



**Education for Pupils with  
Autism Spectrum Disorders**

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# **Education for Pupils with Autism Spectrum Disorders**

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# FOREWORD

In the introduction to *Count Us In*, I said that the most effective schools were those which valued each child as an individual. Meeting the needs of individual children is the key purpose of any educational organisation, whether it is an early years centre, a school or a service providing outreach provision for pupils in a range of settings. We know also from HMIE's *Missing Out* report that the group of pupils with individualised educational programmes, which includes most children with autism spectrum disorders, is at risk of missing out on educational opportunities.

Autism spectrum disorders, as the name suggests, do not represent a single nor straightforward set of needs to be met. The challenges facing education and other professionals, and the young people whose needs are being addressed, are considerable. The key is to see past the presenting issues, often behavioural in nature, to the communication disorders beyond that and to find what works for each individual concerned. This report is about the extent to which the needs of pupils with autism spectrum disorders are being met across a range of educational establishments and services. It evaluates the progress pupils make in their learning and the extent to which they achieve to their fullest potential within the various forms of provision.

*Education for Pupils with Autism Spectrum Disorders* highlights the variety of provision and arrangements for meeting the needs of pupils with ASD. Across the various forms of provision, the task group found that most pupils were making good progress towards the targets in their individualised educational programmes. However, these programmes were frequently deficient in either the attention given to addressing the underlying ASD needs or conversely in addressing achievement across the curriculum. Also, in many cases, the progress of pupils was not tracked systematically, with the result that schools and authorities did not have sufficiently detailed information about the

achievement of pupils with ASD. In addition, parents were not always kept fully informed about the range of provision available for their children. Training for all staff involved in the education of pupils with ASD was also a key area for development. We need to do better in these highlighted aspects. It is important to get them right because if things go wrong, they can have serious consequences.

This report was produced in response to the request of the Scottish Ministers that HM Inspectorate of Education (HMIE) carry out a task to evaluate and report on the educational provision for pupils with autism spectrum disorders (ASD). As part of that task, HMIE was charged with identifying good practice and making recommendations for moving forward.

As part of their evaluative activity, HMIE commissioned the National Centre for Autism Studies to produce a literature review relating to ASD. The literature review provides background to ASD and includes information about the range of approaches used to teach children with this condition. It is published as Appendix 3 of this report and can be downloaded from the HMIE website, [www.hmie.gov.uk](http://www.hmie.gov.uk).

Ensuring that all pupils succeed is a fundamental aim of Scottish education and essential to the achievement of excellence for all. I commend this report to you as an important contribution to our understanding of autism spectrum disorders and the extent to which the needs of pupils with these conditions are currently being met.

Graham Donaldson  
HM Senior Chief Inspector  
October 2006



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# 1. INTRODUCTION

At the request of Scottish Ministers, Her Majesty's Inspectorate of Education (HMIE) carried out a task to evaluate and report on the educational provision for pupils<sup>1</sup> with autism spectrum disorders (ASD<sup>2</sup>) in Scotland. The remit for the task was to:

- identify and report on the range of educational provision for pupils with ASD, including other specialist and mainstream services such as speech and language therapy services, where these impinge on education;
- evaluate provision;
- identify and report on good practice; and
- make recommendations for moving forward.

An advisory group<sup>3</sup> commented on the work of the task as it developed. The remit for the group of expert professionals and stakeholders was to:

- advise HMIE during the planning and implementation of the review of educational provision for children and young people with ASD in Scotland;
- assist in the process of identifying key areas that should be investigated;
- comment on proposed arrangements for undertaking the task and emerging findings;
- draw the attention of the task team to relevant sources of evidence, material and expertise as appropriate; and
- comment on the draft conclusions and recommendations of the review.

## Legislative background

### *The Standards in Scotland's Schools etc Act 2000*

This Act places duties upon local authorities to ensure that schools meet the needs of all their pupils and encourage them to achieve their full potential, and to raise educational standards.

### *The Education (Additional Support for Learning) (Scotland) Act, 2004*

This Act (known as the ASL Act) requires education authorities to replace the system for assessment and recording of children and young people with special educational needs with a new framework around additional support needs. The Act defines additional support needs more broadly than special educational needs. The Act extends the duties of local authorities towards pupils, as outlined in the Standards in Scotland's Schools Act, to individual pupils. Children are defined as having additional support needs under the terms of the ASL Act if they require additional support to that which might normally be provided in a school to ensure that they make good progress in their learning. Schools have a key role to play in maximising the potential, raising the achievement and addressing the learning needs of all learners. At the commencement of the Act<sup>4</sup>, Records of Needs could no longer be opened. Advice for schools and education authorities on implementing the terms of the Act are contained in *Supporting children's learning: code of practice* (2005)<sup>5</sup>.

## The framework for the task

The aim of the task was to evaluate provision for pupils with ASD and to determine how well the needs of individual pupils with ASD were being met. To carry out the task, HMIE made reference to the evaluative framework set out in *How good is our school?*<sup>6</sup> This framework, used in all school inspections, contains a set of generic quality indicators which are used to evaluate the quality of education. To the generic evaluative framework, the task team brought extensive knowledge of ASD and experience of working with pupils with ASD. The literature review added to the collective knowledge of the team. In this way, the task team was able to apply an ASD specific 'lens' to the generic framework.

<sup>1</sup> The term 'pupil', for the purposes of this report, includes children under the age of five who attend pre-school provision.

<sup>2</sup> *Autism spectrum disorders*. Appendix 1: Glossary contains definitions of this and other terms used in this report.

<sup>3</sup> Appendix 2: membership of the advisory group.

<sup>4</sup> The Education (Additional Support for Learning) (Scotland) Act 2004 was commenced on 15th November 2005. From the date of commencement, the concept of 'special educational needs' as defined in the Education (Scotland) Act, 1980 ceased to exist. The new act introduced the wider concept of 'additional support needs'.

<sup>5</sup> *Supporting children's learning: code of practice*, Scottish Executive, 2005

<sup>6</sup> *How good is our school?: Self evaluation using quality indicators*, HMIE, 2002 edition



The evaluative framework for the task consisted of a selection of quality indicators from *How good is our school?*. The task team organised these indicators under a set of high level questions which are increasingly being used by HMIE and other inspection bodies throughout Scotland as a framework to evaluate quality:

- What outcomes have we achieved?
- How well do we meet the needs of learners and their families?
- How good is the education we provide?
- How good is our management?
- How good is our leadership?

These questions are used later in this report as organisers to set out the findings of the task.

Evaluation instruments and interview schedules were developed for the task. These were based on HMIE inspection models and informed by the literature review and the knowledge and expertise of the task team. They are available on the HMIE website: [www.hmie.gov.uk](http://www.hmie.gov.uk).

### Description of evaluative terms used in this report

Throughout this report the six-point scale from *How good is our school?* (updated version, 2005) is used to describe evaluations:

level 6 excellent - outstanding, sector-leading

level 5 very good - major strengths

level 4 good - important strengths with areas for improvement

level 3 adequate - strengths just outweigh weaknesses

level 2 weak - important weaknesses

level 1 unsatisfactory - major weaknesses.

The following words are used to describe numbers and proportions throughout the report:

almost all	over 90%
most	75–90%
majority	50–74%
less than half	15–49%
few	up to 15%.

## 2. CONCLUSION

HM Inspectors found much good practice in relation to the work of education authorities and school and other professional practice that supported pupils with autism spectrum disorders. Pupils' achievements were often good in relation to the targets set for them. Nevertheless, considerable challenges remain for authorities, schools and partner agencies. Gaps in strategy at education authority level need to be examined and addressed. More attention needs to be paid to what approaches to learning and teaching work for this group of young people and less to analysis of the kind of provision. Targets set out in individualised educational programmes need to have appropriate breadth and level of challenge. Above all, those with responsibility for delivering services to pupils with autism spectrum disorders should ensure consistency in the quality of services provided. This is a challenging agenda since each individual young person affected will need a support package fit for purpose and aimed specifically at addressing their individual needs.

This task carried out by HMIE found that education authorities across Scotland have a variety of provision and arrangements to meet the needs of pupils with autism spectrum disorders. In the best examples, provision ranged from integration into mainstream primary and secondary schools to placement in special schools. However, education authorities often did not share with parents information about the provision for autism spectrum disorders available to them. In some cases, provision was developed in response to pressing and immediate need rather than proactively as part of a wider strategy to support all pupils who have additional support needs.

