LECTURE ONE: BASIC INFORMATION

Terms .......................................................................................................................................................... 1
  The disorder
  Other terms
  Those who have the disorder
  When people stutter
  When people do not stutter
  Stuttering moments
  A summary of recommended formal and informal stuttering terms

Defining stuttering.................................................................................................................................... 4
  There is no single definition of stuttering
  Dictionary definition
  Internal definition
  Perceptual definition

Describing stuttering moments............................................................................................................. 7
  Taxonomies
  Unambiguous stuttering moments
  A taxonomy
  Stuttering behaviours combine in one stuttering moment
  Some practical examples of describing stuttering

Distribution of stuttering moments ..................................................................................................... 12
  The influence of spoken language
  Adaptation, consistency and adjacency

Identifying stuttering............................................................................................................................ 14
  Clinical identification of stuttering
  Speech and language disorder comorbidity
  Legal stuttering identification
  Screening for early stuttering
  Theoretical perspectives about stuttering identification
  Disorders to distinguish from stuttering
  An unusual case history

Guidelines for interacting with those who stutter .................................................................................. 19
  An important topic
  Two caveats about eye contact

Conditions that reduce or eliminate stuttering..................................................................................... 20
  The fluency inducing conditions
  Verbal response contingent stimulation
  Auditory feedback

Summary ...................................................................................................................................................... 22
How stuttering affects people............................................................................................... 36

Speech impact
Quality of life impact
Occupational impact
Educational impact
Stuttering stereotypes
Anticipation of stuttering
Social anxiety
Personality

Stuttering and genetics........................................................................................................ 43

Background
Familial incidence
Twin studies
Family aggregation studies
Biological genetic evidence
A mouse model of stuttering
Conclusions

Brain structure and function............................................................................................... 47

Mounting evidence
Two current hypotheses
The critical issue
Clinical applications of neuroimaging research

Epidemiology of Stuttering.................................................................................................. 49

Epidemiology
The value of stuttering epidemiology
Epidemiology and public health

Point prevalence of stuttering.............................................................................................. 49

Point prevalence
Two essential caveats
Estimates of stuttering point prevalence
A large data set

Cumulative incidence of Stuttering...................................................................................... 51

Cumulative incidence
Childhood cumulative incidence
Lifetime cumulative incidence

Stuttering onset .................................................................................................................... 55

Onset occurs during the pre-school years
Onset can be sudden and severe
Repeated movements are prominent at onset
More boys and men are affected than girls and women
Is stuttering onset predictable?

Natural recovery from early stuttering................................................................................. 57

What is the natural recovery rate?
Two essential caveats
Prospective reports of natural recovery beyond the pre-school years
Prospective reports of natural recovery during the pre-school years
Is natural recovery predictable?

Summary .................................................................................................................................. 61
LECTURE THREE: THE CAUSE OF STUTTERING

Two reasons causality is clinically important .................................................. 75
  Explaining cause to clients and parents
  Treatment credibility and expectancy

An example of a clinically influential causal theory ........................................ 75
  The Diagnosogenic Theory
  The rise
  The fall

Testing causal theory of stuttering .............................................................. 76
  Introduction
  Testability of a theory
  Explanatory power of a theory

Multifactorial models of stuttering causality .............................................. 79
  The fundamental proposition
  The Demands and Capacities Model
  Other multifactorial models
  Testability
  Explanatory power
  The future of multifactorial models

The Interhemispheric Interference Model .................................................. 82
  The fundamental proposition
  Testability
  Explanatory power
  The future of the Interhemispheric Interference Model

The Covert Repair Hypothesis ..................................................................... 85
  The fundamental proposition
  Testability
  Explanatory power
  The future of the Covert Repair Hypothesis

The EXPLAN Theory .................................................................................. 88
  The fundamental proposition
  Testability
  Explanatory power
  The future of the EXPLAN Theory

The P&A Model ......................................................................................... 90
  Background
  The fundamental proposition
  Testability
  Explanatory power

Epilogue ....................................................................................................... 92

Summary .................................................................................................... 93
LECTURE FOUR: CLINICAL MEASUREMENT OF STUTTERING

Six reasons for clinical measurement

Assessment
Communicating with clients
Stating treatment goals
Assessing progress toward treatment goals
Managing maintenance of treatment gains
Keeping track of daily stuttering severity changes

Percentage syllables stuttered (%SS)

Overview
Percentage syllables stuttered scores are not normally distributed
Equipment for percentage syllables stuttered measurement
Limitations of percentage syllables stuttered

Severity rating (SR) scales

Overview
Equal interval ordinal scales
Severity rating scores are not normally distributed
Reliability of severity ratings
A severity rating scoring guide
The clinical population as reference
Advantages of severity ratings

The relation between %SS and SR

A strong relationship
Repeated movements and fixed postures
Percentile ranks for %SS and SR
The relation between %SS and SR during treatment

Syllables per minute (SPM)

Speech naturalness (NAT) measurement

Why measure speech naturalness?
A scale of speech naturalness

Stuttering-Like Disfluencies

The Stuttering Severity Instrument (SSI-4)

