Brisk Risk identification Tool: the BRIGHT tool

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Background

• Ageing demographic
• Tip of the iceberg – prevention
• Is there anything under there
Proactive assessment- 41 trials
15 systematic reviews, 4 meta-analyses

- Not sure whether proactive assessment works
- Case finding promising as targeted
- Exactly what and who not known.
The BRIGHT trial

- Does a proactive health surveillance process reduce disability
- 165 GPs in 60 practices
- 3875 participants over 75 years.
Methods

General practices – select those over 75 years, enrol, consent 2008-9

Comparison

Control Group
• usual care

Case finding
• Birthday card BRIGHT tool to all
• Triggers = Referral for OPHS

QOL, Function, Residential care placement, hospitalisation, mortality, cost effectiveness 2011-12
<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In general do you have good health?</td>
<td></td>
<td></td>
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<tr>
<td>2. Do you need someone to help you get around indoors?</td>
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<tr>
<td>3. Have you tripped or fallen?</td>
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<tr>
<td>4. Do you get short of breath walking across the room?</td>
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<tr>
<td>5. Do you usually need someone to help you bathe or shower?</td>
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<tr>
<td>6. Do you usually need someone to help you comb your hair, brush your teeth, shave, apply makeup, or wash/dry your face and hands?</td>
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<tr>
<td>7. Do you usually need someone to help you dress your lower body?</td>
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<td>8. Have you been bothered by feeling down, depressed or hopeless?</td>
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<td>9. Do you have any difficulties making decisions about everyday activities?</td>
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<tr>
<td>10. Do you have memory problems that make everyday activities difficult?</td>
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<tr>
<td>11. Do you usually need any help with ordinary housework?</td>
<td></td>
<td></td>
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<tr>
<td>Did you fill in this questionnaire by yourself?</td>
<td></td>
<td></td>
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<tr>
<td>If No, Who?</td>
<td></td>
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Pilot study – Objective

- Waitemata DHB
- 100 people
- MDS-HC Maple
  - specificity - 0.84
  - sensitivity 0.85
- False positives 2:1

- Is the BRIGHT tool valid?
  - Initial validation with MDS-HC
  - Larger number of people
  - Prospective outcomes
BRIGHT tools

2008-9
- 1811 received the BRIGHT tool
- 282 (16%) scored 3+

2009 onwards
- 106 died, 64 admitted res care, 157 total.
- 1190 hospitalised
- 566 ASH admissions
Prediction residential care placement or death

- **Sensitivity**, all those that died/adm identified? 50/127 = 40%
- **Specificity**, rules out? 733/838 = 87%
- **Positive predictive value**, % correct 50/155 = 32%
- **Negative predictive value** 733/810 = 90%

<table>
<thead>
<tr>
<th>Rescare/death</th>
<th>Triggered</th>
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<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>733 (90%)</td>
<td>105 (68%)</td>
<td>838</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>77 (10%)</td>
<td>50 (32%)</td>
<td>127</td>
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<td></td>
<td></td>
<td>810</td>
<td>155</td>
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</table>
Identifies those who will lose independence
Cut points

- Area under curve .75,
- modest
Prediction hospitalisation

- Sensitivity
  \[
  \frac{121}{505} = 24\%
  \]

- Specificity
  \[
  \frac{1130}{1287} = 88\%
  \]

- Positive predictive value
  \[
  \frac{157}{275} = 56\%
  \]

- Negative predictive value
  \[
  \frac{1130}{1514} = 75\%
  \]

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<tr>
<th>ASH</th>
<th>Triggered</th>
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<tbody>
<tr>
<td>No</td>
<td>No</td>
<td>1130 (75%)</td>
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<tr>
<td></td>
<td>yes</td>
<td>121 (44%)</td>
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<tr>
<td></td>
<td></td>
<td>1287</td>
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<tr>
<td>Yes</td>
<td>No</td>
<td>384 (25%)</td>
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<tr>
<td></td>
<td>yes</td>
<td>157 (56%)</td>
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<td></td>
<td></td>
<td>505</td>
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<td></td>
<td>1514</td>
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<td></td>
<td></td>
<td>278</td>
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</tbody>
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All hospitalisations

ASH hospitalisations

Survivor Functions
With 95% Confidence Limits

Survival Probability

Time

0 200 400 600 800 1000

0 0.2 0.4 0.6 0.8 1.0

Not Triggered

Triggered

Survivor Functions
With 95% Confidence Limits

Survival Probability

Time

0 200 400 600 800 1000

0 0.2 0.4 0.6 0.8 1.0

Not Triggered

Triggered

ASH
BRIGHT tool

- Accurate for disability
- Some discrimination for hospitalisations
- MRC assessment trial screen
  - 35 items, triggered 10%
- Roberts screen with MDS-HC
  - Triggered 60%
- May be efficient in targeting as long as alternate pathways are at entry
Does it make a difference?

RCT awaited