Staff training and continual professional development play a crucial role in the ability of each school to meet pupils' individual learning needs, particularly in an area in which pupils often present challenging behaviour and apparently poor attitudes to learning. Teachers and support staff should be provided with high quality training to enable them to meet the needs of pupils with autism spectrum disorders and to ensure that these pupils do not miss out on the educational opportunities they deserve.

### 3. TASK METHODOLOGY

HMIE carried out the task between January 2005 and March 2006. The task consisted of two separate phases.

The first phase of the task was carried out between January and March 2005. It involved two aspects.

- 1) A literature review relating to ASD<sup>7</sup>.  
The National Centre for Autism Studies was commissioned to produce this up-to-date literature review of ASD as a background to the task. The literature review provides information about the background to ASD, its causes and diagnosis. The review includes information from the United Kingdom and from international studies about the range of approaches used to teach children with ASD, and the extent to which each approach is used. The review includes a collation of the published evidence of the effectiveness of the various approaches.
- 2) An analysis of a questionnaire which was issued to all education authorities (EAs) in Scotland.  
Each EA was asked to provide information about the number of children with ASD in their authority and the provision which was made for ASD. The questionnaire also asked for information about provision for staff training.

The second phase of the task took place from April 2005 to March 2006. During this phase, a task team was deployed to visit a sample of EAs. The team consisted of HM Inspectors with particular qualifications and knowledge of children with additional support needs and ASD, and seconded team members including a speech and language therapist, a social work services manager, a deputy headteacher of a large unit for pupils with ASD and an educational psychologist. The task team made visits to six EAs throughout Scotland to interview

key staff and to evaluate practice. The six which were selected (Fife, Glasgow, North Lanarkshire, Scottish Borders, South Ayrshire and Shetland Isles) provided a representative sample across Scotland and a balance between large and small, and urban and rural authorities. In addition to visiting the EAs, the task team also visited independent, residential provision at Daldorch School (managed by the National Autistic Society) and New Struan School (managed by the Scottish Society for Autism).

During each of the visits to an EA, the task team carried out a similar set of activities. They interviewed:

- education officers with responsibilities for pupils with additional support needs;
- educational psychologists;
- social work officers with responsibilities for additional support needs and disability;
- a manager of speech and language services;
- a focus group of headteachers; and
- a group of parents of children who had ASD<sup>8</sup>.

The task team visited around six schools<sup>9</sup> within each authority. The number and type of schools visited varied depending on the size of the authority, the number of pupils with ASD and how the EA had organised its provision. In almost all EAs, the team visited pre-school centres, or nursery classes, primary schools, a secondary school, a special school or, where appropriate, units for pupils with ASD which were located with mainstream schools. The team carried out a similar set of activities on the visits to Daldorch School and New Struan School. Visits to schools were supplemented by inspections undertaken within HMIE's general programme. Schools for pupils with ASD which were inspected as part of the general inspection programme during 2005-2006 were included in the data set for this task.

<sup>7</sup> Appendix 3: Literature Review is available on the HMIE website: [www.hmie.gov.uk](http://www.hmie.gov.uk)

<sup>8</sup> The groups of parents were selected by officers from the authorities. A number of other parents also contacted HMIE independently to provide more personal views of provision for their children.

<sup>9</sup> Throughout this document the term 'schools' is taken to mean pre-school centres, special schools, primary schools and secondary schools.

**Total number of schools visited for the task**

Pre-school centres and nursery classes	5
Primary schools	14
Secondary schools	10
Special schools and units attached to mainstream schools (schools)	3 (schools) 8 (units)
National centres for autism	2

In each school the team:

- interviewed the headteacher;
- interviewed teachers and support staff;
- observed learning and teaching;
- interviewed a speech and language therapist;
- where appropriate, interviewed pupils; and
- where it was possible, met with individual parents.

## 4. WHAT ARE AUTISM SPECTRUM DISORDERS?

“Autism is a severe disorder of communication, socialisation and flexibility in thinking and behaviour, which involves a different way of processing information and of seeing the world.”<sup>10</sup>

In 1943, Kanner<sup>11</sup> coined the term ‘early infantile autism’ to describe children with unusual behaviour patterns that had been present from early childhood. His original paper gave detailed descriptions highlighting extreme autism, obsessiveness, good relationships with objects, a desire for sameness, stereotypy and echolalia. Around the same time, Asperger<sup>12</sup> published his original paper in which he described four slightly older and very intellectually able individuals. In his summary of the typical features of the group, Asperger writes about the children’s appearance; their distinct intellectual functioning including their learning difficulties and attention problems; their problematic behaviour in social situations; and the impairment of their emotions and instincts. These behaviour patterns differed from, but also overlapped with those of Kanner’s autism group.

Typically, autism spectrum disorders are characterised by a ‘triad of impairments’<sup>13</sup> identified by Wing and Gould in 1979. The triad represents three broad and interacting aspects of ASD, all of which will be inconsistent with the presenting individual’s chronological age. The following, by Jordan, is an adaptation of the triad.

### The triad of impairments

#### Social

Impaired, deviant and delayed or atypical social development, especially interpersonal development. The variation may be from ‘autistic aloofness’ to ‘active but odd’ characteristics.

#### Language and communication

Impaired and deviant language and communication, verbal and non-verbal. Deviant semantic and pragmatic aspects of language.

#### Thought and behaviour

Rigidity of thought and behaviour and impoverished social imagination. Ritualistic behaviour, reliance on routines, extreme delay or absence of ‘pretend play’.

### Prevalence of autism spectrum disorders

From the most recent and most rigorous studies, the most accurate overall population estimate available for the prevalence of ASD in children is approximately 60 per 10,000 children (0.6%). However, findings about the sub-groupings within this differ and variations in prevalence may exist at a local level.<sup>14</sup>

The following set of charts and tables presents a synopsis of the information provided by education authorities in response to the HMIE questionnaire. The questionnaire asked each education authority about their provision for pupils with ASD. The charts and tables cover the range of provision in authorities and the numbers of children supported, along with the types of specialist education therapies used to meet the needs of pupils with ASD.

<sup>10</sup> Jordan, R. (1999) *The Nature and Definition of Autism*. In: *Autistic Spectrum Disorders: An introductory handbook for practitioners*. London: David Fulton Publishers Ltd.

<sup>11</sup> Kanner, L. (1943) *Autistic Disturbances of Affective Contact*. *Nervous Child*, 2, 217-250.

<sup>12</sup> Asperger, H. (1944) ‘*Autistic psychopathy*’ in childhood. In U. Frith (ed) (pp.37-92) *Autism and Asperger syndrome*. Cambridge: Cambridge University Press.

<sup>13</sup> Wing, L. & Gould, J. (1979) *Severe impairments of social interaction and associated abnormalities in children: epidemiology and classification*. *Journal of Autism and Developmental Disorders*, 9, pp.11-29.

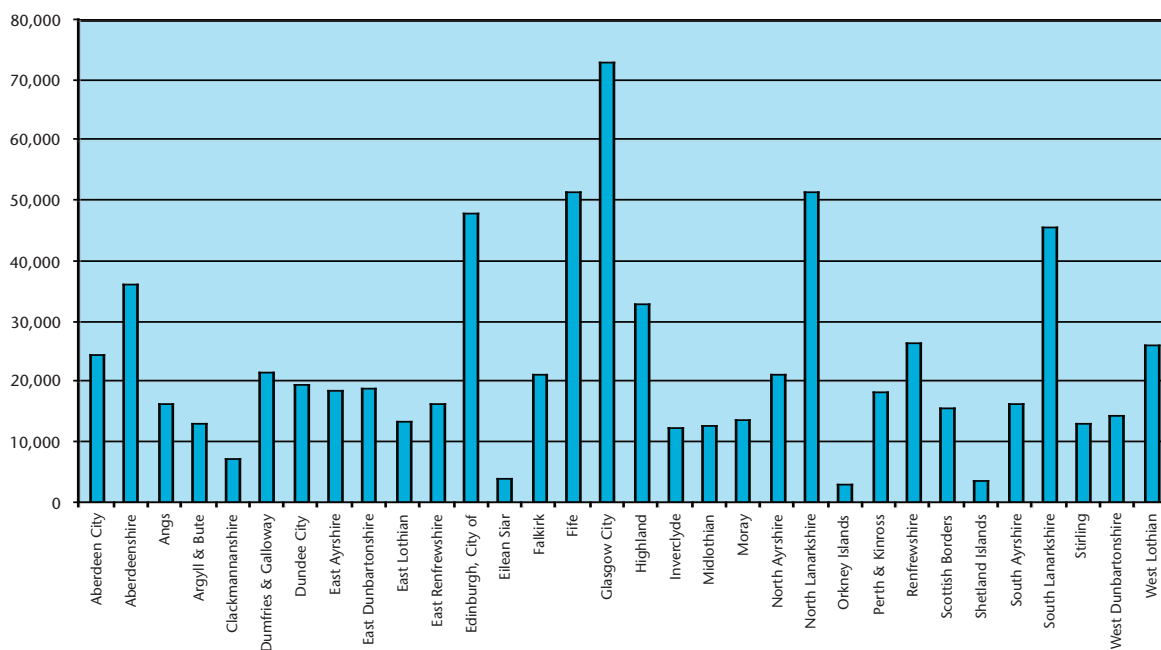
<sup>14</sup> *Public Health in Scotland Autistic; Spectrum Disorders Needs Assessment Report*, NHSScotland, 2001.

