



## On the Radar

Issue 404

4 February 2019

*On the Radar* is a summary of some of the recent publications in the areas of safety and quality in health care. Inclusion in this document is not an endorsement or recommendation of any publication or provider. Access to particular documents may depend on whether they are Open Access or not, and/or your individual or institutional access to subscription sites/services. Material that may require subscription is included as it is considered relevant.

*On the Radar* is available online, via email or as a PDF or Word document from <https://www.safetyandquality.gov.au/publications-resources/on-the-radar/>

If you would like to receive *On the Radar* via email, you can subscribe on our website <https://www.safetyandquality.gov.au/> or by emailing us at [mail@safetyandquality.gov.au](mailto:mail@safetyandquality.gov.au). You can also send feedback and comments to [mail@safetyandquality.gov.au](mailto:mail@safetyandquality.gov.au).

For information about the Commission and its programs and publications, please visit <https://www.safetyandquality.gov.au>  
You can also follow us on Twitter @ACSQHC.

---

### On the Radar

Editor: Dr Niall Johnson [niall.johnson@safetyandquality.gov.au](mailto:niall.johnson@safetyandquality.gov.au)

Contributors: Niall Johnson

### Reports

*Health literacy for people-centred care: Where do OECD countries stand?*

OECD Health Working Papers No. 107

Moreira L

Paris: OECD Publishing; 2018. p. 54.

DOI	<a href="https://doi.org/10.1787/d8494d3a-en">https://doi.org/10.1787/d8494d3a-en</a>
Notes	The latest paper in the OECD's Health Working Papers looks at what OECD nations have been doing on health literacy with the particular focus on supporting care that centres on the individual. This survey of practice suggests that while there are changes being made, including the use of digital technologies, language, complexity and other barriers still exist. The technologies may be improving access to health information, providing ways to improve health knowledge and support self care. However, as it observed, <b>'when health information is misused or misinterpreted, it can wrongly influence individuals' preferences and behaviour, jeopardise their health, or put unreasonable demands on health systems.'</b>

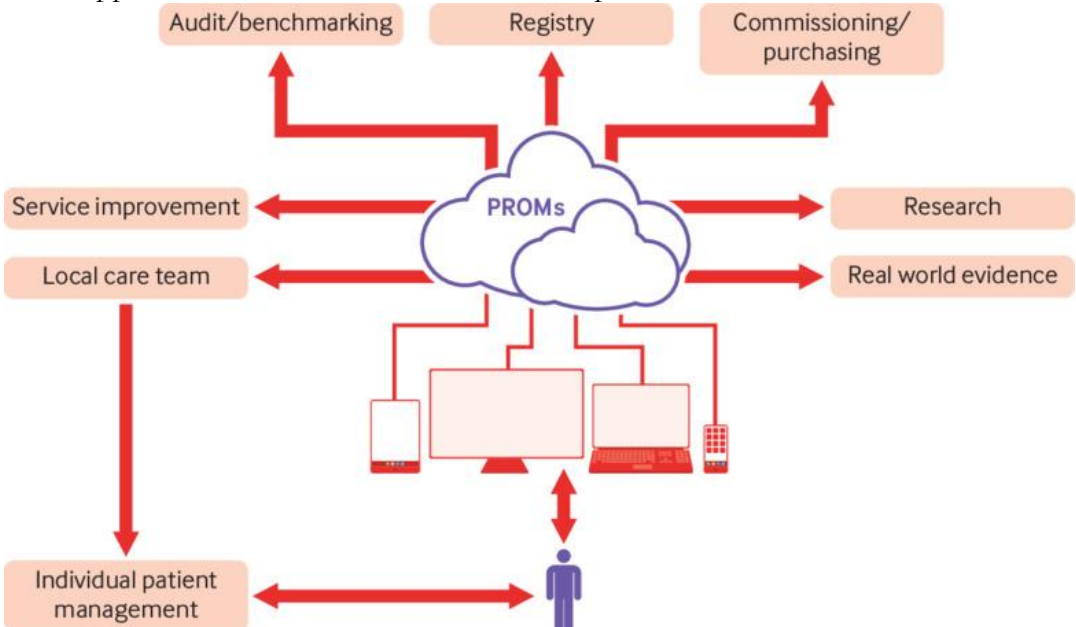
For information on the Commission's work on patient and consumer centred cares, including health literacy, see <https://www.safetyandquality.gov.au/our-work/patient-and-consumer-centred-care/>

## Journal articles

### *Maximising the impact of patient reported outcome assessment for patients and society*

Calvert M, Kyte D, Price G, Valderas JM, Hjollund NH

BMJ. 2019;364:k5267.

