SUPPLEMENTARY MATERIAL

Medline Search Sample:

Concept 1: technology dependence

Keywords: "technology depend*" OR "technology-depend*" OR "technological depend*" OR "technological-depend*" OR "screen depend*" OR "mobile depend*" OR "device depend*" OR "screen-depend*" OR "mobile-depend*" OR "device-depend*" OR "medical technol*" OR "dependen* on medical technol*" "technology relian*" OR "technolog*-relian*" OR "technological relian*" OR "screen relian*" OR "mobile relian*" OR "device relian*" OR "screen-relian*" OR "mobile-relian*" OR "device-relian*" OR "medical relian*" OR "relian* on medical technol*" OR "over*reliance in technolog*" OR "over*dependence on technolog*"

Concept 2: Physical disability OR chronic illness OR complex care OR complex medical care OR complex needs

Medline: (MH "Complex Care") OR (MH "Chronic Disease") OR (MH "Critical Illness") OR (MH "Disabled Persons+")

Keywords: "Physically Handicapped" OR "physical handicap*" OR "Physically Disab*" OR "Physical disability*" OR "Physically Challenged" OR "chronically ill" OR "chronic illness*" OR "chronic disease*" OR end-of-life OR "end of life" OR "life-limiting condition*" OR "life limiting condition*" OR life-threatening OR "life threatening" OR "terminal illness*" OR "life-limited" OR "life limited" OR life-sustaining OR "life sustaining" OR "sustaining life" OR "Life Limiting Illness*" OR "Life-Limiting Illness*" OR "Genetic Disease*" OR "Genetic Disorder*" OR "Genetic condition" OR "Inborn Genetic Disease*" OR "Single-Gene Defect*" OR "Single Gene Defect*" OR "Critical Illness*" OR "critically ill" OR "Catastrophic Illness*" OR "Multiple Chronic Conditions" OR "Multiple Chronic illnesses" OR "complex care" OR "complex caring" OR "complex nursing" OR "complex need*" OR "multifaceted need*" OR "multifaceted care" OR "complex medical need*" OR "medically fragile" OR "medically frail*" OR blind* OR "visual impair*" OR deaf* OR "hearing impair*" OR "mobility impair* OR "physical deficiency" OR "physical incapacity" OR "physically limited"

Technology	Medline
Technology	6,061
Phys Disab /Complex/Chronic	865,087
Combined	498
Peer Review	n/a
Total	498

#	Query	Limiters/Expander	Last Run Via	Result s
S 6	S4 AND S5	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - MEDLINE	498
S 5	"technology-depend*" OR "technological depend*" OR "technological depend*" OR "technological-depend*" OR "screen depend*" OR "mobile depend*" OR "device depend*" OR "screen- depend*" OR "mobile-depend*" OR "device-depend*" OR "medical technol*" OR "dependen* on medical technol*" "technology relian*" OR "technological relian*" OR "screen- relian*" OR "mobile relian*" OR "device relian*" OR "screen- relian*" OR "mobile-relian*" OR "relian* on medical technol*" OR "over*reliance in technolog*" OR "over*dependence on technolog*" OR "over*dependence on technolog*" OR "technological depend*" OR "technological depend*" OR "technological depend*" OR "technological-depend*" OR "device depend*" OR "screen- depend*" OR "mobile-depend*" OR "device depend*" OR "medical technol*" OR "mobile-depend*" OR "device-depend*" OR "medical technol*" OR "dependen* on medical technol*" OR "mobile-relian*" OR "technological relian*" OR "technological relian*" OR "screen relian*" OR "mobile relian*" OR "device relian*" OR "mobile relian*" OR "device-relian*" OR "mobile relian*" OR "device-relian*" OR "medical relian*" OR "device-relian*" OR "medical relian*" OR "device-relian*" OR "medical relian*" OR "felian* on medical technol*" OR	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - MEDLINE	6,061