There is no simple relationship between the number of pupils in each authority and the number identified with ASD. Chart 1 shows the total pupil population in each education authority. Chart 2 shows the numbers of pupils with ASD, as reported by each EA, as a percentage of the total school population within each authority. Throughout the country, education

authorities use different criteria to determine those children and young people for whom they will make provision. Some authorities make provision for those who have a formal medical diagnosis of ASD. Others make provision for all learners who display characteristics of ASD whether or not this is supported by a formal medical diagnosis.

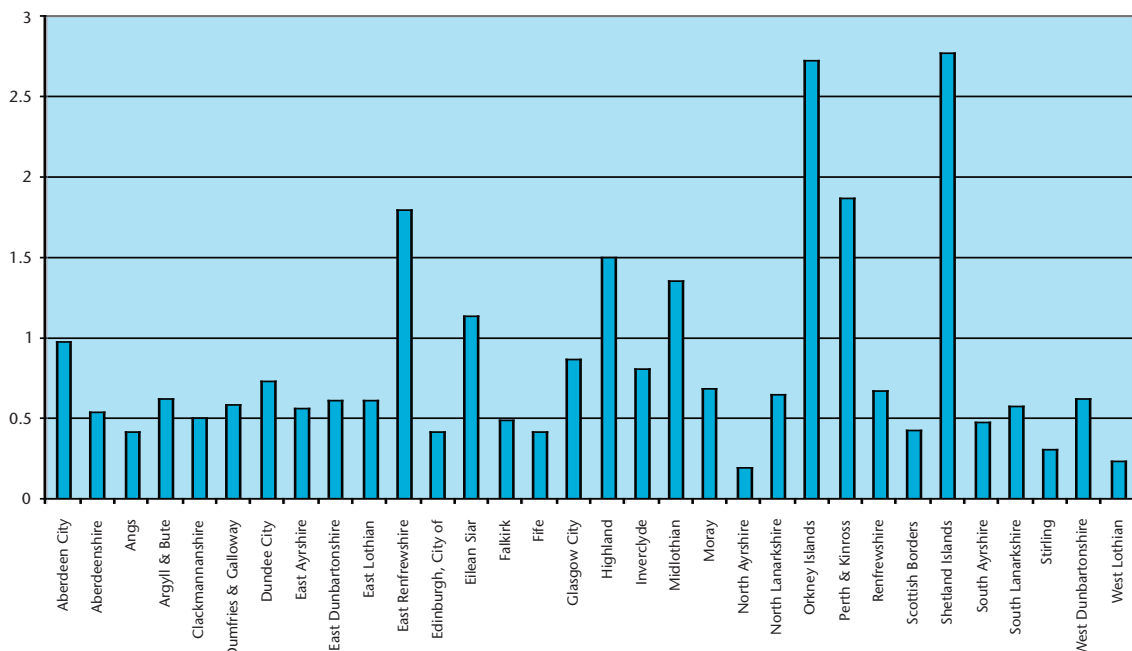
**Chart 1**

**Total pupil population by EA (Scottish Executive, 2003 figures)**



**Chart 2**

**Pupils with autumn spectrum disorders as a percentage of total pupil population**



## 5. PROVISION FOR PUPILS WITH AUTISM SPECTRUM DISORDERS

This section of the report provides information on different types of provision and the numbers of pupils served by these provisions in each EA. The figures reflect the information given to HMIE by each EA.

### Specialist pre-school provision

Half of all authorities made specialist provision for pre-school children with ASD and almost all offered some support within their overall provision for children with a range of additional support needs. Some authorities were developing pre-school provision which aimed to ensure early identification of ASD and other learning difficulties through inter-agency working, and to provide related support for children and their families. In the best practice, authorities did not limit support to those children with a formal medical diagnosis of ASD. Some authorities were unclear whether certain children had been diagnosed or not. This was the case in around 10% of the national total of children in specialist pre-school provision. Survey results are summarised in Table 1. (Comprehensive data on the actual numbers of children with ASD in mainstream nurseries was not gathered in this survey.)

**Table 1: Provision in pre-school specialist units**

Authorities with provision	17	
Number of children supported	292	
Of those supported:		
Number of children with diagnosis	155	53%
Number of children without diagnosis	104	37%
Number of children where EAs were unclear if they had a diagnosis or not	33	10%

### Provision in primary specialist units

Around 80% of EAs made provision in primary specialist units for children with ASD. Some units contained 'communication' bases which had been accredited by the National Autistic Society. Primary units in some authorities operated inclusively, with the children being on the school roll. Around 29% of pupils with ASD in primary schools were in specialist units, with 67% of these children having been medically diagnosed with ASD. Two authorities were unclear about whether or not the remainder had been diagnosed. HMIE's survey results are summarised in Table 2.

**Table 2: Provision in primary specialist units**

Authorities with provision	27	
Number of children supported	774	
Of those supported:		
Number of children with diagnosis	518	67%
Number of children without diagnosis	121	16%
Number of children where EAs were unclear if they had a diagnosis or not	135	17%

### Provision in secondary specialist units

Just fewer than 60% of EAs made provision in specialist units for children with ASD in secondary schools. Some of these units had been accredited by the National Autistic Society. In most cases, staff aimed to ensure that pupils were included to some extent in mainstream classes, where appropriate. Many pupils with ASD spent more than half of their time in mainstream classes and the rest in a specialist base where they followed a curriculum to meet their specific needs. For example, in some authorities, rooms in the units were designed to limit visual distractions, to eliminate superfluous noise and to cater for pupils' various sensitivities. Some secondary schools with specialist units were an integral part of local school cluster arrangements in which the various agencies worked together to ease pupils' transition from pre-school to primary, and from primary to secondary school. Some 28% of pupils with ASD in secondary schools were in specialist units. Within these units almost 80% of the children had a medical diagnosis. Some authorities were unclear whether or not the remainder had been diagnosed. Survey results are summarised in Table 3.

**Table 3: Provision in secondary specialist units**

Authorities with provision	20	
Number of children supported	276	
Of those supported:		
Number of children with diagnosis	220	80%
Number of children without diagnosis	12	4%
Number of children where EAs were unclear if they had a diagnosis or not	44	16%

### Provision in schools for children with moderate learning difficulties

Over 40% of authorities made provision for children with ASD in schools for children with moderate learning difficulties. These schools typically had 'autism-friendly' groups and gave consideration to ensuring an appropriate environment which included specifically-designed work areas and distraction-free spaces. Around 80% of children with ASD in these schools had been medically diagnosed. One authority was unable to quantify how many children with ASD it had in these schools. Survey results are summarised in Table 4.

**Table 4: Provision in schools for children with moderate learning difficulties**

Authorities with provision	15	
Number of children supported	452	
Of those supported:		
Number of children with diagnosis	363	80%
Number of children without diagnosis	89	20%



**Provision in schools for children with severe/complex learning difficulties**

Around 75% of authorities made provision for children with ASD in schools for children with severe/complex learning difficulties. Over 25% of children in these schools had not been medically diagnosed. One authority was unable to quantify how many children with ASD it had in these schools. Survey results are summarised in Table 5.

**Table 5: Provision in schools for children with severe/complex learning difficulties**

Authorities with provision	25	
Number of children supported	621	
Of those supported:		
Number of children with diagnosis	462	74%
Number of children without diagnosis	159	26%

**Provision in schools for children with emotional and behavioural difficulties**

Over 30% of authorities made provision for children with ASD in schools for children with emotional and behavioural difficulties (EBD). Almost 50% of children in these schools had not been medically diagnosed. Several authorities were unable to quantify how many children with ASD they had in these schools. Survey results are summarised in Table 6. It is likely therefore that the very small numbers in this table reveal under-reporting and under-diagnosis of pupils with ASD who attend EBD provision.