The Speech Efficiency Score (SES)

The Overall Assessment of the Speaker’s Experience of Stuttering (OASES)

The Wright and Ayre Stuttering Self-Rating Profile (WASSP)

Simple speech satisfaction scales

Summary

Appendix One

%SS and SR measures during clinical management of a pre-school child

Appendix Two

Speech and quality of life measures for stuttering
LECTURE FIVE: EVIDENCE-BASED PRACTICE WITH STUTTERING

What is evidence-based practice? ................................................................. 121
Speech-language pathology and evidence-based practice .................................. 121
What evidence-based practice is not .............................................................. 121
   Not a rulebook
   Not a source of all clinical knowledge
   Not a replacement for common sense
How to do evidence-based practice ................................................................ 122
   Step One: Find out what the client needs
   Step Two: Find the relevant evidence
   Step Three: Do the treatment and evaluate its effects
Scientific standards for clinical evidence ....................................................... 124
   Peer-reviewed scientific journals
   Hierarchies of evidence
   Detailed methodological critique
Clinical trials of stuttering treatment ............................................................. 125
   What is a clinical trial?
   Clinical trial standards
Phases of clinical trial development ............................................................... 127
   Phases I to IV
   The CONSORT statement
   Phase I clinical trials
   Phase II clinical trials
   Phase III clinical trials
   Phase IV clinical trials
Finding stuttering research to inform evidence-based practice ........................ 131
   Finding clinical trials as they are published
Summary ......................................................................................................... 132
Clinical features of early stuttering ................................................................. 137
Early intervention with telepractice ............................................................... 137
  Telepractice
  Advantages of telepractice early stuttering intervention
Three early stuttering treatments supported by clinical trials ......................... 138
The Lidcombe Program .................................................................................. 138
  Background
  Overview
  The severity rating (SR) scale
  Percentage syllables stuttered (%SS)
  Parent verbal contingencies
  Some essential things about parent verbal contingencies
  Verbal contingencies during practice sessions
  Verbal contingencies during natural conversations
  Stage 2
  The Lidcombe Program problem solving
Clinical Strengths and limitations of the Lidcombe Program ............................ 145
  Strengths
  Limitations
Treatments Based on Multifactorial Models: I. Palin Parent-Child Interaction Therapy ..... 146
  Background
  Overview
  The treatment process
Treatments Based on Multifactorial Models: II. RESTART-DCMTreatment ................ 150
  Background
  Overview
  Assessment
  The treatment process
Clinical Strengths and Limitations of Treatments Based on Multifactorial Models ........ 152
  Strengths
  Limitations
The Westmead Program ................................................................................ 152
  Background
  The treatment process
Clinical Strengths and Limitations of the Westmead Program ........................... 154
  Strengths
  Limitations
Summary ......................................................................................................... 154
Appendix One .................................................................................................. 155
  Lidcombe Program Severity Rating Chart
Appendix Two ................................................................................................ 156
  Common Lidcombe Program problems
LECTURE SEVEN: THE EARLY STUTTERING INTERVENTION EVIDENCE BASE

Clinical trials of one treatment................................................................. 160
  The Lidcombe Program
  Palin Parent-Child Interaction Therapy
  The Westmead Program

Clinical trials comparing two treatments................................................. 163
  Lidcombe Program compared to RESTART-DCM Treatment

Translational research .............................................................................. 165
  The Lidcombe Program

Randomised clinical experiments.............................................................. 166
  The Lidcombe Program

Data-based case studies........................................................................... 167
  The Lidcombe Program
  A family-focused treatment approach based on a multifactorial model

Treatment fidelity research....................................................................... 168
  The Lidcombe Program

Treatment mechanisms............................................................................ 170
  The Lidcombe Program
  Treatments based on multifactorial models

Treatment safety........................................................................................ 172
  The Lidcombe Program
  Treatments based on multifactorial models

How long does treatment take? .................................................................. 172
  The Lidcombe Program

How does a treatment delay affect the treatment process? ....................... 174
  The Lidcombe Program

Do case variables affect the treatment process?....................................... 175
  The Lidcombe Program

Parent experiences................................................................................... 175
  The Lidcombe Program

The early stuttering intervention evidence base: Summary and conclusions .. 177
  The Lidcombe Program
  Treatments based on multifactorial models
  The Westmead Program
LECTURE EIGHT: EVIDENCE-BASED ADULT SPEECH TREATMENTS

Speech restructuring treatment .......................................................................................................................... 185
  Background
  A brief history

Programmed instruction ................................................................................................................................. 187
  A technique for behavioural control
  Performance continent progression
  A fundamental assumption
  Models of programmed instruction
  An example of programmed instruction
  Instatement and transfer

The clinical trial evidence for speech restructuring treatment ................................................................. 189
  Numbers of trials
  Effect size
  Speech naturalness

Speech restructuring I: The Camperdown Program .................................................................................. 191
  Background
  Stage I: Teaching treatment components
  Stage II: Establishing stutter-free speech
  Stage III: Generalisation
  Stage IV: Maintance of treatment gains
  Clinical trial evidence for the Camperdown Program