DOI	<a href="https://doi.org/10.1136/bmj.k5267">https://doi.org/10.1136/bmj.k5267</a>
Notes	<p>The role of the patient has expanded in recent years. Far from being the passive object of care, patients are (ideally) much more involved in their care, including in the decision making and in reporting what happens. Patient-Reported Outcome Measures (PROMs) are an expression of this. 'This item notes how PROMS have the potential to 'drive global patient centred healthcare reform, but we need a more efficient coordinated approach to assessment if we are to fully realise benefits'. The authors suggest that these data need to systematically collected, collated and use as 'current use is fragmented and suboptimal'. Their proposed solution is 'an integrated evidence based approach to data collection to meet multiple stakeholder needs'.</p> 

For information on the Commission's work on Patient-Reported Outcome Measures (PROMS), see <https://www.safetyandquality.gov.au/our-work/indicators/patient-reported-outcome-measures/>

### *Fatal flaws in clinical decision making*

Davis SS, Babidge WJ, McCulloch GAJ, Maddern GJ.

ANZ Journal of Surgery. 2018.

DOI	<a href="https://doi.org/10.1111/ans.14955">https://doi.org/10.1111/ans.14955</a>
Notes	<p>This study, based on a year's (2015) data from the Australian and New Zealand Audit of Surgical Mortality database, saw the authors review 3422 deaths. Their analysis revealed 226 cases (6.6%) that involved a clinical decision-making incident. The most common of these clinical decision-making incidents were <b>decision to operate</b> (99 cases) and <b>diagnostic error</b> (49 cases) The authors suggest the decision to operate errors means increased discussion of complex cases may be required; perhaps particularly with an emphasis on <b>shared decision making</b> with the patient and their family..</p>

For information on the Commission's work on shared decision making, see <https://www.safetyandquality.gov.au/our-work/shared-decision-making/>

*Current challenges in health information technology–related patient safety*

Sittig DF, Wright A, Coiera E, Magrabi F, Ratwani R, Bates DW, et al  
Health Informatics Journal. 2018;1460458218814893.

*Humanizing Artificial Intelligence*

Israni ST, Verghese A  
JAMA. 2019;321(1):29-30.

*Questions for Artificial Intelligence in Health Care*

Maddox TM, Rumsfeld JS, Payne PRO  
JAMA. 2019;321(1):31-2.

*The practical implementation of artificial intelligence technologies in medicine*

He J, Baxter SL, Xu J, Xu J, Zhou X, Zhang K  
Nature Medicine. 2019;25(1):30-6.

*Artificial intelligence, bias and clinical safety*

Challen R, Denny J, Pitt M, Gompels L, Edwards T, Tsaneva-Atanasova K  
BMJ Quality & Safety. 2019 [epub].

*The effect of cognitive load and task complexity on automation bias in electronic prescribing*

Lyell D, Magrabi F, Coiera E  
Human Factors. 2018;60(7):1008-21.

*Evaluation of harm associated with high dose-range clinical decision support overrides in the intensive care unit*

Wong A, Rehr C, Seger DL, Amato MG, Beeler PE, Slight SP, et al.  
Drug Safety. 2018 [epub].

DOI	Sittig et al <a href="https://doi.org/10.1177/1460458218814893">https://doi.org/10.1177/1460458218814893</a> Israni and Verghese <a href="https://doi.org/10.1001/jama.2018.19398">https://doi.org/10.1001/jama.2018.19398</a> Maddox et al <a href="https://doi.org/10.1001/jama.2018.18932">https://doi.org/10.1001/jama.2018.18932</a> He et al <a href="https://doi.org/10.1038/s41591-018-0307-0">https://doi.org/10.1038/s41591-018-0307-0</a> Challen et al <a href="https://dx.doi.org/10.1136/bmjqs-2018-008370">https://dx.doi.org/10.1136/bmjqs-2018-008370</a> Lyell et al <a href="https://doi.org/10.1177/0018720818781224">https://doi.org/10.1177/0018720818781224</a> Wong et al <a href="https://doi.org/10.1007/s40264-018-0756-x">https://doi.org/10.1007/s40264-018-0756-x</a>
Notes	Various ways of utilising technology, including clinical decision support systems, Artificial Intelligence (AI) and others, have been touted as ways of supporting and enhancing clinical practice and the safety and quality of health care delivery. These items are all reflections on the apparent potential and the challenges that have emerged and ways to address some of these. Some of these are more reflective while others are more pragmatic and focus on specific issues. Sittig et al identify nine major safety challenges facing Health IT in the shorter term that they believe need to be focused on the patient safety aspects. These are (by stage): Design and Development stage (1) developing models, methods, and tools to <b>enable risk assessment</b> ; (2) developing <b>standard user interface design features and functions</b> ; (3) ensuring the <b>safety of software</b> in an interfaced, network-enabled clinical environment; (4) implementing a method for <b>unambiguous patient identification</b> . Implementation and Use stage (5) developing and implementing <b>decision support which improves safety</b> ; (6) identifying practices to safely manage <b>information technology system transitions</b> .

