Proposed NNAP Probiotics Measure – NNAP response to consultation feedback

NNAP were delighted to receive 42 responses to two proposed new measures, and have revised the measure proposals following detailed consideration of the measure feedback by the NNAP Methodology and Dataset Group.

The consultation ran from 6th to 26th August 2026. Of the consultation responses relating to probiotics, 32 of 42 (73%) were in favour of NNAP proceeding with the original proposal, or one with modifications; 21 of 42 (50%) favoured proceeding with an unmodified proposal.

The consultation responses varied in both style and concision. The NNAP has chosen to respond to all the themes represented in the responses minimising the need for any repetition, rather than to publish the verbatim feedback with responses to each.

Consultation feedback	**NNAP response**
Concern that the proposed measure does not capture adequate information relating to dosage, which products were administered, time of starting probiotics, duration of probiotic use or adverse events.	NNAP accept that the measure is limited in scope and does not address some of the research questions about UK probiotic administration that could be addressed using routinely collected data and within audit methodology. These aims might be of interest, but are not central to understanding whether or not probiotics are administered to eligible patients within individual units.
Questions over whether there is sufficient evidence of a causal link between probiotic use and reduction in NEC.	Numerous meta-analyses including many thousands of patients, indicated that the use of probiotic products – compared to their non-use – resulted in a reduction of NEC. This is evidence of a causal relationship. However, that there are complex issues in the development and prevention of NEC is obvious and fully accepted by NNAP.
Comment that the effect of probiotics is strain specific, and because the proposed measure is not limited to the product recommended for use by ESPGHAN, the product agnostic measure proposed by NNAP is not fit for purpose.	NNAP is aware of the evidence that probiotics overall seem to reduce NEC, and also the evidence that certain strains are better evidenced as effective than others. However, it is far from the role of NNAP to make product specific treatment recommendations – rather it is the intention of this measure to allow units to understand if eligible babies within a given unit are receiving probiotics or not. This is separate to identifying with which agent units might seek to treat babies. Naturally units who do not consider probiotics to be sufficiently well evidenced for use in their service would not expect to see significant levels of probiotic exposure. The measure has been modified to make this point clearer. In contrast, units aiming to administer probiotics would likely expect that a high proportion of eligible patients were exposed to probiotics on at least one day. However, available evidence

	suggests that 'within unit' implementation is incomplete, and the audit measure will address this issue for units.
Comment that practice guidance states that probiotics should be used from the time at which a baby was on feeds until a defined stopping point.	NNAP agrees that it is biologically more plausible that repeated day exposure is more effective in preventing NEC than only a single day of dosing. However, the proposed NNAP measure concentrates on 'one or more days of exposure' precisely because there is neither a clear evidence base for when probiotics should first be administered, nor for when they can most safely be discontinued. Early implementing units in the UK for example, differed as to whether they gave probiotic products prior to the establishment of enteral feeds, or only after a threshold of milk feed administration had been reached. There is similar heterogeneity in timing of probiotic discontinuation. For this reason and others (such as heterogeneity of gestation), the proposed NNAP measure does not address duration of probiotic administration.
Concern that probiotic products might have done harm, while acknowledging that the randomised trial evidence, and systematic review evidence does not favour this. Comment that a 'governance' approach to surveillance for harms associated with probiotic usage should be used.	NNAP agrees that units using probiotics should be both mindful of the theoretical risk of harm in using any new treatment, and that a 'full governance approach' should be considered. NNAP is mindful that units choosing to use probiotics will be aware of the substantial reduction in mortality and NEC that was seen in multiple clinical trials.
Comment that the proposed measure is a 'surrogate measure' that should be validated.	NNAP considers the proposed measure to be a care process measure, relevant to a well evidenced intervention. Analogously, NNAP have introduced measures of the use of maternal antenatal corticosteroids. Steroid therapy is known to reduce morbidity and mortality. No 'validation' objections were made to the introduction of this measure.
Concern that use of the metric may create perverse incentives and that units might focus on documentation and token dosing rather than safe product selection.	NNAP agree that were units to choose probiotics without careful consideration of product choice and administration plans, that outcomes might not be as good as if careful attention were paid to these issues. However, the intention of this proposed measure is not to encourage units to start to administer probiotics – rather the intention is to enable probiotic administering units to understand their effectiveness in administering probiotics to babies in their care. We have modified the measure proposal to make this clearer.

Suggestion that a more appropriate alternative would be a NEC-prevention bundle measure that includes human milk exposure, donor milk access, standardised feeding protocol adherence, antimicrobial stewardship, avoidance of unnecessary acid suppression, probiotic governance where used, and actual NEC outcomes as balancing or outcome measures.	NNAP hopes that if each of the proposed elements of the respondent's 'bundle' are taken in turn, ranked according to the evidential weight that can safely be attributed to them and then compared to the existing suite of NNAP measures, that it will be apparent to readers of the NNAP measures guide that NNAP agrees that measurement of more than one aspect of neonatal care is necessary and appropriate in order to minimise the occurrence of the devastating disease that NEC represents.
Concern that NNAP is attempting to shape practice because probiotic use in not universal, and therefore neonatal units not using probiotics will automatically 'fail'.	NNAP does not describe units as 'failing'. NNAP considers that units choosing not to use probiotics will be both confident in their basis for not doing so, and less able than other units to benefit from this measure. NNAP has not recommended probiotic use; it is not within the remit of NNAP to seek to alter units' therapeutic choices. Rather this measure seeks to assist units that do use probiotics to ensure they are administered to all eligible babies. The measure proposal has been amended to make this clearer.
Concern that outlier analysis might describe units not using probiotics as 'outliers'. Units with low rates of NEC might rationally choose not to use probiotics.	NNAP considers it beyond its remit to decide whether probiotic use should be routine. NNAP has clarified in the measure proposal that no outlier analysis is anticipated for this measure, and why.
Suggestion that the numerator is extended to 4 to 7 days of exposure.	NNAP accepts that there is evidential ambiguity about the optimal treatment duration. As noted above, in the absence of evidence the proposed proxy measure of probiotic deployment is advocated to measure the use of probiotics with the assumption that courses that are 'too short' are not used.
Request to make a minor alteration to the reference to ESPGHANs description of 'definition' of probiotics.	This has been altered in the measure proposal.
Concern that the measure proposed only describing implementation of products meeting the ESPGHAN characteristics of a probiotic.	This was not the intention of the measure, and the proposed measure clarifies that new products coming to market that do satisfy the characteristics described by ESPGHAN would be added to the list of included products.
Concern about whether dataflows would transmit the relevant daily data drugs administered field.	With any new NNAP measure, some bedding in of data accuracy via data feedback loops will occur. However, the suggested alternative of using a question in software (asking if probiotics were given) to base the measure on would potentially result in

	the measure being very sensitive to erroneous data entry on any single day of a stay by a member of staff who might not be aware of the nature of probiotics, let alone what NNAP considered eligible probiotics for this measure. For this reason the measure has not been amended.
Suggestion that NNAP consider widening the eligibility threshold, pointing out that even lower risk babies than those currently included (<30 weeks gestation) can still get NEC.	The NNAP acknowledges that babies born at higher gestations may benefit from probiotics, and it is possible that the measure could be amended at some future time. However, there appears to be greater uptake for probiotics at lower gestations at which the risk of NEC is highest, and for this reason the measure as drafted is considered to be be of most utility to most units.

Sam Oddie for NNAP Methodology and Dataset Group, October 2026.