can be a consequence of revised clinical guideline specified diagnostic criteria, or can be a result of newly defined conditions recognised as a disease or syndrome. Of even greater concern is the possibility that some recently described conditions (or changes in disease parameters) represent a solution looking for a problem rather than a new disease that will benefit from treatment. Additionally, novel treatments increase the number of available treatment options marketed. There are significant details provided to healthcare providers on how to commence medications, but limited detail on when and how to withdraw these medications [2].

Undiagnosing is a strategy to review diagnostic labels and remove those considered to be either unnecessary or no longer beneficial. Few

tools are currently available to guide healthcare providers in undiagnosing to reduce overprescribing. To address this gap, we have recently released the ERASE criteria that guide the review of diagnoses to consider whether undiagnosing may be appropriate [3]. The ERASE criteria guide healthcare providers through the process of evaluating a diagnosis based on current investigations and potentially adjusting treatment targets or eliminating a diagnosis entirely after considering whether the condition may have been resolved or represent normal ageing.

The ERASE criteria rely on healthcare providers having access to an accurate and comprehensive medical record to make informed decisions regarding undiagnosing. Many older individuals with multimorbidity are assisted in managing their health by a diverse team of healthcare providers. Consumers may be referred to multiple specialist physicians to independently manage each individual diagnosis. Limited or delayed sharing of medical records between healthcare providers may mean healthcare providers do not have a complete and accurate record of a patient's condition. With an inaccurate and incomplete medical record, healthcare providers do not have access to sufficient information to undertake undiagnosing using the processes outlined in the ERASE criteria.

Further compounding the issue of inaccurate medical records is the limited ability of many consumers to reliably report their own medical history. We see this in situations such as healthcare use among consumers with osteoporosis where many consumers do not recall undergoing a scan to assess their osteoporosis risk and approximately one-third don't recall the results of their scan. Research demonstrates consumers with multiple chronic conditions face greater health literacy challenges in accessing and understanding health information [4]. This suggests the consumers most in need of undiagnosing are also those least likely to be able to provide an accurate medical history to facilitate undiagnosing.

Consumers remain key players in the undiagnosing process. There is currently a lack of data investigating undiagnosing from the consumer perspective. However, many older adults would be willing to stop one or more medication [5], which suggests consumers may also be willing to engage in the process of undiagnosing. Consumers with multimorbidities report feeling understood and supported by their healthcare provider even though they struggle to independently find

and understand health information [4]. This health literacy strength may be utilised by healthcare providers to facilitate communication regarding the purpose and benefits of undiagnosing and engage consumers in the undiagnosing process. Conversely, undiagnosing without involving consumers may erode their trust in their healthcare providers.

The concept of undiagnosing is relatively new and therefore faces a number of challenges. Healthcare providers, medical records and the consumers themselves may all act as either barriers or enablers to undiagnosing. For undiagnosing to be undertaken successfully we believe it must be supported by accurate and comprehensive medical records with the timely sharing of consumer information between healthcare providers. This support will facilitate communication and collaborative decision making between the healthcare provider and consumer to achieve undiagnosing to reduce overprescribing.

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References

- [1] S. Banerjee, J. Hellier, M. Dewey, R. Romeo, C. Ballard, R. Baldwin, P. Bentham, C. Fox, C. Holmes, C. Katona, M. Knapp, C. Lawton, J. Lindsay, G. Livingston, N. McCrae, E.

- Moniz-Cook, J. Murray, S. Nurock, M. Orrell, J. O'Brien, M. Poppe, A. Thomas, R. Walwyn, K. Wilson, A. Burns, Sertraline or mirtazapine for depression in dementia (HTA-SADD): a randomised, multicentre, double-blind, placebo-controlled trial, *Lancet* 378 (2011) 403–411, [https://doi.org/10.1016/S0140-6736\(11\)60830-1](https://doi.org/10.1016/S0140-6736(11)60830-1).
- [2] A. Page, R. Clifford, K. Potter, C. Etherton-Ber, Informing deprescribing decisions in older people: does the product information contain advice on medication use for older people and medication withdrawal? *J. Pharm. Pract. Res.* 48 (2018) 149–157, <https://doi.org/10.1002/jppr.1362>.
- [3] A. Page, C. Etherton-Ber, Undiagnosing to prevent overprescribing, *Maturitas.* 123 (2019) 67–72, <https://doi.org/10.1016/j.maturitas.2019.02.010>.
- [4] S.M. Hosking, S.L. Brennan-Olsen, A. Beauchamp, R. Buchbinder, L.J. Williams, J.A. Pasco, Health literacy in a population-based sample of Australian women: a cross-sectional profile of the Geelong Osteoporosis Study, *BMC Public Health* 18 (2018) <https://doi.org/10.1186/s12889-018-5751-8>.
- [5] E. Reeve, M.D. Wiese, I. Hendrix, M.S. Roberts, S. Shakib, People's attitudes, beliefs, and experiences regarding polypharmacy and willingness to deprescribe, *J. Am. Geriatr. Soc.* 61 (2013) 1508–1514, <https://doi.org/10.1111/jgs.12418>.

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