	"over*reliance in technolog*" OR			
1	"over*dependence on technolog*")			
S 4	S1 OR S2 OR S3	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - MEDLINE	865,08 7
S 3	AB ("Physically Handicapped" OR "physical handicap*" OR "Physically Disab*" OR "Physical disability*" OR "Physically Challenged" OR "chronically ill" OR "chronic illness*" OR "chronic disease*" OR end-of-life OR "end of life" OR "life-limiting condition*" OR "life limiting condition*" OR "life-threatening OR "life threatening" OR "terminal illness*" OR "life-limited" OR "life limited" OR life-sustaining OR "life sustaining" OR "sustaining life" OR "Life Limiting Illness*" OR "Life- Limiting Illness*" OR "Genetic Disease*" OR "Genetic Disorder*" OR "Genetic condition" OR "Inborn Genetic Disease*" OR "Single-Gene Defect*" OR "Single Gene Defect*" OR "Critical Illness*" OR "critically ill" OR "Catastrophic Illness*" OR "Multiple Chronic Conditions" OR "Multiple Chronic illnesses" OR "complex care" OR "complex caring" OR "complex nursing" OR "complex need*" OR "multifaceted need*" OR "multifaceted care" OR "complex medical care" OR "multiple needs" OR "multiple care" OR "complex medical care" OR "multiple needs" OR "multiple care" OR "medically fragile" OR "medically frail*" OR blind* OR "visual impair*" OR deaf* OR "hearing impair*" OR "mobility impair* OR "physical deficiency" OR "physical incapacity" OR "physically limited") OR TI ("Physically Handicapped" OR "physical	Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - MEDLINE	579,51 4

2	"Chronic Disease") OR (MH "Critical Illness")	Boolean/Phrase Search modes -	Screen - Advanced Search Database - MEDLINE Interface - EBSCOhost	5
S	(MH "Complex Care") OR (MH	Search modes -	Interface - EBSCOhost Research Databases Search	279,25
	handicap*" OR "Physically Disab*" OR "Physical disability*" OR "Physically Challenged" OR "chronically ill" OR "chronic illness*" OR "chronic disease*" OR end-of-life OR "end of life" OR "life-limiting condition*" OR "life limiting condition*" OR life-threatening OR "life threatening" OR "terminal illness*" OR "life-limited" OR "life limited" OR life-sustaining OR "life sustaining" OR "sustaining life" OR "Life Limiting Illness*" OR "Life- Limiting Illness*" OR "Genetic Disease*" OR "Genetic Disorder*" OR "Genetic condition" OR "Inborn Genetic Disease*" OR "Single-Gene Defect*" OR "Single Gene Defect*" OR "Critical Illness*" OR "critically ill" OR "Catastrophic Illness*" OR "Multiple Chronic Conditions" OR "Multiple Chronic illnesses" OR "complex care" OR "complex caring" OR "complex nursing" OR "complex need*" OR "multifaceted need*" OR "multifaceted care" OR "complex medical care" OR "multiple needs" OR "multiple care" OR "medically fragile" OR "medically frail*" OR blind* OR "visual impair*" OR deaf* OR "hearing impair*" OR "physically limited")			

Search
Screen -
Advanced
Search
Database -
MEDLINE

Supplemental material

Narrow reasoning categories for initiation	Narrow reasoning categories against initiation	Narrow reasoning categories - unclear if for or against initiation
Actively positive reasons		
Action to reduce pressure on the brain[28]	Positive reasons not to initiate	Altruistic reasoning
Acute situations[25]	Alleviate moral dilemmas[22]	Accurate information and wellbeing[29]
Acute treatment to avoid death[32]	Avoiding distress for the child[11]	Alleviate burden of guilt[25, 29, 61]
Benefit to patient[38]	Avoiding prolongation of suffering[13]	Alleviate burden on parents[34]
Child unable to meet nutritional needs orally[28]	Acute deterioration of respiratory condition[15]	Authority to make decisions[56]
Doctor-centred[27]	Best interest and open discussion[25]	Best interest of the child[11, 27, 29, 42]
Emergency situation [26, 28]	Best interests of the child[29]	Burdens on family, family context[33]
Established diagnosis and treatment[17]	Best interests, avoiding intensive futile care[47]	Burden on parents[55]
Feeding tube for survival[23]	Caring responsibility[27]	Burden of treatment at home[37]
Hope for a miraculous or unexpected good	Cultural factors supporting child death at home[34]	Capacity of services and resources[19]
outcome[16]	Due consideration to value of continuing life	Carer well-being[29]
Hope/ expectation of good quality of life[33]	sustaining support[24]	Child well being[29]
Improve or ensure respiration[28]	Family, caring responsibility[29]	Child and family under stress[39]
Improved child health[29]	Future quality of life, life expectancy[30]	Control family's uncertainty through selective
Life prolonging attitude[21]	Improve quality of life, preserving remaining life[15]	communication[14]
Long term outcome[27]	Parental insight into child's prognosis[34]	Decisions based on rang of conditions, experience and
Medical stability of the child[18]	Poor quality of life on technology[38]	prognosis[19]
Need for respiratory support[23]	Providing supportive comfort care[8]	Doubt about parent understanding of consequences[21]
Perceived as safe and expected treatment[37]	Quality of life would be compromised by treatment[8]	Empathy[27]
Preserving hope[21]	Respect patient or parent's wishes[51]	Empathy from professionals[27]
Recovery or bridge to transplantation[34]	Responsibility to prevent needless pain[25]	Evaluating patient future quality of life[33]