**Table 6: Provision in schools for children with emotional and behavioural difficulties**

Authorities with provision	12	
Number of children supported	21	
Of those supported:		
Number of children with diagnosis	11	52%
Number of children without diagnosis	10	48%

## Provision in mainstream primary and secondary schools

All authorities indicated that they made provision for children with ASD in mainstream primary and secondary schools. In some authorities, teachers in these schools were supported by authority staff from a range of agencies and also shared support as part of a school cluster. In other cases, teams of teachers with appropriate<sup>15</sup> qualifications and experience supported staff who worked with children with ASD in the mainstream sectors. Such arrangements were typically focused on specific staff who would support children as they were identified or transferred to individual schools. Some 71% of pupils with ASD in primary schools were in mainstream classes. Around 20% of primary children supported in this way had not been formally diagnosed and a number of authorities were uncertain about whether a diagnosis had been made in 14% of pupils with ASD in mainstream primary schools. Some 72% of pupils with ASD in secondary schools were in mainstream classes. Some 25% of secondary pupils supported in this way had not been formally diagnosed and a number of authorities were uncertain about whether a formal medical diagnosis had been made in the case of 12% of pupils with ASD in mainstream secondary schools. Survey results for provision in mainstream schools are summarised in Table 7.

**Table 7: Provision in mainstream primary and secondary schools**

Mainstream sector	Primary	Secondary
Authorities with provision	32	32
Number of children supported	1836	706
Of those supported:		
Number of children with diagnosis	1055	458
Number of children without diagnosis	454	170
Number of children unspecified	327	78
Total children in mainstream	406015	318427

## Outreach provision

Almost 60% of authorities indicated that they made outreach provision for children with ASD. Some authorities were uncertain about the numbers of children supported through outreach since this often overlapped with other forms of support. In many cases, outreach support was provided by an inter-disciplinary team of professionals whose members were allocated to individual schools on the basis of need. These teams were organised in a number of ways. For example, they could be centralised in an authority or contain members of staff from special schools or units. Members of the team provided support, advice and training to staff in mainstream schools, and also to parents. In some cases, support and development groups were run by psychological services. In one authority, for example, the outreach team worked initially in conjunction with the Scottish Society for Autism to support teachers who worked with specific pupils with ASD. The team was augmented through the appointment of a development officer. Some 13% of children supported by outreach teams had not been formally diagnosed and a number of authorities were uncertain about whether a diagnosis had been made in the case of 27% of pupils. Some authorities were unable to identify within the pupils supported by generic teams which pupils had ASD and which did not. Survey results are summarised in Table 8.

**Table 8: Outreach provision**

Authorities with provision	20	
Number of children supported	863	
Of those supported:		
Number of children with diagnosis	520	60%
Number of children without diagnosis	111	13%
Number of children unspecified	232	27%

<sup>15</sup> A range of certificated training programmes for teachers of pupils with ASD is provided in Scottish Universities and Teacher Education Institutions. The National Autistic Society and the Scottish Society for Autism provide a range of professional qualifications. In addition, a number of education authorities provide entry-level training for teachers.

### Other forms of provision

Most authorities made other types of provision to meet the needs of children with ASD. These included, for example, the use of home programmes, residential placements and support from independent organisations such as the National Autistic Society and the Scottish Society for Autism. The numbers of authorities using each type of provision and the numbers of children involved are shown in Table 9.

Several authorities used a range of approaches to support home programmes. However, in most cases these approaches supported only a very small number of children and often as a ‘trial’. These approaches included Son-Rise<sup>16</sup> and Lovaas<sup>17</sup> therapy. Support was generally provided by a home visiting teacher, supported by multi-disciplinary teams as appropriate, and focused on both children and their families.

**Table 9: Other forms of provision**

Provision	Number of authorities	Number of children
Home programmes	13	19
Residential	22	165
Independent	11	106
Other	13	160
Outwith authority	20	158
ASD specific	3	93

Analysis of data from the HMIE questionnaires to each EA indicated that in a number of cases authorities held incomplete data about pupils with ASD. It is important that each EA holds full details of the total numbers of pupils with ASD, and their placements.

#### **Recommendation 1:**

*Education authorities should ensure that they hold complete information on the numbers of pupils with autism spectrum disorders for whose education they are responsible to ensure that they develop a coherent strategy for meeting a range of needs. This information should include details of provision for these pupils. Allocation of support and resources should not be restricted to those pupils with a medical diagnosis of autism spectrum disorders.*

<sup>16</sup> Son-Rise programme. See Appendix 1: Glossary and Appendix 3: Literature review.

<sup>17</sup> Lovaas method. See Appendix 1: Glossary and Appendix 3: Literature Review.

## 6. APPROACHES USED TO TEACH CHILDREN WITH AUTISM SPECTRUM DISORDERS

HMIE's questionnaire asked all education authorities to provide information about the range of approaches they used to support pupils with autism spectrum disorders.

All EAs reported that they used a wide range of tools, strategies and resources when making provision for pupils with ASD, and when providing support for their families. Treatment and Education of Autistic and related Communication Handicapped Children (TEACCH)<sup>18</sup> and ASD-specific Speech and Language Therapy were the most common approaches, used by over 60% of authorities. The Hanen<sup>19</sup> parent programme was used by around 50% of authorities. The Lovaas method and Son-Rise programme were used by a few authorities. Other approaches used included:

- visual communications systems
- cognitive behavioural therapy<sup>20</sup>
- social skills training
- play therapy
- video interaction guidance
- psycho-educational profiling
- social stories<sup>21</sup>.

In delivering these approaches, education staff often worked closely with educational psychologists and speech and language therapists, although some authorities reported that a shortage of these therapists limited the support they could provide. Most authorities were unable to quantify the numbers of children with whom the various approaches were used.

The literature review associated with this report describes a number of the approaches which are commonly used. The volume of writing about interventions and approaches refers frequently to their widespread use, but the published literature contains little information about actual practice. A

full evaluation of evidence about the effectiveness of individual approaches is provided in the literature review.

The literature review supports the view that no specific approach to intervention brings greater benefit across the spectrum, or that any sub-group of children benefits from any one particular intervention. The following key points are taken from the literature review.

- Methodological difficulties within studies mean that definitive evidence of the effectiveness of any one approach, and the contrasting effectiveness of one approach compared to another, is not available.
- Most approaches offer some evidence of positive and useful intervention results, and an eclectic model to supporting people with ASD has emerged.
- A "playful context" has emerged as a widely used setting for supportive intervention.
- The use of peer-mediated support and social group contexts is increasing.
- Environmental structure and socio-constructive<sup>22</sup> teaching techniques tailored to the individual are important components of any support.
- Intervention approaches which involve the child in prolonged periods of training, or long periods of interaction with only a trained adult, may preclude involvement of the child in other effective forms of support.
- The need for early intervention to meet the needs of a child when these needs are initially recognised is apparent.
- The involvement of parents has emerged as a crucial element in intervention approaches and the need for support for parents and family is emphasised.<sup>23</sup>

<sup>18</sup> TEACCH: Treatment and Education of Autistic and related Communication Handicapped Children. See Appendix 1: Glossary and Appendix 3: Literature Review.

<sup>19</sup> Hanen programme. See Appendix 1: Glossary and Appendix 3: Literature Review.

<sup>20</sup> Cognitive behaviour therapy: See Appendix 1: Glossary and Appendix 3: Literature Review.

<sup>21</sup> Social stories. See Appendix 1: Glossary and Appendix 3: Literature review

<sup>22</sup> Socio-constructive techniques include approaches such as cognitive behavioural therapy and social stories. See Appendix 3: Literature review.

<sup>23</sup> Appendix 3: Literature review, page 78.

## Programmes

Learning and teaching programmes for autism spectrum disorders should address the needs that arise from ongoing assessment of the pupil in his or her learning environments. Programmes should also take account of the pupil's broader learning needs and the associated difficulties which can co-exist with autism spectrum disorders. No one 'recipe' will provide the correct approach for all pupils in all situations. It is important for schools and education authorities to have a clear understanding of autism spectrum disorders and of the importance of meeting all the learning needs of an individual pupil.