	<p>Monitoring, Evaluation, and Optimization stage</p> <ul style="list-style-type: none"> <li>(7) developing real-time methods to enable automated <b>surveillance and monitoring of system performance and safety</b>;</li> <li>(8) establishing the cultural and legal framework/safe harbor to allow <b>sharing information about hazards and adverse events</b>; and</li> <li>(9) developing models and methods for consumers/patients to <b>improve health information technology safety</b>.</li> </ul> <p>In their viewpoint piece, Israni and Verghese make the point that AI is not comparable with human intelligence but for AI in health care to assist clinicians it needs to learn from datasets that are ‘<b>not biased</b> by sex, race, ethnicity, socioeconomic status, age, ability, and geography’ and needs to understand that needs of diverse clinicians and patients. The pose the challenge of ‘<b>applications that can enhance the <i>human</i> abilities in clinicians to better engage in caring for the patient</b>’</p> <p>In their viewpoint in the same issue of <i>JAMA</i>, Maddox et al pose some more direct questions, including <b>what are the right tasks, data, and evidence standards for AI</b> and how to <b>integrate AI into clinical care</b>. They consider these to be significant issues and observe that ‘Whether AI will ultimately improve quality of care at reasonable cost remains an unanswered, but critical, question. Without the difficult work needed to address these issues, the medical community <b>risks falling prey to the hype of AI and missing the realization of its potential</b>.’</p> <p>He et al also provide a short perspective piece reviewing the issues surrounding the <b>implementation of AI into existing clinical workflows</b>, including data sharing and privacy, transparency of algorithms, data standardization, and interoperability across multiple platforms, and concern for patient safety.</p> <p>Challen et al focus on the issues of bias and the implications for clinical and patient safety, particularly as they apply to machine learning in artificial intelligence. Here the biases are not so much about the datasets use but more about biases in the processes and the consequences, such as <b>distributional shift, insensitivity to impact, black box decision-making, unsafe failure and automation complacency, reinforcement of outmoded practice and self-fulfilling predictions</b>.</p> <p>Lyell et al used a simulation study to examine how <b>cognitive load</b> may impact on errors. They report that participants who reported experiencing a lower cognitive load were more likely to make errors of omission. This suggests that perhaps they were not fully engaged with the tasks and the authors speculate that there may be a mismatch in how users are allocating fewer cognitive resources then are needed when they perceive a task is easy.</p> <p>Wong et al describe a prospective observational study that looked at when clinicians entered overrides so as exceed the maximum dose of a medication in the intensive care unit using a clinical decision support system (CDSS). The study found that <b>insulin</b> was the most frequent medication for which a <b>maximum dosage alert was overridden</b>, but that in about 90% of cases these overrides were appropriate. The authors argue that clinical decision support for medication dosing needs to be improved so as to better balance safety with alert fatigue. Which brings us full circle to the first piece and how these technologies need to be part of an <b>iterative, continuous improvement that places safety to the fore</b>.</p>
--	---

For information on the Commission's work on safety in e-health, see <https://www.safetyandquality.gov.au/our-work/safety-in-e-health/>

*What's Been The Bang For The Buck? Cost-Effectiveness Of Health Care Spending Across Selected Conditions In The US*

Wamble D, Ciarametaro M, Houghton K, Ajmera M, Dubois RW  
Health Affairs. 2019;38(1):68-75.

