

Prudent Health Care: the role of DCP's

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Prudent Healthcare



- Health and well-being through co-production
- Make the most effective use of all skills
- Reduce variation by using evidence-based practice

Change in population distribution



- 50% of the population will be 50+ by 2050
- 25% of the population will be pensioners





Change in population distribution





1980 – 2015 – 2050: pyramid to bell to barrel

BUT it won't all be healthy aging





Source: Government Actuary's Department

Mobility and other co-morbidities will be key factors





So some will be *in a* home





But most will be at home





11% increase of 65+ in 15 years yet 0.3% increase in number entering care

And they'll have teeth!





How do we care for older people?





Kickbusch I. A global strategy for healthy ageing. World Health 1997;50(4):4-5.





How do we care for older people?

CrossMark





Does dental disease presence equate to treatment need among care home residents?

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ARTICLE INFO	ABSTRACT
Article history:	Objectives: This study aimed to explore the relationship between dental disease, complexity
Received 12 March 2014	and dental treatment needs of care home residents.
Received in revised form	Methods: Survey of residents in care homes in Wales. Random sample of participants from a
6 May 2014	random selection of care homes across Wales, UK. Data collection involved questionnaires
Accepted 22 May 2014	and dental examinations.
	Results: Data were collected from 655 care home residents in 213 care homes. Half of all residents reported good or very good oral health but most had dental treatment needs. 73%
Keyuponda:	of dentate residents had active caries, of those, 53% required restorations and 37% needed
Dental	extractions. All were deemed to require dental examination. 60% of dentate residents and
Oral health	50% of edentate residents had case complexity, which influenced the delivery of care.
Residential care	Conclusions: There is significant unmet dental treatment need amongst care home resi-
Case mix	dents. Dental disease presence alone is a poor indicator of the need for care and does not
Survey	account for case complexity or the shift towards a patient centred rather than disease
Older people	focussed approach to care. Measures for treatment needs and complexity are required when undertaking assessments of oral health needs in care homes.
	Clinical Significance Traditional oral health surveys measuring dental disease do not necessarily equate to treatments required for care home residents and do not reflect
	the complexity and difficulties involved in delivering dental care. This survey highlights dental needs in care homes, and the difficulties involved in delivering care to address
	these needs.

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. Introduction

Good oral health is important for care home residents' nutrition, health and wellbeing.¹ Maintaining residents' oral

residents is an on-going challenge globally and the World Health Organisation has recommended that countries adopt strategies for improving oral health in older adults.

health and meeting the dental treatment needs of care home

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http://dx.doi.org/10.1016/j.jdent.2014.05.010 0300-5712/Crown Copyright () 2014 Published by Elsevier Ltd. All rights reserved.

- The majority of dentate participants had active dental caries 73% (202 / 277)
- Majority of participants who required fillings had case complexity
- 65% of all those requiring fillings needed additional time or extra visits

How do we care for older people?







Making sure *in the future* "the right number of people with the right skills are in the right place at the right time to provide the right services to the right people"



Planning the future work-force

$L^{r} = [N/Q] * [Q/H] * [H/P] * P$

 $P = population \ size$ $H / P = level \ of \ disease \ in \ population$ $Q / H = amount \ of \ cure/care \ to \ manage \ disease$ $N / Q = productivity = number \ of \ people \ to \ deliver \ cure/care$

Birch S, Kephart G, Tomblin-Murphy G et al. Human Resources Planning and the Production of health: a needs-based analytical framework. Canadian Public Policy 2007;33(Supplement): S1-S16

SO, what do older people want?





Brocklehurst PR et al. Older people and oral health: setting a patient-centred research agenda. Gerodontology. 2015 Sep;32(3):222-8. doi: 10.1111/ger.12199. Epub 2015 May 23.

SO, what do older people want?



-the first point I put was raising awareness, so that we reduce the idea that disease is inevitable.... [Specialist]
-how we can get dentists or hygienists, I put assistants but I'm talking about the whole thing.....to visit....to actually visit people in their own homes if they can't get to a GP or a dentist.... [User]
-maybe you could have two systems then where you automatically get assessed when you're 50. At 50 you get an invite to have this screening.... [User]

Move from cure to care & stratify the dental team



In the practice



In the community

Need to think of different models









Need to think of different models











Using the whole dental team

Would it be safe?





