

Question 22 evidence tables

Question 22: What is the best way to make decisions about artificial feeding and hydration after stroke?

NB Any discrepancies between reviewers in evidence quality and comment were discussed at the corresponding evidence review meeting

FOIS = Functional Oral Intake Score, PRESS = Predictive Swallowing Score, PEG = percutaneous endoscopic gastrostomy, NGT = nasogastric tube, SR = systematic review, MA = meta-analysis, RCT = randomised controlled trial, IPDMA = individual patient data meta-analysis, MDT = multidisciplinary team, PICO = patient/population, intervention, comparison and outcomes, OR = odds ratio, CI = confidence interval, QoL = quality of life, ADL = activities of daily living, OR = odds ratio, RR = relative risk, aOR = adjusted odds ratio, cOR = crude odds ratio, CI = confidence interval, RoB = risk of bias, I2 = heterogeneity statistic.

Ref ID	Source	Setting, design and subjects	Intervention	Outcomes	Results	Evidence quality (SIGN checklist score) and comment
353	M. Galovic et al. (2019). Development and Validation of a Prognostic Model of Swallowing Recovery and Enteral Tube Feeding After Ischemic Stroke. <i>JAMA neurology</i> , 76:5 561-570	Setting, Design: Single centre prospective observational cohort study (derivation cohort) + multi centre (5 tertiary stroke referral centres in Switzerland) prospective observational cohort study (validation cohort), ischaemic stroke patients with a severe impairment of oral intake (Functional Oral Intake Score (FOIS) score <5, at the initial swallowing evaluation. Subjects: Consecutive admissions for acute ischemic stroke and initially severe dysphagia (FOIS score <5).	Development and validation of the Predictive Swallowing Score (PRESS) - to predict the recovery of functional oral intake at 7 days (an indication for nasogastric feeding) and 30 days (an indication for percutaneous endoscopic gastrostomy feeding).	Recovery of oral intake (primary end point, FOIS ≥5) or return to pre stroke diet (secondary end point, measured 7 (indication for NGT feeding) and 30 (indication for PEG feeding) days after stroke).	Final prognostic model included 5 variables: age, stroke severity on admission, stroke location, initial risk of aspiration, and initial impairment of oral intake). Predictive Swallowing Score prediction estimates ranged from 5% (score, 0) to 96% (score, 10) for a persistent impairment of oral intake on day 7 and from 2% to 62% on day 30. Model performance in the validation cohort showed a discrimination (C statistic) of 0.84 (95% CI, 0.76-0.91; P<.001) for predicting the recovery of oral intake on day 7 and 0.77 (95% CI, 0.67-0.87; P<.001) on day 30, and a discrimination for a return to pre stroke diet of 0.94 (day 7; 95% CI, 0.87-1.00; P<.001)	++ High quality. Majority of TRIPOD criteria met. Unsure how the study size was arrived at and how missing data were handled/risk of attrition bias.

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					and 0.71 (day 30;95% CI, 0.61-0.82; P<.001).	
353	M. Galovic et al. (2019). Development and Validation of a Prognostic Model of Swallowing Recovery and Enteral Tube Feeding After Ischemic Stroke. <i>JAMA neurology</i> , 76:5 561-570	5 Swiss stroke centres Derivation model (n=153) single centre prospective observational cohort study Validation model (n=126), 64 internal and 62 from 4 other centres Included if severe swallow (FOIS<5)	None - observational	Primary: Swallow recovery (FOIS=>5) Secondary: return to pre-stroke diet Developed PRESS score using clinical relevant and statistically significant parameters in the model.	PRESS predicted swallow recovery by 7d (C-statistic 0.84) and 30d (0.77) 2/3 with severe dysphagia do not recover after 7 days, 1/3 do not recover after 30d 6% returned to pre stroke diet in 7d, 2/3 require diet modification after 30d. Prolonged swallow recovery independently associated with a poor outcome.	++ High quality cohort study reported by TRIPOD guidelines
354	K. Ikezawa et al. (2021). Effect of early nutritional initiation on post-cerebral infarction discharge destination: A propensity-matched analysis using machine learning. <i>Nutrition & dietetics: the journal of the Dietitians Association of Australia</i> , :	Retrospective study of 41 477 ischaemic cerebral infarction patients in Japan hospitalised between 2016 and 2019 (Across 380 hospitals)	Early Initiation of nutrition (oral or enteral) i.e., within 3 days of admission	Discharge home verses discharge to non-home environment (e.g., Rehabilitation wards or nursing homes)	60% of patients in the early initiation of nutrition were discharged home compared with just 17% in the control group. (p < 0.05)	- Large number of patients were excluded from the study due to missing data. There were differences in conscious levels and modified rankin scores within the control group that needed statistical adjustment by propensity score matching to be able to compare the 2 groups. Unable to access clinical markers that could influence patient prognosis