### **Recommendation 2**

*Education authorities should ensure that they have a suitably varied range of provision to meet the wide and varying needs of pupils with autism spectrum disorders. They should publish details of their provision for autism spectrum disorders, including planned future developments.*

## 7. WHAT OUTCOMES HAVE SCHOOLS ACHIEVED FOR PUPILS WITH AUTISM SPECTRUM DISORDERS?

Inspectors evaluated how well pupils made progress in their learning and achieved to their fullest potential within the various forms of provision. They evaluated pupils' attainment and achievement in all schools and the progress which pupils were making in the targets set out in their individualised educational programmes (IEPs). They also considered pupils' achievements in relation to national levels of attainment and national qualifications, where these were appropriate.

An IEP describes in detail the nature of a child's or young person's additional support needs, the ways in which these are to be met and the learning outcomes to be achieved. It also specifies what additional support is required, including that required from agencies outwith education. Almost all pupils with ASD, in all schools visited as part of the sample, had an IEP. In most cases IEPs contained targets in language and communication, mathematics and personal and social development. In a few cases pupils had attainment targets in additional areas of the curriculum. Increasingly, schools will wish to ensure that IEPs are used to plan for pupils with ASD so that they become successful learners, confident individuals, responsible citizens and effective contributors<sup>24</sup>. Where appropriate, a school should work with appropriate agencies, including health, social work or voluntary agencies to draw up IEPs so that objectives and services can be coordinated.<sup>25</sup> An effective IEP for pupils with ASD helps to plan for the pupil's learning targets where additional support is needed, or where support is needed to compensate for an ASD, and to ensure access to the broader curriculum.

The quality of IEPs in the schools visited was variable. Although most pupils were making progress through the targets as stated in their IEPs, in some cases targets were insufficiently matched to

pupils' needs and their prior attainment. In a number of schools, generally in mainstream settings, targets within IEPs were insufficiently focused and did not always fully address pupils' specific needs in relation to ASD. In contrast, some targets set for pupils attending specialised provision focused solely on pupils' needs in relation to ASD, for example, their communication and social needs, and did not identify targets for them to achieve more widely. IEPs were not always used effectively as tools to plan for pupils' progress.

Education authorities and schools generally did not pay sufficient attention to tracking pupils' individual progress or to analysing attainment information for pupils with ASD separately from the information which they held for all pupils. For this reason, it was difficult for education authorities or schools to compare the attainment of pupils with ASD with that of pupils who did not have ASD, or to benchmark the progress of groups of pupils with ASD.

### *Pre-school*

In most pre-school provision, children with ASD were making good progress and achieving well. They were developing skills in communication and in social interaction. In most centres, staff used a range of formal and informal assessments to identify children's progress. Children's achievements were monitored on an individual basis and their successes were identified and celebrated by staff. A range of health education professionals, including speech and language therapists, were involved in setting appropriate targets for a majority of children. Parents were not always involved in the target setting process. However, most parents received copies of individual targets which had been set for their child. In a few centres, staff were unaware of the school's longer term targets for children.

<sup>24</sup> A Curriculum for Excellence, [www.acurriculumforexcellencescotland.gov.uk](http://www.acurriculumforexcellencescotland.gov.uk), Scottish Executive (2004)

<sup>25</sup> Supporting children's learning: code of practice, Scottish Executive, 2005

*Primary schools*

Overall, pupils in primary schools were making good progress towards the learning targets set within their IEPs, in particular, in targets which had been set for personal and social development. A few pupils were making good progress within 5-14 levels of attainment in line with their peers. In a few cases learning targets were not sufficiently clear. Some were insufficiently focused on addressing the needs of pupils with ASD while others did not focus enough on improving pupils' attainment across the curriculum. Teachers held regular reviews of pupils' progress and had good expectations of pupils' achievement and attainment.

In the best practice, the speech and language therapy targets were well-integrated into the curriculum for each pupil. Teaching staff collaborated with speech and language therapists to help learners reach their targets and achieve the specified outcomes.

In one mainstream primary school, all targets for IEPs for pupils with ASD were colour coded to tie in with the triad of impairment<sup>26</sup>. This careful attention to planning ensured that the specific, individual needs within the triad for each pupil were being addressed within the national 5-14 framework.

*Secondary schools*

Overall, pupils made good progress towards targets in their IEPs. Higher attaining pupils generally achieved in line with their peers. In a number of schools, pupils achieved well in Scottish Qualification Authority examinations. In a few schools, staff felt that pupils' abilities were not fully demonstrated in examination conditions and that

pupils did not see the value of examinations. Pupils generally had appropriate opportunities to achieve across a range of different experiences. For example, schools made use of alternative ways of organising the curriculum and certificated pupils' wider achievements through, for example ASDAN awards<sup>27</sup>. Pupils' achievements in Outward Bound courses and within the local community were recognised and suitably accredited.

Pupils with ASD, in a mainstream secondary school, who were sitting Standard Grade examinations, were able to choose their seats in the examination room and practise mock examinations in these seats. This approach allowed them to familiarise themselves with the unfamiliar examination conditions.

*Specialist provision and independent special schools*

Overall, pupils' IEP targets were more focused on addressing ASD than in mainstream schools. Pupils made good progress towards achieving individual targets. Most were making particularly good progress in developing communication skills. A few pupils in specialist units attached to primary schools made good progress within appropriate 5-14 levels of attainment. However, a few pupils could have achieved more through the identification of more challenging targets. The independent special schools in the sample were very focused on individual needs, particularly in targets related to ASD.

In a unit for pupils with ASD based in a special school, pupils had personal records of achievement. Individual booklets followed pupils through their school careers, and were monitored by the senior management team.

<sup>26</sup> Difficulties with social interaction, language and communication, and thought and behaviour.

<sup>27</sup> Award Scheme Development and Accreditation Network

**Recommendation 3**

*Education authorities should ensure that schools prepare clear and effective individualised educational programmes for all pupils with autism spectrum disorders and use them as planning tools to meet the specific and broader learning needs of individual pupils. They should ensure that schools also use individualised educational programmes to track pupils' progress towards meeting their potential. The Scottish Executive, education authorities and other agencies should work together to coordinate support for pupils with autism spectrum disorders, where there is a need. Education authorities should work with health boards to develop clear procedures for early identification of children with autism spectrum disorders.*



## 8. HOW WELL DO SCHOOLS MEET THE NEEDS OF LEARNERS AND THEIR FAMILIES?

### Impact on pupils

Schools should ensure that their pupils are enthusiastic and motivated to learn; have a sense of self-respect, well-being and ambition; respect others and participate in things going on around them; and have a sense of resilience. Inspectors evaluated the extent to which pupils displayed such attributes and also what pupils felt about their educational experiences. Topics for discussion with pupils were selected appropriately to meet the needs of individual learners, for example, how well they were progressing in their learning, the extent to which they felt included in the life of the school, had friends and enjoyed school.

All education authorities and independent schools had recognised the need to develop the range of services they provided for pupils with ASD. Overall, schools had a positive impact on children and young people. In almost all schools visited, pupils with ASD had good access to a safe and secure environment. Most settings provided opportunities for pupils to develop their social skills and their abilities to interact through meaningful access to real life situations.

A number of schools provided good opportunities for pupils with ASD to engage with mainstream peers in out-of-school activities and clubs. However, such opportunities were not yet fully developed within all authorities and schools. Residential pupils in the independent schools in the sample had very good opportunities to take part in a wide range of community activities during and after the school day. In all settings, most pupils had access to residential educational experiences. However, schools did not usually maintain sufficiently clear records of the uptake of these experiences to allow them to plan for any improvements or gaps in the experiences of individuals. A small number of education authorities had good links with social work departments to develop out-of-school provision.

An educational psychologist and a parent of a boy with ASD put in a successful bid for a 'friendship' project to the Changing Children Services' Fund and were awarded £5,000. They used the funding to organise social outings for pupils with ASD and their peers. For example, one group of boys went to an executive box to watch a premier league football match. Pupils with ASD could choose a mainstream pupil to go with them on the outing.

### *Pre-school*

In most pre-school centres, children's communication and social interaction needs were well supported through a range of approaches including the use of signs, symbols and photographs. Social skills and interaction were being well targeted within activities and routines. In all pre-school centres, children had good opportunities to interact with their peers.

