Table 2: Results of Stage 2 of the Delphi Survey

Stage 2:Areas for AHP nursing research that have reached over 70% Agreement

N	Areas
1	'What is the efficacy of different airway clearance techniques (PEP, flutter, Vest etc) for a child with CF?'
2	'What is the efficacy of physical activity/exercise versus airway clearance in the well adult with CF?'
3	'What is the most appropriate exercise test for children with CF?'
4	'What is the long term efficacy of different exercise/physical activity interventions in children with CF?'
5	'Development and evaluation of an outcome measure of physical activity in CF (including reliability, validity, sensitivity and specificity, predictive power)'
6	'Development and evaluation of an outcome measure to assess efficacy for airway clearance trials in CF (including reliability, validity, sensitivity and specificity, predictive power).'
7	'Development and evaluation of measures of adherence e.g. self report, daily diaries, electronic monitors and pharmacy refills (including sensitivity, specificity and predictive power)'
8	'Development and evaluation of measures of barriers to adherence in children, adolescents and adults'
9	'Development and evaluation of screening measures to identify disturbed eating in patients with CF'
10	'What is the best approach to improve low BMI's in CF?'
11	'Can the body composition of patients with CF be improved with nutritional intervention and a prescribed exercise regimen?'
12	'Are behavioural approaches to disordered eating effective for young adults with CF?'

Stage 2:Areas for AHP nursing research that have reached over 60% Agreement

N	Area
13	'What is the efficacy of different airway clearance techniques (PEP, flutter, cornet Vest etc) for an adult with CF?'
14	'Development and evaluation of patient reported outcomes for pulmonary exacerbations.'
15	'How should quality of life and patient reported outcome measurements be incorporated into clinical practice?'
16	'What is the efficacy of physical activity versus airway clearance in the well child?'
17	'What is the efficacy of different infection control policies across CF centres?'
18	'What is the efficacy of home versus hospital IV therapy?'
19	'What is the standard of knowledge of CF in CF patients, adolescents and parents?'
20	'What screening tools should we utilize on an annual basis to assess psychosocial functioning (e.g. depression, anxiety)?'
21	'What is the impact of newborn screening (including false positives, true positives, borderline disease) on parents' mental health (e.g. depression), attachment and parenting practices?'
22	'What is the optimal airway clearance regime during an exacerbation?'
23	'What is the long term efficacy of different exercise/physical activity interventions in adults with CF?'
24	'What is the efficacy of assessment of quality of life across different clinics/age groups/disease severity and how does quality of life relate to clinical status?'
25	'What is the patient perspective on the optimal palliative service?'
26	'How do we involve patients in making decisions (e.g. NIV etc)?'
27	'What is the efficacy of complex psychological interventions to improve adherence and clinical outcomes and emotional, social and quality of life

	outcomes'
28	'What is the most effective model of transition from paediatric to adult centres?'
29	'Do appetite stimulants improve the nutritional status and lung function of patients with CF?'
31	'Longitudinal analysis of bone mineral density in patients aged 10 to 25 years and association with risk factors.'
31	'Efficacy of insulin pump therapy versus multiple daily injection regimens in CFRD.'
32	'Factors affecting growth during the first year following new born screening'

Stage 2: 12 Themes reached >55% agreement for AHP nursing research iat Stage 2 by the Delphi Survey

	Research Area
1	Adherence
2	Airway Clearance
3	Outcome Measures
4	Exercise
5	Education
6	Well/ Very Young/ NBS
7	Infection Control
8	Antibiotics
9	Nutritional Support
10	Inhaled Therapies
11	General Nutrition
12	Bone Disease

Results of Stage 3 of the Delphi Survey

<u>Stage 3:Areas for AHP nursing research that have reached over 70% Agreement in either Stage 2 or Stage 3 of the Delphi Survey</u>

N	Areas

1	'Development and evaluation of an outcome measure of physical activity in CF (including reliability, validity, sensitivity and specificity, predictive power)'
2	'Development and evaluation of measures of barriers to adherence in children, adolescents and adults'
3	'What is the long term efficacy of different exercise/physical activity interventions in children with CF?'
4	'How should quality of life and patient reported outcome measurements be incorporated into clinical practice?'
5	'What is the long term efficacy of different exercise/physical activity interventions in adults with CF?'
6	'What is the efficacy of different airway clearance techniques (PEP, flutter, Vest etc) for a child with CF?'
7	'What is the efficacy of physical activity/exercise versus airway clearance in the well adult with CF?'
8	'What is the best approach to improve low BMI's in CF?'
9	'Development and evaluation of an outcome measure to assess efficacy for airway clearance trials in CF (including reliability, validity, sensitivity and specificity, predictive power).'
10	'Development and evaluation of measures of adherence e.g. self report, daily diaries, electronic monitors and pharmacy refills (including sensitivity, specificity and predictive power)'
11	'Development and evaluation of screening measures to identify disturbed eating in patients with CF'
12	'What is the efficacy of different airway clearance techniques (PEP, flutter, cornet Vest etc) for an adult with CF?'
13	'Development and evaluation of patient reported outcomes for pulmonary exacerbations.'
14	'What screening tools should we utilize on an annual basis to assess psychosocial functioning (e.g. depression, anxiety)?'
15	'What is the most appropriate exercise test for children with CF?'
16	'Are behavioural approaches to disordered eating effective for young adults with CF?'
17	'Can the body composition of patients with CF be improved with nutritional intervention and a prescribed exercise regimen?'

Stage 3: Top 10 Themes for AHP nursing research identified at Stage 3 by the Delphi Survey

	Top 10 Research Themes (1- most important- 10 least important)
1	Adherence
2	Airway Clearance
3	Outcome Measures
4	Exercise/Physical Activity
5	Education
6	Well/Very Young/New Born Screening
7	Antibiotics
8	Inhaled Therapies
9	Infection Control
10	Nutritional Support

Stage 4: 7 Priority Research Areas for AHP nursing research identified at Stage

Broad Area	Detail of 7 Priority Areas
Adherence	(1) assessment, (2) exploration of barriers and adherence interventions
Exercise Physical Activity	(3) physical activity/exercise versus airway clearance techniques for bronchial hygiene in stable CF patients; (4) exercise/physical activity in the well patient with CF; (5) exercise tests for children with CF, (6) nutritional/exercise interventions to improve body composition
Airway Clearance and interventions for the newborn with CF	(7) Airway clearance techniques and interventions for the newborn with CF