Based on current evidence how often should an individual visit their dental practitioner for a dental examination?

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Background

The six-month fixed recall interval has become an unchallenged dental practise absent of evidence based accountability. While there is an increase in oral malignancy, the observed decrease in the prevalence of caries and periodontal disease has perhaps rendered the bi-annual routine oral examination (ROE) outdated. A one-size-fits-all protocol for fixed six-month recalls dismisses the bespoke interplay of individual risk factors.

Aims: Evaluate evidence based literature regarding current recall intervals under the following headings:

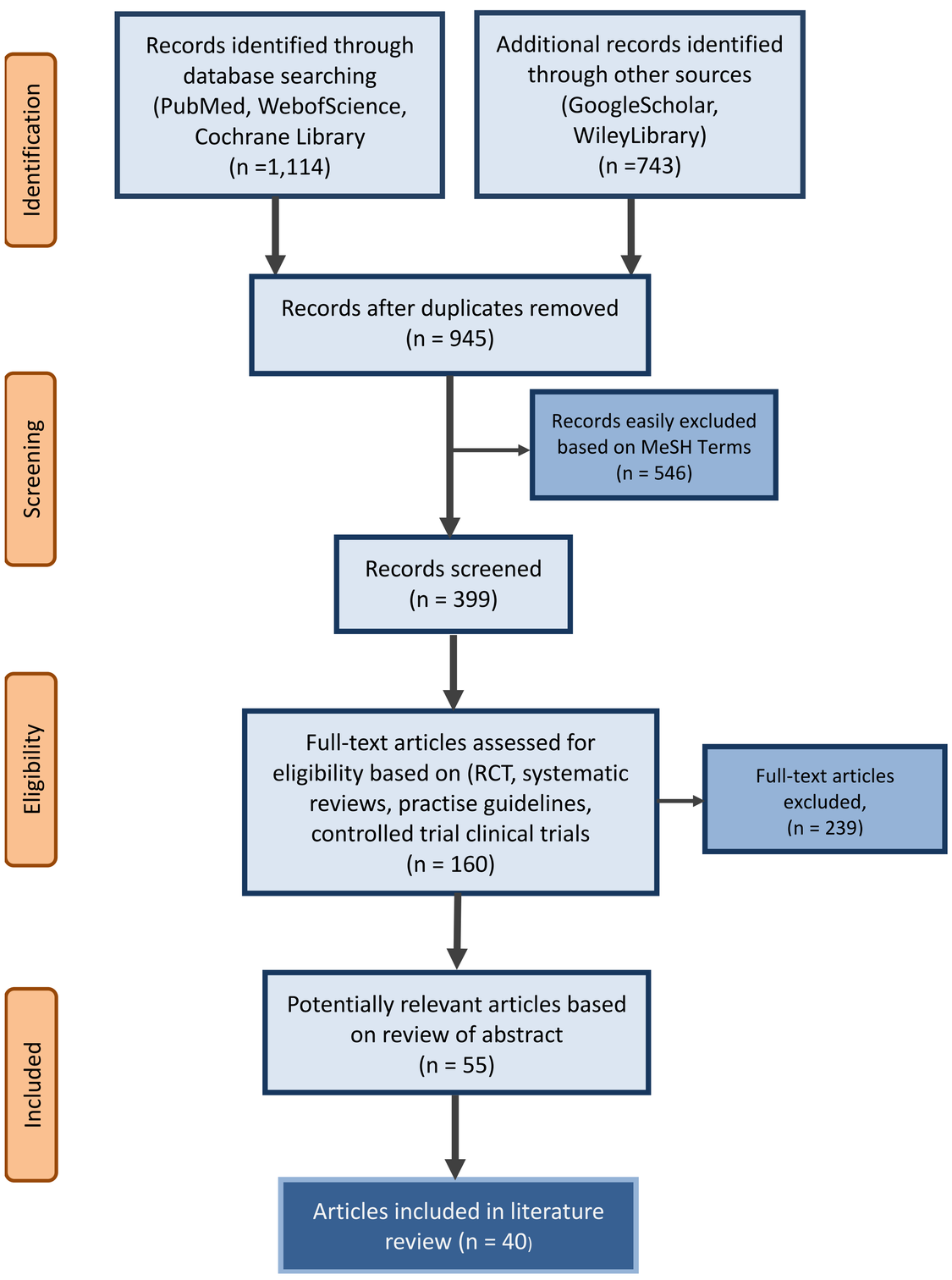
1. Caries assessment and progression
2. Periodontal assessment and maintenance
3. Oral malignancies