### *Primary schools*

Within mainstream primary schools, pupils generally had good opportunities to transfer the skills they had learned within the school, for example, in the lunch hall and at playtime. In a few schools staff needed to consider how pupils could transfer skills between school and home. Most schools provided pupils with access to lunch and after school clubs. However, schools did not routinely collect information about the uptake of these facilities among pupils with ASD.

### *Secondary schools*

Secondary schools had the potential to make a positive impact on the lives of pupils by providing good access to a mainstream peer group, to broad curriculum experiences and to the national qualifications framework. In a number of secondary schools pupils were observed to be 'over supported' by non-teaching staff. Pupils reported that they viewed auxiliaries and classroom assistants<sup>28</sup> as being 'their' teacher and would generally expect their day to be organised, guided

<sup>28</sup> Across Scotland, a variety of titles are used to describe the roles of non-teaching support staff.

and directed by this member of staff. In one EA it was common practice for the pupil support assistant to transfer with pupils as they moved from primary to secondary school. This provided pupils with a good level of continuity. However, it resulted in pupils developing an over-dependency on a known adult. Although there were some good examples of information being given to help all staff and pupils develop a general understanding of ASD throughout mainstream secondary schools, on the whole there was a lack of awareness of pupils' additional support needs.

In a mainstream secondary school, the principal teacher of learning support acted as coordinator of a flexible curriculum programme which allowed pupils to have access to mainstream subject areas but also ensured that they had appropriate 'time out' periods. In this way, pupils were enabled to sustain a full day at school.

In one pair of schools, arrangements for the transfer of information from the primary to the secondary school were effective. Staff held a planning meeting prior to transfer. At this meeting information about the best strategies to encourage learning was identified and shared. Parents and pupil were fully included in the planning meeting.

#### *Specialist provision and independent schools*

Overall, special schools had a very good impact on pupils. Pupils had very good opportunities to transfer skills across different settings in the school. Pupils in special schools and units had very good opportunities to transfer the skills they learned in school to community settings and, in the case of both independent schools visited, between school settings and care settings. Staff used a good range of communication approaches which supported pupils' learning and encouraged the development of their emotional well-being. One area in which it was difficult for special schools to have a strong impact on pupils' lives was the provision of good role models for behaviour. For example, a strong emphasis on routine during group activities can result in a number of pupils spending too long waiting to take their turn.

#### **Recommendation 4**

*Schools should ensure that pupils with autism spectrum disorders are given appropriate opportunities to gain an understanding of the social world they live in and to develop life skills which they can use outside school. Pupils should be given full opportunities to identify and develop their personal strengths.*

#### **Delivery of the curriculum**

In most education authorities and independent schools the curriculum provided a positive focus on addressing pupils' ASD-specific needs. Priority was given to addressing pupils' social communication and interactions. A feature of the curriculum throughout the schools visited was the high degree of personalisation of pupils' programmes of work. In a number of cases, approaches to enable pupils to gain access to the wider curriculum were very good. While break times provided opportunities for pupils to practise social skills in real situations, staff did not provide sufficiently high levels of support to enable this to happen effectively. In some schools, teachers had no written guidance to help them plan effectively for pupils' learning in the wider curriculum. In these schools, some curricular areas were not adequately covered, curriculum choice was limited and opportunities for pupils to progress in their learning and achieve accreditation were limited.

In most schools, and particularly in special and independent schools, speech and language therapists gave very good support to aid communication and social interactions. For example, they led social language and social skills groups as well as supporting the development of social stories and the effective use of symbols to aid pupils' learning.

#### *Pre-school*

Children in pre-school centres had appropriate access to the early years curriculum, which was suitably adapted and individualised to meet their needs. The curriculum paid very good attention to developing children's communication skills and social interaction. In most centres, staff chose from

a range of approaches to use with children with ASD to meet individual needs. They established appropriate routines for each day and expected children to respond to their names and to each other. In a few centres there were insufficient sensory approaches to the curriculum.

#### *Primary schools*

Most pupils in primary schools followed a broad and relevant curriculum which had been suitably individualised to meet their ASD needs. Schools had a wide range of approaches to meet pupils' ASD needs. Most schools made good use of strategies like visual and individual timetables to structure pupils' days. In a few schools, staff did not pay sufficient attention to developing flexibility in pupils' thinking. Pupils were often removed from stressful situations rather than challenged to develop coping skills. A few pupils needed to be given better access to a broad curriculum.

#### *Secondary schools*

In mainstream secondary schools most pupils had appropriate access to a broad and relevant curriculum suitably individualised through pupils' IEPs. In a number of schools, increasingly flexible approaches were used to meet individual needs. For example, a number of schools made use of ASDAN awards and courses at Access level. Approaches to developing pupils' organisational skills and independence were variable. In a few schools, good use was made of individual timetabling to support the development of such skills. In others, classroom assistants supported pupils too closely. Pupils in units attached to secondary schools were not always able to achieve in the wider school curriculum, for example, missing out on a modern foreign language.

#### *Specialist provision and independent schools*

Most pupils in special schools and units followed a relevant curriculum suitably individualised to meet their ASD needs. A high priority was given to developing pupils' skills in communication and social interaction. Most schools made good use of sensory approaches to learning and to structuring pupils' days through various forms of individualised

timetables. In a few special schools, a concentration on communication and social skills was at the expense of broader curricular experiences.

In both independent schools visited, the curriculum offered a very positive focus on addressing pupils' ASD needs. A range of approaches were used to meet pupils' individual needs in relation to ASD and priority was given to addressing pupils' social and communication needs and the ability to transfer these skills within everyday situations. Positive and child-centred approaches were evident.

### **Approaches to inclusion**

Most schools provided a very positive focus on social inclusion and promoted an ethos of equality and fairness. In a few EAs the provision and support for pupils was proactive and allowed for good planning for transitions. Early decisions made in these authorities regarding provision and placement alleviated parental, pupil and staff stress. However, in a few EAs action plans for pupils with ASD were often developed reactively in response to sudden demands. Some pupils had been inappropriately placed within mainstream classes without appropriate support, and a few had been placed in specialist provision who would have had benefited from more mainstream contact.

In all education authorities there were generally good opportunities for pupils to have access to their mainstream peers. In a few education authorities and in both independent schools, access to lunchtime and after-school activities was good. In one authority, a well-planned project for pupils with ASD enabled them to meet their mainstream peers outwith the school. In almost all education authorities, respite and community and leisure resources for pupils with ASD were limited.

In a mainstream secondary school, a pupil with ASD was supported by a specific individualised programme in the community. This programme was managed by a principal teacher in the school and offered a very high level of support which successfully met the pupil's needs and helped to develop his communication skills.

### *Pre-schools*

Children in pre-school centres had good access to a mainstream peer group. Examples of shared placements worked well. In a few centres, children were supported to spend part of the week in a mainstream nursery and part in a specialist pre-school centre. In this way children had good access to mainstream settings and role models, but also had specific support for ASD.

### *Primary schools*

Pupils in primary schools benefited from very good access to peers and to a broad curriculum. Pupils in units attached to primary schools were well supported in transitions from lessons in mainstream classes to lessons in the unit. Transition arrangements from primary to secondary school were good, but initial planning for transitions could have taken place at an earlier stage.

### *Secondary schools*

Pupils with ASD in secondary schools had good access to peers and positive role models. In the best examples, pupils with ASD were well involved with mainstream peers in classes and in supervised lunchtime activities. However, inclusion was not without problems in secondary schools. Examples included:

- difficult social interactions between pupils with ASD and other pupils and reported bullying of pupils with ASD; and
- inadequate preparation of pupils with ASD for whole-school 'activity days'.

In a number of units attached to mainstream schools, specialist teachers and support staff provided subject teachers with useful information about the needs of individual pupils. This approach enabled pupils to be fully included in lessons. Schools did not regularly review the amount of support given to individual pupils to ensure a balanced approach to allowing pupils to develop independence.

In a mainstream secondary school, pupils who had peers with ASD in their class undertook a 'peer awareness' programme. This programme was delivered by professionals and parents who had children with ASD. It successfully raised awareness of the needs of pupils with ASD.

### *Specialist provision and independent schools*

Pupils in specialist provision and independent schools benefited from being in a safe and secure environment where they were very well supported. Staff in most special schools and units made very good use of the local community to develop a measure of social inclusion for pupils. Staff in most specialist provision for pupils at the secondary stages were developing opportunities for pupils to be included in broad curricular experiences. A few schools needed to put greater efforts into ensuring that pupils were included in the national qualifications framework and had opportunities for their learning to be fully accredited. Pupils in special and independent schools had too little access to a mainstream peer group or opportunities for senior pupils to undertake appropriate work experiences.