DOI	<a href="https://doi.org/10.1377/hlthaff.2018.05158">https://doi.org/10.1377/hlthaff.2018.05158</a>
Notes	This US study sought to establish 'the extent to which increased medical intervention spending on seven prevalent chronic conditions in the US over a twenty-year period has been a good investment'. Looking at seven of the conditions associated with the greatest morbidity or mortality in the USA, the authors found that in six of the seven, spending was cost-effective and 'a source of high value creation'. They report that ' <b>dollars spent on medical care can be a source of high value creation</b> , and such investment should continue' and that 'there is significant variability in value across diseases, which highlights the <b>need for disease-specific spending approaches</b> .'

*Health Expectations*

Volume 22, Issue 1. February 2019

URL	<a href="https://onlinelibrary.wiley.com/toc/13697625/2019/22/1">https://onlinelibrary.wiley.com/toc/13697625/2019/22/1</a>
Notes	<p>A new issue of <i>Health Expectations</i> has been published. Articles in this issue of <i>Health Expectations</i> include:</p> <ul style="list-style-type: none"> <li>• <b>Collecting and using patient experience data:</b> Caution, commitment and consistency are needed (Mary Chambers, Joseph LeMaster)</li> <li>• Current trends in <b>patient and public involvement in cancer research:</b> A systematic review (Kathrine Hoffmann, Lone Helle Schou, Karin, M Jarden)</li> <li>• <b>Barrett's oesophagus:</b> A qualitative study of patient burden, care delivery experience and follow-up needs (James Britton, Shaheen Hamdy, John McLaughlin, Maria Horne, Yeng Ang)</li> <li>• How does it feel to be a problem? <b>Patients' experiences of self-management support</b> in New Zealand and Canada (Nicolette F Sheridan, Timothy W Kenealy, Anita C Fitzgerald, Kerry Kuluski, Annette Dunham, Ann M McKillop, Allie Peckham, Ashlinder Gill)</li> <li>• What's the problem with <b>patient experience feedback?</b> A macro and micro understanding, based on findings from a three-site UK qualitative study (Laura Sheard, Rosemary Peacock, Claire Marsh, Rebecca Lawton)</li> <li>• Involving young people in <b>cyberbullying research:</b> The implementation and evaluation of a rights-based approach (Rebecca Dennehy, Mary Cronin, Ella Arensman)</li> <li>• <b>User involvement in digital health:</b> Working together to design smart home health technology (Alison Burrows, Ben Meller, Ian Craddock, Fiona Hyland, Rachael Gooberman-Hill)</li> <li>• Online accounts of gene expression profiling in early-stage breast cancer: Interpreting <b>genomic testing</b> for <b>chemotherapy decision making</b> (Emily Ross, Julia Swallow, Anne Kerr, Sarah Cunningham-Burley)</li> <li>• Moving between ideologies in <b>self-management support</b>—A qualitative study (Dagmara Bossy, Ingrid Ruud Knutsen, Anne Rogers, Christina Foss)</li> <li>• <b>Coproduction and health:</b> Public and clinicians' perceptions of the barriers and facilitators (Daniella M Holland-Hart, Samia M. Addis, Adrian Edwards, Joyce E Kenkre, Fiona Wood)</li> </ul>

	<ul style="list-style-type: none"> <li>• “Change is what can actually make the tough times better”: A <b>patient-centred patient safety intervention</b> delivered in collaboration with hospital volunteers (Gemma Louch, Mohammed A Mohammed, L Hughes, J O'Hara)</li> <li>• Potential harms associated with <b>routine collection of patient sociodemographic information</b>: A rapid review (Jennifer Petkovic, Stephanie L Duench, V Welch, T Rader, A Jennings, A J Forster, P Tugwell)</li> </ul>
--	---