Predicted as diseased (positive) **Diseased – True Positive**

Predicted as healthy (negative) Truly healthy – True Negative





How would you score this lesion?





How would you score this lesion?





© Cardiff and Vale NHS Trust Courtesy of M. Lewis

How would you score this lesion?





How did everyone do?



	Sensitivity	Specificity	Confidence
Specialists	0.82	0.75	7.50
GDPs (n=96)	0.77	0.71	6.54

How did everyone do?



	Sensitivity	Specificity	Confidence
Specialists	0.82	0.75	7.50
GDPs (n=96)	0.77	0.71	6.54
DCPs (n=63)	0.77	0.68	5.90



R



Number of frank malignancies missed



...and the impact of confidence?





What about the common oral disorders?

How good are you?



- Who thinks this has suspected decay worthy of a referral to a dentist?
- Who thinks this tooth is sound and doesn't warrant referral?



How good are you?



- Who thinks this has suspected decay worthy of a referral to a dentist?
- Who thinks this tooth is sound and doesn't warrant referral?



How good are you?



- Who thinks this has suspected decay worthy of a referral to a dentist?
- Who thinks this tooth is sound and doesn't warrant referral?



How did dentists perform?



	Sensitivity	Specificity
Dental	.85	.65
students		
GDPs	.85	.71

....and the rest of the team?



	Sensitivity	Specificity
Dental students	.85	.65
GDPs	.85	.71
HTs	.85	.67
HT students	.85	.54
Dental Nurses	.88	.62

Dentists versus dental nurses





Brocklehurst PR, Ashley J, Walsh T, Tickle M. Relative performance of different dental professional groups in screening for occlusal caries. Community Dentistry and Oral Epidemiology 2012; 40(3):239-46.



But, could the results be replicated....

....in practice?



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The Efficacy of Screening for Common Dental Diseases by Hygiene-Therapists: A Diagnostic Test Accuracy Study

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R. Macey', A. Glenny', T. Walah', M. Tickle', H. Worthington', J. Ashley',

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What about efficacy in practice?





What about efficacy in practice?



Patients

Index Test Dental Care Professionals (DCPs) will perform a screen for caries and periodontal disease Reference Test General Dental Practitioner (GDP) independently performs an identical screening process

Index test positive



 Any tooth with frank cavitated lesions or any tooth with shadowing or opacity consistent with underlying dentinal caries



Macey R, Walsh T, Glenny AM, Worthington H, Tickle M, Ashley J, Brocklehurst P. Protocol for diagnostic test accuracy study: the efficacy of screening for common dental diseases by Dental Care Professionals. BMC Oral Health Sept 21:13(1):45.

Index test positive



 Probing depth of any site on any tooth causes the BPE probe to disappear so that the black band is only partially visible (BPE 3) or disappears (BPE 4)



Not about BoP



Efficacy in NHS practice





Macey et al. J Dent Res. 2015 Jan 20. pii: 0022034514567335



Next step....

Testing effectiveness of care



Time



Implications?

Prevention for older people





Strategies to prevent oral disease in dependent older people (Protocol)

Brocklehurst P, Williams L, Hoare Z, Goodwin T, McKenna G, Tsakos G, Chestnutt IG, Pretty I, Wassall R, Jerkovi

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Brocklehnur, P. Williams L, Hoare Z, Gondwin T, McKenna G, Tsakos G, Chestnurt KG, Pretty I, Wassall R, Jerkovis - c osis. K, Hayes M, Watt RG, Burton C. Strategies to prevent oral disease in dependent older people. Cachrane Database of Systemetic Reviews 1016; Issue 10. Act. No.: CD012402. DOI: 10.1002/ActaBast.C012402.

www.cochranelibrary.com

Strategies to prevent onal disease in dependent older people (Protocol) Copyright © 2016 The Cochrane Cellaboration, Published by John Wiley & Sons, Ltd.

WILEY

- Large team
- 6,414 papers identified
- 30 papers to undergo data extraction and determination of bias
- Aim to publish by the end of the year (2017)

....a better use of resource





da Mata C, Allen PF, Cronin M, O' Mahony D, McKenna G, Woods N. Cost-effectiveness of ART restorations in elderly adults: a randomized clinical trial. Community Dent Oral Epidemiol 2014; 42: 79–87.



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