### **Recommendation 5**

*Schools should ensure that they maximise opportunities for pupils with autism spectrum disorders to be included socially and educationally with mainstream peers.*

### **Impact on parents and families**

Education authorities selected the parents who met inspectors. Parents were interviewed either as part of focus groups or individually or in groups within the school their children attended. Most parents who met with inspectors expressed good levels of satisfaction with the schools their children attended. A number of EAs had invited representatives of parents to participate in strategy groups to help develop policy. In a small number of authorities, individual parents contacted inspectors to indicate that they were very unhappy about provision for their children and particularly the ways in which the EA had dealt with decisions affecting their child. These parents felt excluded and marginalised. Even parents who expressed satisfaction with their child's current provision reported the occasional lack of planning and clarity about future provision for their child. They felt that support during the time of diagnosis needed to be better and the time taken by the EA to make decisions, especially about transitions from one

setting to another, should be shortened. Parents did not present a unified view of the type of provision which they felt was 'right' for their children. The most important issue for parents was for the school to meet their children's needs and fully involve parents in decision making. Another issue was the amount and quality of information about its range of provision that EAs provided parents.

Parents reported that they had had easy access to members of staff at school level for support and information. Most parents, irrespective of the type of provision their child attended, reported that there were good levels of communication between the school and home. Inspectors found numerous examples of very positive uses of home-school diaries and parental leaflets focused on ASD. A few EAs provided very helpful information for parents on authority procedures and useful contact names and organisations. Although parents were keen that their child received the correct support many were concerned about their child being 'labelled' by staff and pupils. This was a particular issue in mainstream schools.

A few education authorities invited parents to contribute to training conferences and course programmes. This gave staff very effective insights into family life and was a very powerful approach to staff development across all sectors.

#### *Pre-school*

Most parents of children in pre-school centres were satisfied with their children's placements and their own involvement with the centres they attended. They felt well informed about individual targets which centre staff had set for their children's development. They felt that on day-to-day matters they received good quality and regular information. In a small number of individual cases, parents expressed satisfaction that the EA had worked with them to provide an individual package of care and education that met the needs of their child and themselves. The main area of concern for parents of pre-school children in all EAs visited was the question of where their children would be placed

when they started school. Parents expressed concern that they had insufficient knowledge of school provision and felt that planning for transfer from pre-school to school did not start early enough. A few parents would have liked more specialised nursery placements.

#### *Primary schools*

Parents felt well involved in the annual review process. They felt that the range of formal and informal communication between themselves and their children's schools was good. They felt well supported by school staff. However, most reported that they did not always have a clear understanding of their children's general progress and were more aware of progress in relation to targets for ASD. Parents were pleased that their child was included in mainstream settings, but were concerned about the lack of knowledge they had about provision at secondary stages.

#### *Secondary schools*

Parents of children in secondary schools reported that on the whole they were well involved with their children's schools and the annual process. They reported very good contact with schools. However, some parents described a number of issues which had caused them to become less confident in the school's ability to meet their children's needs. One example was when the onus was on the parent to contact the school and point out potential areas of difficulty for their child.

Parents generally were pleased with their children's progress. A few felt that they could be making better academic progress. In a small number of schools, parents met regularly as a group and provided a network of support for each other. A few parents felt that support from other agencies was disjointed due to staffing problems. Although parents were satisfied with the work of the teaching and non-teaching staff who had regular contact with their child, a few felt that staff in some mainstream subject areas were not fully aware of their children's difficulties and needs in relation to ASD. Parents would have liked more information about training opportunities concerning ASD.

*Specialist provision and independent schools*

Parents felt fully involved in the annual review process. They were aware of their children's personal targets and felt involved in decision making regarding their children. Parents were pleased with the regular formal and informal communication between themselves and schools. They reported that staff were very supportive of them and their children. They felt that their children were well placed and were making good progress. Most parents whose children attended a specialist unit attached to a mainstream school were pleased that this afforded their children good opportunities to be included with their mainstream peers. An area of concern for a number of parents was the lack of input from therapy staff within the specialist setting. Parental expectations of what the two independent schools visited could achieve for their children were very high. They felt positively about the regular contact they had with the schools, although by geographical necessity this was more often by letter or telephone rather than face to face. They appreciated the well-organised review meetings which involved both care and education staff and felt that these gave them a rounded view of their children's progress. Parents felt that the schools were addressing ASD needs very well, but that they were less sure about their children's progress academically. Parents expressed concerns at high levels of staff turnover and, because of this, the ability of the school to provide consistency of approaches.

**Recommendation 6**

*Education authorities should ensure that parents receive full information about the provision they make for autism spectrum disorders. They should also ensure that parents are informed of the options available to them when their child transfers from stage to stage or school to school. Education authorities and schools should work closely with parents of children with autism spectrum disorders to plan for progression, particularly at times of transition. They should involve parents in relevant training events about autism spectrum disorders. Where appropriate, people with autism spectrum disorders could be invited to contribute to training programmes for parents and staff.*

## 9. HOW GOOD IS THE MANAGEMENT OF PROVISION FOR PUPILS WITH AUTISM SPECTRUM DISORDERS?

### Policy and planning

Analysis of the HMIE questionnaires sent to all EAs showed that just over 70% of authorities had carried out an audit of the numbers of pupils with ASD or maintained annually-updated figures. Several authorities were unable to quantify the numbers of pupils with ASD or the number who had been formally diagnosed. In some cases this was due to a lack of communication between education and health professionals. Other authorities considered it more important to identify each pupil's individual needs rather than arrive at a specific diagnosis of ASD. Responses from EAs revealed a gradual move away from diagnosing autism towards identifying a cluster of needs on the autism spectrum. Several authorities linked their policies for ASD to wider policies for addressing additional support needs, in line with the Education (Additional Support for Learning) (Scotland) Act. In these authorities, support and provision was informed by diagnosis but not dependent on it. Most provided a continuum of support to meet a wide range of needs. In five authorities, support was allocated on the basis of formal diagnosis only. Only around 50% of authorities had recently audited the numbers of children with ASD within each form of provision. Several authorities were in the process of doing so.

Policy development and planning were effective in only two out of the six education authorities inspected, and in one of the independent schools. The EA action plan for pupils with ASD was often only developed reactively in response to a sudden demand. Although appropriate multi-agency approaches to developing guidance and advice were in place at strategic levels, these were not always evident at operational levels. In a few EAs, collaborative practice was not yet well developed. Better joint working was needed when developing policies and planning for improvement for ASD. Most EAs needed to develop better planning with social work services.

Within one health authority, which serviced two education authorities, speech and language therapy services had set up an Autistic Forum chaired by a child health commissioner. This group influenced strategic planning across the health authority by feeding into children's services planning and looking at issues such as diagnostic teams and care pathways. This approach encouraged equity.

In one education authority, teachers in special schools worked with partners from health services to develop criteria for ASD-specific self-evaluation, which they intended to use to identify areas for improvement. By working together to identify key aspects for evaluation, they developed a shared understanding of the key issues in ASD.

A few EAs had developed very good specific guidance on ASD. However, the majority of education authorities did not give sufficient attention to specific guidance on ASD within their general policy on additional support needs. In a few education authorities, procedures to deal with challenging behaviours, including the reporting of incidents, were inconsistent. ASD was not reflected in service and school development planning. A few education authorities had made appropriate use of ASD-specific self-evaluation frameworks to evaluate provision within schools, but the use of this type of framework was not yet widespread.

### Staff confidence in working with pupils with ASD

Most teachers working directly with pupils with ASD felt they had a good or very good understanding of autism spectrum disorders. Specialist staff felt they were well trained and had relevant knowledge of ASD. They were aware of relevant strategies and approaches used to support individual pupils. However, some education authorities did not use the expertise of such staff

effectively to benefit and train others. The majority of teachers and non-teaching staff in mainstream schools did not have a sufficiently good working knowledge of ASD. In a few cases, some staff in mainstream schools demonstrated their lack of understanding of ASD by identifying pupils' difficulties as "bad behaviour" rather than a form of communication disorder. In almost all authorities, staff found the behaviour of pupils with ASD challenging.

Most support staff who worked directly with individual pupils felt that they had sufficient training and support to carry out their jobs effectively. However, in a few cases, support staff felt they were given too much overall responsibility for specific pupils, sometimes resulting in a pupil's over-reliance on one support assistant.

