EVOLVE and IMSANZ
– Reflections, Progress and Future Prospects

Ian Scott  MBBS FRACP MHA Med
Director of Internal Medicine and Clinical Epidemiology | Princess Alexandra Hospital, Brisbane
A/Prof of Medicine | University of Queensland
What is EVOLVE?

Initiative led by the RACP to reduce low benefit care delivered by physicians in Australia and New Zealand.

RACP - founding member of the Choosing Wisely campaigns in Australia and New Zealand.

Through a rigorous peer-review process, EVOLVE identifies a specialty’s Top 5 clinical practices that, in particular circumstances, may:

• be overused;
• provide little or no benefit; or
• cause unnecessary harm.
Do we need EVOLVE?

Proportion of investigations that were inappropriate

- 64% coagulation tests (n=1)
- 22% thrombophilia screening tests in VTE (n=1)
- 34% to 62% CTPA in suspected PTE (n=4)
- 36% to 40% imaging in low back pain (n=2)
- 54% imaging in abdominal pain (n=1)
- 63% blood cultures in suspected sepsis (n=1)
- 23% to 43% troponin assays in chest pain (n=2)
- 20% echocardiography (n=1)
- 17% myocardial perfusion scans in stable IHD (n=1)
- 38% of referrals for telemetry beds in suspected arrhythmia (n=1)
- 10% liver biopsy (n=1)
Do we need EVOLVE?

Proportion of interventions/patients receiving interventions that were inappropriate

14% to 74% blood products (n=3)

15% to 55% older patients receiving at least one inappropriate medication (n=8)

63% to 90% gastric acid suppressants (n=2)

34% direct acting anticoagulants (n=1)

34% of medications in older patients with polypharmacy (n=1)

21% and 24% antimicrobial prescriptions for infections and surgical prophylaxis (n=1)

33% of admissions for undifferentiated chest pain (n=1)

52% inhaled corticosteroids in mild chronic obstructive pulmonary disease (n=1)

10% to 64% end of life care admissions involve futile interventions (n=3)
EVLove lists

Development process

• Consider practices within or significantly impacting the domain of practice of a particular specialty;
• Focus on practices:
  • Growing in use or commonly used and/or costly
  • Significant reduction in low value use worthwhile
  • Evidence base exists which defines low value use
• Use a Delphi method as the preferred methodology
• Recruit representative sample of physicians
EVOLVE: Top 5 Lists from IMSANZ

1. Avoid medication-related harm in older patients (>65 years) receiving five or more regularly used medicines by performing a complete medication review and deprescribing where appropriate.

2. Don’t request daily full blood counts, erythrocyte sedimentation rate (ESR) or C-reactive protein (CRP) as measures of response to antibiotic treatment in immunocompetent patients with mild to moderate community-acquired infections who are clinically improving.

3. Once they have become afebrile and tolerant of oral antibiotics, don’t continue prescribing intravenous antibiotics to patients with uncomplicated infections and no high-risk features.

4. Don’t request Holter monitoring, carotid duplex scans, echocardiography, electroencephalograms (EEGs) or telemetry in patients with first presentation of uncomplicated syncope and no high-risk features.

5. Don’t request computerised tomography pulmonary angiography (CTPA) as the first-choice investigation in patients with low risk of venous thromboembolism (VTE) by Well’s score. Instead request D-dimer and perform imaging only if levels are elevated, after adjusting for age.
EVOLVE: Progress to date

- Total of 23 lists from more than half of RACP affiliated specialty groups
- Plans to extend a ‘refresh’ process through all lists published in early years
- Partnerships with Choosing Wisely, NPS MedicineWise, NSW Health/ACI, ACQSHC Atlas of Health Care Variation
- Recognition of EVOLVE in 2016 Interim Report of MBS Review Taskforce to the Minister for Health and Productivity Commission’s 2017 Shifting the Dial 5 Year Productivity Review
- Nine EVOLVE-related articles published in peer-reviewed journals
- Online education module based on ANZSGM EVOLVE recommendations in collaboration with HETI in NSW
  - a patient and a Physician
  - a carer and a Physician
  - an Advanced Trainee and a Fellow
- EVOLVE forums at RACP Congress and various specialty ASMs
EVOLVE: Evaluation of Impact

- More than 3000 hits on the Evolve web link
- High profile in media and social media

- Champion hospitals and health services partnering with Choosing Wisely and Evolve in projects seeking to reduce low value care
  - Gold Coast and Box Hill hospitals – pathology
  - RBWH – several different investigations
  - Monash – various interventions
  - Austin Health – junior doctors handbook
  - Sir Charles Gardiner – IV cannulae
  - Redlands Hospital – various interventions
EVOLVE: Evaluation of Impact

• Clinician-designed pathways based on initial presenting diagnosis to support ambulant care
• In pre/post study pathway implementation associated with
  • reduced admitted LOS for falls patients of 32.5% and admission costs by 19.5%
  • reduced admitted LOS for syncope, seizure, TIA patients by 22%; no change in costs
• No significant increase in 90-day representations; EDLOS unchanged
• Cost savings in freed capacity of $71 per patient episode

• Pathways included in appendix in SGMCN Mind the Gaps Position Statement available on IMSANZ website
EVOLVE: Evaluation of Impact

Ben Vogler et al  Cairns Hospital, Qld

Methods: This was a single centre, retrospective study performed at Cairns Hospital from the 1st of July 2017 to the 30th of June 2018. Data was collected from review of the electronic medical records.