## Health Expectations

Volume 21, Issue 6. December 2018

URL	<a href="https://onlinelibrary.wiley.com/toc/13697625/2018/21/6">https://onlinelibrary.wiley.com/toc/13697625/2018/21/6</a>
Notes	<p>A new issue of <i>Health Expectations</i> has been published. Articles in this issue of <i>Health Expectations</i> include:</p> <ul style="list-style-type: none"> <li>• Sustaining <b>patient and public involvement and engagement in research</b> (Carolyn A. Chew-Graham)</li> <li>• <b>Public and patient involvement in quantitative health research</b>: A statistical perspective (Ailish Hannigan)</li> <li>• <b>Engaging youth in research planning, design and execution</b>: Practical recommendations for researchers (Lisa D Hawke, Jacqueline Relihan, Joshua Miller, E McCann, J Rong, K Darnay, S Docherty, G Chaim, J L Henderson)</li> <li>• Using the <b>Public Involvement Impact Assessment Framework</b> to assess the impact of public involvement in a mental health research context: A reflective case study (Michelle Collins, Rita Long, A Page, J Popay, F Lobban)</li> <li>• Mindful organizing in patients' contributions to <b>primary care medication safety</b> (Denham L Phipps, Sally Giles, Penny J Lewis, Kate S Marsden, Ndeshi Salema, Mark Jeffries, Anthony J Avery, Darren M Ashcroft)</li> <li>• A checklist for <b>managed access programmes</b> for reimbursement co-designed by Canadian patients and caregivers (Andrea Young, Devidas Menon, Jackie Street, Walla Al-Hertani, Tania Stafinski)</li> <li>• “Ultimately, mom has the call”: Viewing <b>clinical trial decision making</b> among patients with ovarian cancer through the lens of relational autonomy (Gladys B Asiedu, Jennifer L Ridgeway, K Carroll, A Jatoi, C R Breitkopf)</li> <li>• Implementing <b>community participation via interdisciplinary teams</b> in primary care: An Irish case study in practice (Edel Tierney, Rachel McEvoy, Ailish Hannigan, Anne E MacFarlane)</li> <li>• Does the <b>delivery of diagnostic news</b> affect the likelihood of whether or not patients ask questions about the results? A conversation analytical study (Ged M Murtagh, Anne L Thomas, Lynn Furber)</li> <li>• <b>Co-designing for quality</b>: Creating a user-driven tool to improve quality in youth mental health services (Christina L Hackett, Gillian Mulvale, A Miatello)</li> <li>• How do <b>adolescents with cerebral palsy participate</b>? Learning from their personal experiences (Sophie Catharina Wintels, Dirk-Wouter Smits, F van Wesel, J Verheijden, M Ketelaar, on behalf of the PERRIN PiP Study Group)</li> <li>• <b>What do stakeholders expect from patient engagement</b>: Are these expectations being met? (Mathieu Boudes, Paul Robinson, Neil Bertelsen, Nicholas Brooke, Anton Hoos, Marc Boutin, Jan Geissler, Ify Sargeant)</li> <li>• <b>Are component endpoints equal</b>? A preference study into the practice of composite endpoints in clinical trials (Melissa C W Vaanholt Marlies M Kok, Clemens von Birgelen, Marieke G M Weernink, Janine A van Til)</li> </ul>