Role of healing[14]	Sensitive communication and respect[47]	Evaluating what family can bear[33]
Technology to improve survival[39]	Withdrawal of care as ethical in futile cases[17]	Family well-being[29]
	Withdrawal of technology dependence[32]	Fear of frightening the parents[21]
Least worst option		Greater prospects of survival but living with
Acquiescence to parent views[31]	Confidence and experience	substantial disability[37]
Active euthanasia (attitude negative)[40]	Acceptability[31]	Lack of home care nurses to provide home support[54]
Avoid raising expectations that create a moral dilemma[22]	Confidence to resist pressure[21]	Life-sustaining and prevention of suffering - holistic outcomes[11]
Buy time to make a reasonable diagnosis[22]	Causing the death of the child[21]	Morbidity post-technology dependence[38]
•	Closeness to patient prevents objectivity[21]	Outcome likely to be poor[32]
Child well-being[29]	Distinction between acts and omissions[51]	Overriding parental decisions based on child
Choice of treatment reflects resources[37]	Duty to preserve life and health[51]	welfare[47]
Choosing the least detrimental alternative (slight negative tone)[14]	Duty to the dying and to the sick is different[12]	Perceived inability to provide good quality of life[32]
Complex decision making[32]	Easier to limit LST in young children[33]	Poor outcome[32]
Continue short-term invasive therapy[43]	Experience of outcomes[46]	Quality of life[34]
Disagreement with relatives (attitude negative)[40]	Favouring the status quo[51]	Responsiveness to patient needs[61]
Fear of charges of homicide, abuse or neglect[14]	Length of professional experience[40]	Risk to child and family health[39]
Keeping alive for benefit of others (author against this	Moral duty to uphold ethics despite the	Taking burden from parents[31]
reason)[24]	consequences[51]	Tensions between sanctity of life and quality of
Legal consequences (attitude negative)[40]	Moral obligation to relieve suffering[14]	life[19]
Legal consequences influencing action [13]	Morbidity, device malfunction and poor quality of life[38]	Uncertain prognosis and what is best interests of child[42]
Legal obligation[14, 40, 44]	No confidence to withdraw treatment if survival	Uncertainty of future improvement[41]
Maximum therapeutic care despite physician	possible[46]	Unclear prognosis[46]
opinion[34]	No parental support[30]	Understanding complexity of case[14]
Neonatal resuscitation unclear prognosis[17]	Non-acquiescence to parent views[31]	Understanding future consequences[29]
Not withdrawing care without prognosis[17]	Not required to provide futile care[52]	Values of physician - best interests of the child[33]
Ongoing dependence[41]		values of physician - best interests of the child[33]

Over optimism and appearing not to give up[19]	Physicians not to provide services that are futile[49]	
Parental hope of miracle recovery[34]	Poor prognosis and no benefit of treatment[32]	Working in a team
Treatment[27]	Responsibility to minimise harm and maximise	Act to steer patient views[14]
Treatment prone medicine[21]	benefits in a clinical and wider sense[51]	Appropriate language used to describe unclear
Treatment to allow clear assessment[42]	Risks to home caring abilities[29]	options[56]
Uncertain prognosis[21]	Taking action (withdrawing care)[21]	Aware of parent or patient perspective[53]
	Taking burden from parents[31]	Burdensome to talk about death[44]
Wider concerns (wellbeing)	Technology only prolongs death[22]	Child's ability to communicate views[8]
Family well being[29]	Technology dependence not beneficial[50]	Consensus decision making[58]
Future quality of life, future consciousness[33]		Consideration of advance directives[60]
Influence of personal beliefs[17]	Knowledge and judgement	Consultation with family but clinical team make final decision[25]
Minimise risk of long term morbidity[19]	Awareness of home mechanical ventilation in adults influencing paediatricians[15]	Counselling families of all possibilities[32]
Outcome for the child[21]	Child receive no benefit from CPR[25]	Difference in perception of well being[38]
Post investigation[26]	Correcting nocturnal or proven (diurnal) ventilatory	Difficult treatment decisions[32]
Postponing or passing on responsibility[21]	failure[15]	Effective communication[29]
Pressurized by parents to initiate[46]	Cultural differences as influences on ethical differences[48]	Effective communication[11]
Prolonging treatment opposed to active euthanasia[24]		Effective communication for the child and parent[57]
Survival but increased morbidity[35]	Cultural variation in 'position statements' of viability[48]	Empathy and appreciation for parental decision
Treatment covered by health insurance[37]	Disability future quality of life[49]	making[59]
	Fatal or terminal illness – prognosis[40]	Ensure full understanding of options[56]
Obligations	Futile care[49]	Family assessment of child's condition[33]
Experience of physician to make decisions[8]	Futile treatment withdrawn[25]	Family caring responsibility[29]
Obligation to preserve life[14]	Futility of care[33]	Family understanding of clinical need[39]
Obligation to use the technology if it is there[16]	Futility of further treatment[12]	Future family wellbeing[45]
Others will benefit from testing the technology in this case[16]	Future consequences for patient views / views of	Indirect involvement of parents[31]