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						Study did not include nutritional assessment results. Home environment conditions were not considered – which could have affected discharge destination.
355	Royal College of Physicians (2021). <i>Supporting people who have eating and drinking difficulties. A guide to practical care and clinical assistance, particularly towards the end of life</i> . Report of a working party. London: RCP, 2021. www.rcplondon.ac.uk/projects/outputs/supporting-people-who-have-eating-and-drinking-difficulties [Accessed 11 May 2021]	This policy document was an update of 'Oral feeding difficulties and dilemmas' published in 2010. This guidance is intended to support healthcare professionals caring for people with eating and drinking difficulties towards the end of life, and not exclusive to stroke patients. The working party consisted of doctors (primarily gastroenterologists, and an anaesthetist, a neurologist, and a geriatrician. The party included nurses, dieticians, SALT, and legal practitioners. Stakeholder organisations included BAPEN, BDA, BGS, BSG, D-UK, MTS (Age UK), NNNG, RCPsych, RCSALT, and RPS. The Mental Capacity Act (MCA) 2005 was referenced- applicable only in England and Wales.	Interventions included enteral tubes routes, mouth care, NG tubes, gastrostomy tubes, parenteral nutrition, subcutaneous and rectal hydration.	There was no mention of specific outcomes. The document did include ethical and legal frameworks and guidance notes, and illustrative examples/ case vignettes (including one stroke patient) to guide practice.	Chapter 2 describes strategies to support eating and drinking to optimise nutritional intake Chapter 3 looks at clinically assisted nutrition and hydration (CANH) Chapter 4 covers the law and the changes since the last edition in 2010 Chapter 5 sets out the ethical framework for decision making	N/A This document is not a systematic review or a meta-analysis, RCT, cohort study, case-control study, or a diagnostic study.
356	National Institute for Health and Care Excellence (2017). Nutrition support for adults: oral nutrition	Acute and Community – Inpatients and Outpatients. Systematically developed and based on trial evidence where possible.	N/A	N/A	Decisions starting and stopping artificial nutrition should be acting in patient best interest. Consideration of ethical and legal principles.	N/A Guideline development group met many difficulties –limited time and resources, breadth of

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	support, enteral tube feeding and parenteral nutrition: Clinical guideline [CG32]. NICE, 2017. www.nice.org.uk/guidance/cg32 [Accessed 21 April 2022].				Patients and carers fully informed and access to appropriate and opportunities to discuss information regarding diagnosis and treatment options.	the remit, and evidence base difficult to interpret. Evidence reviewed low statistical power, mainly small studies that were not comparable.
356	National Institute for Health and Care Excellence (2017). Nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition: Clinical guideline [CG32]. NICE, 2017. www.nice.org.uk/guidance/cg32 [Accessed 21 April 2022].	It is a NICE guideline that covers identifying and caring for adults who are malnourished or at risk of malnutrition in hospital or in their own home or in a care home. It offers advice on how oral, enteral tube feeding and parenteral nutrition support should be started, administered, and stopped. It aims to support healthcare professionals and help them choose the most appropriate form of support for their patients. In 2017, some of the links in the footnotes to recommendations were updated.	Oral, enteral tube feeding and parenteral nutrition. These include: NG tubes Duodenal and jejunal feeding Gastrostomy PEG tubes Motility agents	There was no mention of specific outcomes related to the interventions suggested.	The guideline was divided into the following sections: An overview, Introduction, How it was developed, Patient centered care Key priorities for implementation Detailed guidance section 1.1-1.9 Research recommendation	N/A Not applicable This document is not a systematic review or a meta-analysis, RCT, cohort study, case-control study, or a diagnostic study.