Speech restructuring II: The Comprehensive Stuttering Program ....................................................... 196
  Overview
  Clinical trial evidence for the Comprehensive Stuttering Program

Speech restructuring III: Video self-modelling as a supplement .......................................................... 197
  The procedure
  Basic research
  A data-based case study of video self-modelling: Relapse management
  A Phase III trial of video self-modelling: Speech restructuring supplement
  A clinical experiment

A verbal response contingent treatment: Self-imposed time-out ........................................................... 200
  The procedure
  Clinical advantages
  Clinical trial evidence for self-imposed time-out

Machine aided treatments ............................................................................................................................ 201
  Background
  Altered auditory feedback
  Modifying phonation intervals
  Transcranial direct current stimulation

Pharmacological Treatments ......................................................................................................................... 205

Summary ......................................................................................................................................................... 206
LEcTure nine: evideNce-based Adolescent and school-age speecH trEatments

speech restructuring I: Intensive smooth speech .......................................................... 213
  A Phase II trial
  Results
  Anxiety reduction
  Follow-up

speech restructuring II: the Comprehensive stuttering program .................................. 214
  A Phase II trial
  Results

speech restructuring III: the Camperdown program .................................................... 215
  In-clinic
  Telepractice

speech restructuring IV: video self-modelling as a supplement ....................................... 217
  A Phase III trial
  Results

Verbal response contingent stimulation .............................................................................. 218
  The Lidcombe Program
  Gradual Increase in Length and Complexity of Utterance (GILCU)
  Self-imposed time-out
  Clinician-imposed time-out

syllable-timed speech ........................................................................................................ 220
  Method
  A Phase I trial
  Results

Hybrid Treatments I: Syllable-timed speech and verbal response contingent stimulation .. 221
  Method
  A Phase II trial
  Results

Hybrid Treatments I: delphin Speech Treatment .............................................................. 222
  Method
  A Phase II trial
  Results

Machine aided treatments ................................................................................................ 223
  Electromyographic (EMG) biofeedback
  Altered Auditory Feedback

Conclusions about the adolescent and school-age evidence base ...................................... 225
  Speech restructuring
  Verbal response contingent stimulation
  Syllable-timed speech
  Machine-aided treatments

Clinical Notes: Adolescents ............................................................................................... 226
  A life transition
  Parents during treatment
  Telepractice and adolescents

Clinical Notes: School-age children .................................................................................. 227
  A period of changing tractability
  Adaptation of the Lidcombe Program for school-age children
  Teachers and school-age children who stutter

Summary ............................................................................................................................ 230
LECTURE TEN: STUTTERING, SOCIAL ANXIETY, AND MENTAL HEALTH

Background .......................................................................................................................... 235
A changing view about stuttering and anxiety

Anxiety ................................................................................................................................. 235
Expecting harm
Three components

Stuttering, anxiety, and anxiety disorders ............................................................................. 236
Stuttering and anxiety
Stuttering and social anxiety disorder
Stuttering and other anxiety related disorders

The Clark And Wells model of social anxiety disorder .......................................................... 239
The puzzle
The Clark and Wells model
Three assumptions of the model
Negative self processing in social situations
Safety behaviours
Somatic and cognitive anxiety symptoms
Before the feared situation
After the feared situation

Anxiety impairs speech treatment ....................................................................................... 244
The problem of post-treatment relapse
Anxiety and post-treatment relapse

The origins of social anxiety with stuttering: The pre-school years .................................... 245
Direct evidence: Psychometrics
Direct evidence: Early childhood temperament
Indirect evidence
Conclusions

The origins of social anxiety with stuttering: The school-age years and adolescence ....... 252
Direct evidence
Indirect evidence
Conclusions

Stuttering, mental health, and the timing of early intervention ........................................... 257

Summary ............................................................................................................................... 257
LECTURE ELEVEN: TREATMENT OF SOCIAL ANXIETY

Speech-language pathologists and anxiety treatment.......................................................... 270
Anxiety measurement for speech-language pathologists .................................................. 270
  Background
  The Unhelpful Thoughts and Beliefs About Stuttering (UTBAS) scales
  The Fear of Negative Evaluation (FNE) scale
  Subjective Units of Distress Scale (SUDS)
  The Spence Children’s Anxiety Scale
  The Preschool Anxiety Scale Revised
Evidence-based anxiety treatment for stuttering .............................................................. 275
  Cognitive Behaviour Therapy (CBT)
  CBT for stuttering: A clinical randomised controlled trial
  Development of standalone Internet CBT for stuttering
  Program design
  Phase I clinical trials of CBTpsych
  A Phase II clinical trial of CBTpsych
  Acceptance and commitment therapy
Summary ................................................................................................................................ 286
Appendix One ......................................................................................................................... 287
  The Unhelpful Thoughts and Beliefs About Stuttering (UTBAS) scale
Appendix Two ......................................................................................................................... 290
  The UTBAS-6 scale