Parental desire for treatment[8]	patient[42]	Information about diagnosis and prognosis[54]
Pressure of public expectation of technology's	Individual unit approach to decision making[48]	Information for parents for options at end of life[34]
capabilities[11]	Ineffective treatment[29]	Lack of evidence as guidance for parents[54]
Sole decision making[21]	Lack of confidence in ethics[21]	Lessons learned from family[29]
	Lack of community resources leads to intensive	Long-term caring requirements for the child[39]
	treatment at end of life[50]	Mutual trust and shared knowledge[25]
	Legal and moral considerations[33]	No opportunity for parental involvement[34]
	Legal support[47]	Opinions of other professionals[21]
	Miserable and unhappy[21]	Parents as information receivers[34]
	Moral distress[27]	Parents as significant decision makers[34]
	National differences in determining futility[31]	Parental decision based on medical advice[47]
	Need for agreement[21]	Parental involvement[31]
	Need to relieve life-threatening symptom[29]	Parents may prefer a form of paternalism[36]
	No chances of survival[30]	Patient autonomy[29]
	Non elective ventilation[15]	Patient's future ability to interact with others[7]
	Non-curative treatment[29]	Presence of hospital ethics committee[40]
	Obstacles to transition home[45]	Physicians as information providers[34]
	Over-pessimistic[23]	Potential for conflict[32]
	Poor future quality of life[11]	Psychological support to parents[38]
	Poor neurological prognosis[11, 22, 25, 40]	Reassurance from colleagues, experts, ethical
	Providing nutrition and hydration only[24]	committee[57]
	Regret reported by parents who opted for	Receptive to parental / family needs and views[29]
	tracheostomy[36]	Repeated opportunities for imparting information[36]
	Severity of prognosis[8]	Respect for other members of clinical team[25]
	Socio-economic and cultural differences of parents[48]	Risk of catastrophic event at home[54]
	Treatment risks [29]	Risk of social isolation in the long term[39]
	<u> </u>	

Updated guidelines support Withholding or	Risk of unilateral decision making[32]
withdrawing care [40]	Sharing decisions to empower families[28]
	Shared discussions leading to decisions[32]
Dispute	Sharing the decision[8]
Being distrusted, treatment as abuse [13]	Supportive and empathetic information provision[29]
Courts discussing values of respect for life [49]	Support to make decisions slowly[39]
Discrimination against disability [49]	Time to make best decisions[29]
Facilitating parental change of mind once accepting of terminal diagnosis [34]	Timely discussion before a child requires technology dependence[32]
Families reluctant to consent [39]	Timing of information to inform decisions[50]
Futility as a means of reclaiming lost decision-making power [12]	Understanding how to communicate information[59]
Loyalty conflicts [46]	Willingness to involve parents in decisions[17]
Parental refusal of consent [11]	
Parents' wishes are legally classed as euthanasia [44]	Impartiality
Persistent vegetative state legal possibility to	Aiming to act fairly[53]
discontinue treatment [44]	Assessment of quality of life[23]
Reducing fear of legal consequences [17]	Assumptions based on quality of life[41]
Resisting parental request [30]	Availability of resources[33]
Secrecy of acts/ euthanasia [14]	Avoid value-based or unfounded assumptions on quality of life[42]
	Avoiding close relationships with parents[46]
	Certainty of outcome[24]
	Changing prognosis/child's situation[25]
	Complex evaluation of burden and risk[42]
	Confidence in decision[21]
	Cost and complexity of care[54]

