

Supplementary Table 1  
 Characteristics of the individual studies included in the meta-analysis

RCT

<i>REFERENCE, YEAR</i>	<i>COUNTRY</i>	<i>YEAR</i>	<i>STUDY SETTING</i>	<i>DURATION</i>	<i>N</i>	<i>INTERVENTION TYPE</i>	<i>CONTROL</i>	<i>BIAS</i>	<i>FUNDING</i>
<b>ADACHI 2002</b>	Japan	2002	Elderly living in nursing homes	24 months	Number evaluated: 88	Method of oral hygiene treatment focused mainly on <b>mechanical cleaning</b> with scaling with hand scalers once a week by dental hygienists. Routine care consisted of brushing of the teeth with an electric brush with an automatic water supply. Assisted cleaning after each meal by staffs or caregivers.	Caregiver-provided usual oral care Swabbing with a sponge brush and denture cleaning after each meal by residents	<i>RS -unclear, AC- unclear, BP-High risk, OA- unclear, OD- unclear, SR-low risk, OR- low risk.</i>	Grant from Tokyo Dental College
<b>BOURIGAULT 2011</b>	France	2011	Nursing homes	18 months	Number evaluated: 2,513	<b>Bucco dental health care professional care</b> brushing teeth, buccal mucosa and tongue (three times a day and after each meal) + mouthrinse ( <b>chlorhexidine</b> ) + dental visit (annual visit to dentists).	Usual mouth care (not stated in detail)	<i>RS -unclear, AC- unclear, BP-High risk, OA- unclear, OD- unclear, SR-low risk, OR- low risk.</i>	Colgate-Palmolive and the 'Programme Hospitalier de Recherche Clinique' 2003
<b>JUTHANI-MEHTHA 2015</b>	USA	2015	Nursing homes	30 months	Number evaluated: 575	Brushing teeth (twice a day) + cleaning denture + mouthrinse (0.12% <b>chlorhexidine</b> oral rinse, twice a day) + upright feeding positioning, by <b>nurses</b>	Usual oral care + usual feeding position (not stated in detail)	<i>RS -low risk, AC-low risk, BP-High risk, OA- low risk, OD- low risk, SR-low risk, OR- low risk.</i>	National Institutes of Health, USA

<b>LAM 2013</b>	Hong Kong	2013	Stroke rehabilitation unit	31 months	Number evaluated: 81	Professional OHI with <b>chlorhexidine</b> mouth wash use	Oral hygiene instruction	<i>RS -low, AC- unclear, BP-High risk, OA- unclear, OD- unclear, SR-low risk, OR- low risk.</i>	Grant from Tokyo Dental College
<b>OHSAWA 2003</b>	Japan	2003	Nursing homes in Japan	24 months of follow-up	Number evaluated: 49	Brushing teeth after each meal assisted by nurses and caregivers along with <b>povidone iodine</b> (1.0%) as mouthwash; mechanical plaque control, 2-3 days/week by dentists or dental hygienists.	Usual oral care	<i>RS -low, AC- unclear, BP-High risk, OA- low risk, OD- unclear, SR-low risk, OR- low risk.</i>	Not stated
<b>PANCHABHAI 2009</b>	India	2009	ICU (mixed medical and surgical)	8 months	Number evaluated: 300	<b>Chlorhexidine</b> along with usual care.	Potassium permanganate	<i>RS -unclear, AC- unclear, BP-High risk, OA- low risk, OD- unclear, SR-low risk, OR- unclear.</i>	Not stated
<b>YONEYAMA 2002</b>	Japan	2002	Nursing homes in Japan	24 months	Number evaluated: 366	Brushing teeth after each meal assisted by nurses and caregivers along with <b>povidone iodine</b> (1.0%) as mouthwash; plaque control once a week by dentists and dental hygienists.	Usual oral care	<i>RS -low, AC- unclear, BP-High risk, OA- low risk, OD- unclear, SR-low risk, OR- low risk.</i>	Japan Welfare Ministry

Random sequence generation (selection bias) - RS, Allocation concealment (selection bias) – AC, Blinding of participants and personnel (performance bias) All outcomes- BP, Blinding of outcome assessment (detection bias) All outcomes- OA, Incomplete outcome data (attrition bias) All outcomes- OD, Selective reporting (reporting bias) -SR, Other risk-OR.

## Non-RCT & Other studies

<i>REFERENCE, YEAR</i>	<i>COUNTRY</i>	<i>YEAR</i>	<i>STUDY DESIGN</i>	<i>DURATION</i>	<i>NUMBER OF PARTICIPANTS</i>	<i>INTERVENTION TYPE</i>	<i>CONTROL</i>	<i>FUNDING</i>
<b>MCNALLY 2019</b>	USA	2019	Controlled trial	3.5 months	2,890	Toothbrushing three times per day, each toothbrush was coated with sodium bicarbonate and included a single-use antiseptic oral solution (0.05% <b>cetylpyridinium chloride</b> ).	Usual oral care	Supported in part by an unrestricted grant and in-kind donation of oral care products from Sage Products, Inc.
<b>HOLLAR 2017</b>	Netherlands	2017	Controlled trial	12 months	103	Receiving daily oral care and 0.05% <b>chlorhexidine</b>	Usual oral care	Not stated
<b>BASSIM 2008</b>	USA	2008	Retrospective	79 weeks	143	This included toothbrushing, antiseptic mouthwash use, and oral and denture cleaning for edentulous or partially edentulous residents.	Usual oral care	Dental Research fellowship
<b>ROBERTSON 2013</b>	Canada	2013	Quasi-experiment	6 months	83	Change mouth suction equipment every 24 hours, Mouth assessment every 2-4 hours, Cleanse mouth with toothbrush every 12 hours, Cleanse oral mucosa with oral rinse solution every 2-4 hours, moisturise mouth/lips with swab and standard mouth moisturiser every 4 hours, Suction mouth and throat as needed.	Usual oral care	Not stated