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EVALUATION CRITERIA TO ASSESS THE VALUE OF IDENTIFICATION SOURCES FOR HORIZON SCANNING

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National Horizon Scanning Centre (NHSC):

- **Purpose:** advanced notice of new health technologies, likely to have a significant impact on English National Health Service (NHS), within 2-3 years.
- **Remit:** all health interventions e.g. drugs, devices and diagnostics.
- **End-users:** National Institute for Health and Clinical Excellence (NICE), Health Technology Assessment (HTA) programme and other national policy-makers.

Scanning:

- Involves looking at many different sources of information on scientific developments on the horizon.
- NHSC scans a wide range of sources.
- Combination provides corroboration, increases accuracy and information coverage.
- Lack of tools to aid horizon scanners to assess new sources more objectively.

Aim:

- Develop and apply set of criteria and scores to evaluate current NHSC sources.

Objective:

- Remove from routine scanning, sources that fell beneath a cut-off score.

METHODS



- MEDLINE, EMBASE, PubMed, international horizon scanning and HTA agencies & Google
- Keywords - 'Horizon scanning systems', 'Search strategy', 'Priority setting', 'New and emerging health technologies', 'Systematic scanning' & 'Health technology assessment'

- **Analytic Hierarchy Process (AHP):** converts evaluations to numerical values or a 'priority' (indicating relative importance of each criteria).
- **Scoring system:** to ensure criteria could be applied more quantitatively.
- **Pilot:** horizon analysts applied the criteria and scores to 6 randomly selected sources.
- **Feedback** from horizon analysts was used to further develop the categories, scoring and recording system.

**Final criteria and scores
were used to assess all
35 sources**

**Horizon analysts were
asked to record their
opinion as to whether a
source should be
scanned or not**

**Scores were summed
and sources ranked
Maximum total score
possible = 240**

Criteria	Usefulness to NHSC			
	Very low 0 points	Low 10 points	Moderate 20 points	High 30 points
Accessibility : level of effort required	Limited access	Resource intensive: manual scanning of literature	Medium effort: Internet sites, keyword search	Minimal effort: automatic email alerts, links to articles
Contact point: for further information	No	-	-	Yes
Cost: level of annual subscription or registration cost	>£1,000	£500-1,000	<£500	Free access
Coverage: % of relevant information	<10%	10-50%	50-70%	>70%

Criteria	Usefulness to NHSC			
	Very low 0 points	Low 10 points	Moderate 20 points	High 30 points
Efficiency: time to relevant information	>1 hour	30-60 minutes	10-30 minutes	<10 minutes
Frequency: how often information is updated	Yearly or less frequent	Quarterly	Monthly	Daily - bi- weekly
Memory: news archive	None	<3 months	3-6 months	>6 months
Quality	No quality	Questionable quality, elements of bias	Accurate, reliable	Accurate, objective, reliable, author cited

RESULTS

Analytic Hierarchy Process (AHP) priority was derived for each criteria:

Horizon Analysts (HA) & AHP evaluations

HA 1	AHP priority	HA 2	AHP priority	HA 3	AHP priority	HA 4	AHP priority
Coverage	0.34	Coverage	0.35	Coverage	0.29	Efficiency	0.31
Quality	0.26	Quality	0.27	Quality	0.28	Coverage	0.23
Efficiency	0.16	Efficiency	0.15	Efficiency	0.17	Quality	0.14
Access	0.09	Access	0.08	Access	0.10	Frequency	0.11
Frequency	0.07	Frequency	0.07	Frequency	0.07	Access	0.09
Cost	0.04	Cost	0.03	Cost	0.05	Memory	0.06
Memory	0.03	Memory	0.03	Contact	0.03	Contact	0.04
Contact	0.02	Contact	0.02	Memory	0.02	Cost	0.01

- **Cut-off score** identified as all sources recommended for rejection by individual horizon analysts scored ≤ 100 .
- **7 sources (20%) were removed** from ongoing horizon scanning:

Removed sources	Total score
British Cardiovascular Society (website)	100
Food and Drug Administration (website)	100
Science Daily	100
Saturday Times (newspaper)	90
Radiological Society of North America (website)	90
Dial-Paediatric Drug (Medicine) Information Advisory Line	80
European Congress of Radiology (website)	60

NHSC most valuable sources:

Source	Total score
PharmaTimes	220
Lancet	210
Journal of the American Medical Association	210
Pharmaceutical Marketing Live	210
Medgadget	210
Clinica - industry news magazine	200
Doctor's Guide	200
Gene Therapy Advisory Group	200
Press Watch	190
Clinica - daily alert	190

DISCUSSION

Other studies:

Criteria we judged as important were in accordance with previous studies

Common criteria were: accessibility, cost, coverage, efficiency, frequency and quality

Limitations:

- Criteria were used by individual horizon scanners to assess their assigned sources, perhaps leading to a subjective analysis of the source.
- Scanning efficiency: time to find relevant technologies or information, will vary between individual horizon analysts and improve as experience is gained in scanning a specific source.
- We did not measure the number of relevant 'hits' for individual sources, which would have increased the objectivity of our recommendations for removal

The future:

- We succeeded in developing criteria, considered useful by NHSC horizon analysts.
- Value of using criteria needs to be established through future use.
- Criteria have been tested on 1 new source, The Formulary Journal, but was rejected.
- Criteria and scores should be reviewed regularly.
- Review of current scores could be more regular exercise.

Any questions?

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