Supplemental material

Criteria for withholding or withdrawing treatment[34]
Culturally appropriate communication[53]
Death expected or survival unacceptable quality of life[24]
Decision based on diagnosis, prognosis and quality of life [24]
Delegating effective care[61]
Differences between neonates and older children[8]
Economic resource costs[33]
Economic and labour costs[45]
Estimation of quality of life[23]
Excluding information believed to be irrelevant[43]
Financial or economic impact[29]
Future challenges in diagnosis[28]
Future morbidity[28]
Future outcomes[57]
Future quality of life[57]
Global fair allocation of resources[53]
Guidelines influence decision making[17]
Importance of quality of life on decision making[24]
Increased survival but also morbidity[55]
Information reflecting linguistic and cultural needs[50]
Institutional treatment and caring[29]
Judgement of benefit or risk of treatment[25]
Legal obligation[14, 29, 40]
Longitudinal outcome[27]

Non curative treatment[29]
No difference in mortality between those who do and don't rely on technology[36]
Objectivity hiding parts of the truth[21]
Obligation to be responsible for care at home[61]
Outcomes[27, 53]
Overtreatment[21]
Physician responsible for final decision[25]
Potential for consciousness[24]
Power/trust in technology[29]
Prolong life[61]
Rationing of resources[58]
Realistic assessment of problem[14]
Responsibility[27]
Responsibility for outcomes[61]
Responsibility to avoid bias or judgement about quality of life[42]
Responsibility to do the least harm[53]
Right to determine how skills are used[57]
Role is to preserve life[22]
Technology potentially incompatible with child growth and development[38]
Treatment associated with benefits and burdens[36]
Treatment related factors - invasiveness, complications, reversibility, life expectance, functioning, quality of life, psychology[33]
Uncertain or inaccurate prognosis[21, 43]
<u>l</u>

Uncertain outcomes[27]
Uncertain prognosis[8]
Using facts to determine moral decision[43]
Wider concept of best interest of the child[25]
Worth the economic costs[27]
Disputes
Answers to disputes are empirically based[7]
Complex ethical and legal challenges[8]
Conflict between child rights and parent rights[46]
Conflict between hospital and community care[45]
Conflict in decision making[36]
Conflict with media/ journalists[46]
Conflict with nurses[46]
Difficult to communicate because of health care requirement to treat[44]
Dull the need to reappraise actions[43]
Fear of tracheostomy[39]
Inadequacy of outcome measures to inform prognosis[19]
Increased conflict in adults[8]
Inconsistent legal requirements international[52]
Information is understood differently by both parties (parents and clinicians)[55]
Intensive treatment at end of life[50]
Lack of availability of skilled home nursing care[37]

Lack of consensus between physicians[8]
Loyalty conflicts[46]
Media spotlight[58]
Not using information in decision[54]
Obstacles to transition home[45]
Parents sidelined due to complex clinical situation[35]
Paternalism of information provision[24]
Physician / family disagreement[29]
Physician doubt about parent motivation[21]
Potential litigation[11]
Potential for racial bias in care provision[50]
Pressure from parents[21]
Public nature of discussion dictates action[14]
Recommending a treatment they would not want for themselves[27]
Risk of paternalism[56]
Socioeconomic disparity at the end of life[50]
Undisclosed fears of prosecution[14]
Feelings and emotions
Anxiety influencing clinical judgement[42]
Anxiety and fear of the entire process (family)[39]
Assessing feelings[61]
Assuming responsibility for risk of the decision[57]
Attitudes influenced by personal and psychological factors[8]

Awareness / consciousness[24]
Compassion for life 'slippery concept'[58]
Considerations of quality of life and values[8]
Decisional regret after tracheostomy[36]
Emotions and discomfort[33]
Experience, optimism, patient subjective experience[33]
Fear and anxiety, loneliness[21]
Fear of media criticism[21]
Fear of mistakes[21]
Fear of prolonging suffering[46]
Good and bad[61]
Hesitation in withholding and withdrawing[33]
Hope[27]
Increased emotional input - humour, anger, animation[7]
Lack of importance of prognosis to experienced parents[35]
Less regret because technology was better than expected[36]
Moral distress[27]
More experience greater fear of negative media attention[21]
Narratives of being 'good parents' with no regrets[19]
Need to do something[36]
Not allowing anxiety to influence clinical decision[42]
Overwhelming power of technology[22]

	Personal agony[14]
	Personal convictions and values[8]
	Personal factors and experiences influencing decisions[8]
	Presence of hope[29]
	Relieve suffering (ambivalent)[61]
	Relieve suffering[58]
	Regret[36]
	Stigmatisation[29]
	Suffering at end of life[35]
	Transparent and honest[29]