	<ul style="list-style-type: none"> <li>• Towards capturing meaningful outcomes for people with dementia in <b>psychosocial intervention research</b>: A pan-European consultation (Laila Øksnebjerg, Ana Diaz-Ponce, Dianne Gove, Esme Moniz-Cook, Gail Mountain, Rabih Chattat, Bob Woods)</li> <li>• <b>Enacting person-centredness in integrated care</b>: A qualitative study of practice and perspectives within multidisciplinary groups in the care of older people (Lisa K Riste, Peter A Coventry, Siobhan T Reilly, P Bower, C Sanders)</li> <li>• <b>Patient and public engagement in research and health system decision making</b>: A systematic review of evaluation tools (Antoine Boivin, Audrey L'Espérance, F-P Gauvin, V Dumez, A C Macaulay, P Lehoux, J Abelson)</li> <li>• A cross-sectional survey of <b>mental health service users', carers' and professionals' priorities for patient safety</b> in the United Kingdom (Kathryn Berzins, John Baker, Mark Brown, Rebecca Lawton)</li> <li>• Barriers and facilitators to implementing a process to enable <b>parent escalation of care for the deteriorating child</b> in hospital (Fenella J Gill, Gavin D Leslie, Andrea P Marshall)</li> <li>• <b>Engaging "seldom heard" groups</b> in research and intervention development: <b>Offender mental health</b> (Charlie Taylor, Laura Gill, Andy Gibson, Richard Byng, Cath Quinn)</li> <li>• <b>Patient involvement in qualitative data analysis</b> in a trial of a patient-centred intervention: Reconciling lay knowledge and scientific method (Julia Frost, Andy Gibson, Faith Harris-Golesworthy, Jim Harris, Nicky Britten)</li> <li>• A 5-facet framework to describe <b>patient engagement in patient safety</b> (Lenora Duhn, Jennifer Medves)</li> <li>• From activism to secrecy: <b>Contemporary experiences of living with HIV</b> in London in people diagnosed from 1986 to 2014 (Tanvi Rai, Jane Bruton, Sophie Day, Helen Ward)</li> <li>• Long-term views on <b>chronic kidney disease research priorities</b> among stakeholders engaged in a priority-setting partnership: A qualitative study (Meghan J Elliott, Joanna E M Sale, Zahra Goodarzi, Linda Wilhelm, Andreas Laupacis, Brenda R Hemmelgarn, Sharon E Straus)</li> <li>• Attitudes towards <b>lung cancer screening</b> in a population sample (Stephanie E Smits, Grace M McCutchan, Jane A Hanson, Kate E Brain)</li> <li>• "Imagine if I'm not here, what they're going to do?"—<b>Health-care access and culturally and linguistically diverse women in prison</b> (Kelly Watt, Wendy Hu, Parker Magin, Penny Abbott)</li> <li>• The different perspectives of patients, informal caregivers and professionals on <b>patient involvement in primary care teams</b>. A qualitative study (Kirti D Doekhie, Mathilde M H Strating, Martina Buljac-Samardzic, Hester M van de Bovenkamp, Jaap Paauwe)</li> <li>• <b>Public involvement in health and social sciences research</b>: A concept analysis (Mel Hughes, Catherine Duffy)</li> <li>• Interventions to <b>support shared decision making for hypertension</b>: A systematic review of controlled studies (Rachel A Johnson, Alyson Huntley, Rachael A Hughes, Helen Cramer, Katrina M Turner, Ben Perkins, G Feder)</li> <li>• Measuring <b>therapeutic relationship</b> in the care of patients with <b>haemophilia</b>: A scoping review (Erin McCabe, Maxi Miciak, Liz Dennett, Patricia Manns, Christine Gupitill, Jeremy Hall, Douglas P Gross)</li> <li>• Empowerment and pathologization: A case study in Norwegian <b>mental</b></li> </ul>
--	--

	<b>health and substance abuse services</b> (Tone Larsen, Hildegunn Sagvaag)
--	---

*MJ Quality and Safety* online first articles

URL	<a href="https://qualitysafety.bmj.com/content/early/recent">https://qualitysafety.bmj.com/content/early/recent</a>
Notes	<p><i>BMJ Quality and Safety</i> has published a number of ‘online first’ articles, including:</p> <ul style="list-style-type: none"> <li>• Editorial: <b>Workflow disruptions and surgical performance</b>: past, present and future (Douglas A Wiegmann, Thoralf M Sundt)</li> <li>• Patient-reported complications related to <b>peripherally inserted central catheters</b>: a multicentre prospective cohort study (Sarah L Krein, Sanjay Saint, Barbara W Trautner, Latoya Kuhn, John Colozzi, David Ratz, Erica Lescinskas, Vineet Chopra)</li> </ul>

## Online resources

[UK] *National Institute for Health Research*

<https://discover.dc.nihr.ac.uk/portal/search/signals>

The UK’s National Institute for Health Research (NIHR) Dissemination Centre has released the latest ‘Signals’ research summaries. This latest release includes:

- Reviewing **inhaler technique** for older people with **COPD** can improve disease control
- Radiotherapy benefits some men whose **prostate cancer** has spread to their bones
- Antibiotics may be an alternative first-line treatment for uncomplicated **appendicitis**
- Aerobic exercise is an effective treatment for **depression**
- Lifestyle changes may be more important than drugs for **mild hypertension**
- **Premature babies** have fewer complications if a lower platelet count is accepted
- Adding low dose theophylline to inhaled corticosteroids does not reduce **COPD** exacerbations
- Combining mirtazapine with other antidepressants is not effective for **treatment-resistant depression**
- The benefits of commonly used **blood pressure and cholesterol lowering treatment** can last 16 years
- Antidepressants do not help treat depression in people living with **dementia**.

---

## Disclaimer

On the Radar is an information resource of the Australian Commission on Safety and Quality in Health Care. The Commission is not responsible for the content of, nor does it endorse, any articles or sites listed. The Commission accepts no liability for the information or advice provided by these external links. Links are provided on the basis that users make their own decisions about the accuracy, currency and reliability of the information contained therein. Any opinions expressed are not necessarily those of the Australian Commission on Safety and Quality in Health Care.