Progression rates of these oral diseases are of particular interest and are valuable prerequisites for interval planning.

Methods

Literature search of electronic databases including PubMed, GoogleScholar, Web of Science, Cochrane Library and MEDLINE. The search included terms:

"dental recall intervals", "routine oral examination", "six-month recall", "oral cancer" AND "progression", "oral cancer" AND "early detection", "caries risk assessment", "caries" AND "recall interval", "caries progression rate", "periodontal healing", "scale and polish" AND "recall interval", "oral risk factors". Research domains included but were not limited to Health Care science, Dentist Patient Relations, Oncology, Government Health Services, and Public Health Dentistry.



Results/Discussion

1. Caries assessment and progression

Authors/ Country/ Sample size	Type of Study	Type of Intervention/Aim	Main Findings
Sheiham *et al,* 1985 England *N* = 351	Cross-sectional	DMFT*: ROE 6 months v. 24 months	No restorative disadvantage 6 v 24 months
Ellershaw and Spencer, 2012 Australia *N* = 5,574	Cross-sectional	DMFT: 6 month v 24 month attenders	No significant difference in mean DMFT between 6 months v. 24 months
Wang et al, 1992 Norway *N* = 226	Randomized Controlled trial	Randomly allocated 12-month v 24-month recall	Marginally ↑DMFT in patients called every 24 months (Non-significant)

*DMFT = count of the number of: decayed, missing, filled teeth

2. Periodontal assessment and maintenance:

Authors/ Country/ Sample size	Type of Study	Type of Intervention/Aim	Main Findings
Stanton *et al,* 1969 In Vitro *N=99*	Time series study	Rate of wound healing of human gingivae	Full connective tissue repair requires at least 49 days
Caton *et al,* 1982 USA *N=128*	Longitudinal, Nonrandomized controlled trial	Pocket depth/BOP at 4, 8 and 16 weeks following subgingival root planing.	Healing observed at 4 weeks maintained for 8 and 16 weeks Justifying a three/four-month interval
Page *et al,* 2003 USA *N=523*	Longitudinal study (15 years)	Validation of risk based recall intervals across 15 years	Variations in disease susceptibility justify an individualised risk-based periodontal recall interval
Lightner et al, 1971 USA *N=470*	Randomised controlled trial	3,6 or 12 months scale and polish intervals (with and without OHI)	No significant difference between 3, 6 month and 12 month ROE

3. Oral malignancies

Authors/ Country/ Sample size	Type of Study	Type of Intervention/Aim	Main Findings
Scott *et al,* 2005 UK *N=245*	Cross-sectional	Relationship between diagnostic delay and stage of oral squamous cell carcinoma	Presentation of advanced stage oral cancer is a result of tumour characteristic not professional delay in diagnosis
Davenport *et al,* 2003	Systematic Review	12 v 24 month ROE influence on stage at diagnosis	ROE less than 12 months do not impact tumour stage Intervals should be no longer than 24 months in low-risk patients
Brocklehurst *et al,* 2013	Cochrane Review	Fixed vs. risk based recall intervals	Insufficient evidence to suggest blanket recall interval for the general adult population will alter cancer mortality

Conclusions

- Insufficient high quality evidence exists to refute or confirm 6 month check-ups
- The professional consensus has shifted from a one-size-fits-all recall interval to a risk-assessment based recall interval.
- More randomised control trials of adequate sample size and conforming to the CONSORT guidelines are needed.