Results: Among patients with unprovoked PE 28% (14/50) were recommended indefinite anticoagulation. In patients with provoked PE without active malignancy 9.6% (5/52) were prescribed anticoagulation for three months. There was no documentation of duration of anticoagulation in the medical records of 25.7% (27/144) of patients. Thrombophilia screening was undertaken in 20.1% (29/144). A CT abdomen for malignancy screening was performed in 8% (4/50) of patients.

Current projects include:
B12/RCF ordering
TFT ordering
Radiological investigation of pyelonephritis
Faecal occult blood testing
EVOLVE: Evaluation of Impact

- SGMCN has been a lead for Clinical Senate and Low Benefit Care Committee Qld
- Two Senate forums 2017/2019 on low benefit care
- Ministerial commitment over next 18 mo
- Implementation and evaluation framework
- Topics targeted:
  - Antihypertensive drug use in older patients
  - Syncope work-up
  - Use of CTPA
  - Use of routine pathology (FBC/ESR/CRP)
  - Timely changeover to oral antibiotics in patients with pneumonia/urosepsis
  - Admissions and investigations for low risk chest pain
Evolve: Ongoing challenges

- No systematic evaluation of impact or awareness of initiative to date
- Low take up by some specialty groups – especially NZ
- Underutilisation by College trainee networks
- Evolve projects and advocacy mostly ‘spontaneous’ and opportunistic
- Biased selection of low value items
- Process is specialist-dominated – ?role of consumers
- Questionable impact at changing behaviour at scale
  - Early US experience suggested limited impacts
    Rosenberg et al. JAMA Intern Med 2015
  - Subsequent emergence of various QI programs with promising results
    Mafi et al BMJ Qual Safe 2018
- Communicating and engaging with clinicians busy with existing clinical practice
- No visibility on IMSANZ website
EVOLVE: Implementation

Why do we do the things we do?

No participants=50
No responses=79
EVOLVE: Implementation

Traditional knowledge translation strategies
EVOLVE: Implementation

Traditional knowledge translation strategies

Percent Inappropriate

- Coagulation tests in ICU: 23% (Musca, 2016)
- CT pulmonary arteries: 22% (Bairstow, 2010)
- CT ankle X-rays: 49% (Bairstow, 2010)
- CT kidneys, ureter and bladder: 49% (Bairstow, 2010)
- CT imaging abdomen: 37% (Bairstow, 2010)
- D-dimer assays: 24% (Cooper, 2015)
- CT Pulmonary arteries: 10% (Cooper, 2015)
- (V/Q) lung scans: 14% (Cooper, 2015)
- CT pulmonary arteries: 35% (Ong, 2013)
- Troponin (hs-Tn): 21% (Scorgie, 2014)
- Telemetry: 11% (Ramkumar, 2017)
EVLVE: Implementation

Sociocognitive approach

Decisions normally adaptive but become maladaptive because of cognitive bias

<table>
<thead>
<tr>
<th>Bias</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Commission bias ‘Omission regret’</td>
<td>Tendency to do something (or seen to be doing something) even if intended actions are not supported by robust evidence and may in fact do harm</td>
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<td>Uncertainty bias</td>
<td>Tendency to want to attain a higher level of certainty than is clinically feasible or warranted</td>
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<td>Impact bias</td>
<td>Tendency to over-estimate benefits and under-estimate harms of interventions</td>
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<tr>
<td>Extrapolation bias ‘Indication creep’</td>
<td>Tendency to extrapolate intervention benefit seen in a circumscribed sample of patients to similar effects among a wider spectrum of patients who share similar disease traits</td>
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<tr>
<td>Pro-innovation bias ‘Novelty bias’</td>
<td>Tendency to view newer (and more costly) tests and treatments as necessarily better in improving patient outcomes than existing ones.</td>
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Lindner Med J Aust 2018

Scott BMJ 2008; Scott et al Med J Aust 2017
Sociocognitive approach

Practices at one time thought appropriate but now outmoded or shown to be ineffective or harmful, but retained out of belief, habit or ritual

*Clinical inertia, group norms*
EVOLVE: Implementation

Sociocognitive approach

Immersion
*Clinical microsystem*
Defining the low value care problem
Engaging key stakeholders at unit level
Eliciting rationales for low value care

Redefining the problem
Validating the problem as previously defined using data and experience
Converging to mutual understanding of low value care
Giving ownership to clinical teams

Developing motivation for change

Unlearning
Patient narratives and outcome data - harm, waste
Peer comparisons and benchmarking – evaluative feedback
Peer to peer support (seeing how others have unlearned)

Substitution
Providing alternatives

Scott, McPhail 2019
**Sociocognitive approach**

**Facilitating and sustaining the change**
Making it easier to do right thing; harder to do wrong thing
- nudge strategies (public compacts, patient prompts, SDM)

Ongoing feedback loops looking at outcomes, adverse events

Peer group discussions (‘clinical conundrums’)

Intrinsic rewards (professional)
Extrinsic rewards (recognition, budget)

Permissions
Forcing functions on EMR
  - Elimination of options, compulsory indication fields, pop-up messaging

Funding, service agreements, unit guidelines, performance standards

Scott, McPhail 2019
EVOLVE: Future prospects

- Additions to IMSANZ Choosing Wisely recommendations
- Inventories
  - Projects/initiatives
  - Toolkits and resources
- Empowering consumers
- Hospital/clinic compacts
- Collaborations with Wiser Health Care

www.evolve.edu.au
evolve@racp.edu.au
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