#### *Pre-school*

Staff in pre-school centres were well motivated and very positive about their work. They felt that they had good knowledge of ASD in relation to the children in their centres. They felt well supported by their colleagues and reported strong teamwork. A few would have liked more opportunities to learn about different approaches which could be used with pupils who have ASD.

#### *Primary schools*

Staff were highly motivated. Most staff within units attached to primary schools were very well qualified and had a good knowledge of ASD and individual pupils' needs. Teachers and support staff in mainstream primary classes had good knowledge of individual pupils in their classes, but felt that they required more training in ASD in general. In a number of centres staff had access to only a limited range of strategies to help pupils to develop appropriate behaviours. Staff felt that they needed to be better aware of behaviour support strategies.

#### *Secondary schools*

Staff working in units attached to mainstream secondary schools were very well qualified and knowledgeable. They felt well supported to carry out their work and believed that their training needs were well met by the EA and through the

well-developed teamwork in their establishments. Good practice in one EA involved all probationer teachers being provided with general training on ASD. However, some staff in secondary schools, more than in other settings, expressed concern that they were often left to develop their own strategies for individual pupils without having a strong enough knowledge of ASD. In none of the EAs visited, did staff in mainstream schools have appropriate levels of expertise in ASD. A few teachers reported that it was difficult to cope with the pressures of pupils' unpredictable behaviour. Support staff felt that too often subject teachers abdicated too much responsibility to them for supporting, and often teaching, individual pupils with ASD in mainstream classes.

#### *Specialist provision and independent schools*

Almost all teaching and non-teaching staff in specialist and independent provision were well trained and well qualified. Staff reported that they had a good range of opportunities for staff development and felt committed to their work. They had a good understanding of ASD and could choose from a range of strategies and approaches to meet individual pupils' needs. Most felt they had been given sufficient training to deal with pupils' behavioural needs, although in a few cases individual staff in specialist provision felt that the EA could do more to develop their skills in this area. Staff working in the two independent schools felt that teamwork was strong and that all members of the school community, including therapists and psychologists, shared information and supported each other. Overall, staff indicated that they needed more support in developing aspects of the curriculum.

#### **Training opportunities for staff and parents**

All but five of the authorities which completed the HMIE questionnaire provided some ASD-specific training for teaching and other staff who specialised in supporting pupils with ASD. All of the EAs visited for the purposes of this investigation provided good access to staff development for teachers. In the best, staff development in ASD was given a high



priority within the specialist sector and high levels of expertise were evident. Supporting pupils' challenging behaviour was a key focus. In a few education authorities, and within the independent schools, this expertise was used well to create a team of specialists who ably supported other staff, particularly in mainstream schools. Both the independent special schools visited had comprehensive approaches to training and staff development.

Most authorities provided training for non-teaching staff. The opportunities, however, varied across EAs. In most EAs, speech and language therapists and educational psychologists provided effective support and good staff development for staff working in specialist provision. Such support was not provided consistently for staff in mainstream schools. Support staff would have benefited from regular updates to their initial training.

In most education authorities and both independent schools, staff had access to specific ASD accredited courses. In many cases these were over-subscribed. Teachers from mainstream schools and support staff were generally under-represented on ASD training courses.

Several authorities offered inter-agency training. In some EAs teaching and support staff were trained together. Aspects of training in ASD were open to all staff in some authorities. Uptake of this training was increasing, much of it delivered through twilight and evening sessions. The numbers of staff receiving training, some of which had led to an accredited qualification in autism, had increased steadily over the last three sessions (see Table 10).

**Table 10: Numbers of staff trained to support children with ASD**

Year	2002/03	2003/04	2004/05
<b>Accredited training</b>	81	68	88
<b>Authority training (teachers)</b>	1866	2687	3752
<b>Authority training (support staff)</b>	670	855	1022

Staff training took a number of forms including:

- sponsoring teachers to pursue post-graduate certificate or diploma qualifications in inclusive practice containing an option module on ASD;
- sponsoring teachers to pursue post-graduate certificate or diploma qualifications in ASD;
- offering training courses which were specifically focused on ASD; and
- running modular Masters courses in additional support needs.

Staff training was delivered in a variety of ways by:

- authority ASD outreach teams;
- authority staff teams with expertise in ASD;
- professionals from other authorities; and
- independent organisations.

In one education authority, support staff had good opportunities for training through Professional Development Awards in supporting pupils' learning which were delivered in partnership with a local further education college.

In the majority of education authorities effective support networks were in place and were well used by specialist staff to meet collectively to exchange ideas and discuss issues. They valued this opportunity to provide a more consistent approach in schools and expressed the need for more frequent opportunities to network in this way.

Around 80% of EAs provided ASD-related training for parents. Many used the Early Bird<sup>29</sup> and Hanen materials with the latter being delivered by speech and language therapists. Local parent support groups were sometimes used to deliver this training and they also contributed to professional staff training. Some authorities also provided awareness raising sessions for parents in the PECS<sup>30</sup> and TEACCH systems, and on behaviour management. Training sessions were generally delivered by authority staff but external organisations were occasionally invited to contribute. In most cases,

<sup>29</sup> Early Bird materials: See Appendix 1: Glossary and Appendix 3: Literature Review.

<sup>30</sup> PECS: Picture Exchange Communication System. See Appendix 1 Glossary

uptake of ASD-related training by parents and sometimes extended family members, had been high. Parental workshops had been popular and were often over-subscribed. One authority was supporting parental study for the certificate in autism.

### Recommendation 7

*Education authorities should ensure that teaching and support staff have access to a programme of staff development relating to autism spectrum disorders. Continuing professional development at an appropriate level should be available to all staff in schools where there are pupils with autism spectrum disorders. Specialised training should be provided for teachers and non-teaching staff working directly with pupils with autism spectrum disorders. The Scottish Executive should work with training providers to ensure that a comprehensive and progressive programme is available.*

### Management of staff resources

All education authorities had structures which provided varying levels of support to staff in schools. Analysis of the HMIE questionnaire sent to all EAs revealed that around 40% of authorities had a key person within their centrally deployed staff who provided support to staff who taught pupils with ASD. In most other authorities, support for staff was provided by a range of personnel including educational psychologists, speech and language therapists, authority continuing professional development teams, outreach staff, quality improvement officers for additional support needs and other specialist teams. One authority had established a team to provide support specifically for those working with pupils with ASD needs. In addition to providing advice and support to schools and parents, the team contributed to strategic development and training in the authority. In other authorities, support was provided on a school cluster basis. In one case, each cluster had a teacher who provided enhanced support for pupils with additional support needs

including ASD. Support and development groups were occasionally led by educational psychologists.

Most schools visited managed resources for pupils with ASD effectively. In all secondary schools, a principal teacher of support for learning coordinated support for pupils with ASD. High levels of teamwork were evident across all sectors.

One authority had a range of provision which effectively supported the individual learning needs of pupils with autism spectrum disorders. The provision in the authority ranged from placement in mainstream schools with support from outreach teachers to split placements between a mainstream and a specialist unit and full time placement within a specialist unit.

In almost all education authorities, additional staff were deployed effectively to support individual pupils within a mainstream setting and, if necessary, in specialist settings, particularly in crisis situations. However, in most education authorities, the support for pupils with ASD in a mainstream setting was dependent on classroom assistants. In many cases, the assistant had the main responsibility for the pupil rather than the class teacher.

### Approaches to inter-agency working

There was a clear commitment to inter-agency working. It was recognised that where inter-agency partnerships were strong they brought benefits for pupils and staff. A range of education and health professionals including speech and language therapists were well placed to provide important support to schools, parents and pupils. Their experience and knowledge regarding ASD was reflected in the practice within a number of schools. However, in a few cases, particularly within mainstream secondary schools, the input from speech and language therapists was variable and at times had been reduced, due to staffing levels. Almost all authorities had shortages of speech and language therapists. Inter-agency working was more of an intention rather than a reality in a number of schools. In a few, the only inter-agency working took place at annual reviews.

In one authority, mainstream staff who had pupils with ASD in their classes, attended a series of workshops on ASD run by the psychological service. These workshops improved the staff's knowledge of ASD and created a support network for them. As a result they were better equipped to meet the needs of pupils with ASD.

In almost all education authorities, the social work department was not involved early enough with families affected by ASD and was often only involved at a crisis stage. This was frequently put down to shortages of social workers.

Overall, schools ensured that pupils with ASD had access to a range of therapy staff, including very good input by music and art therapists in most specialist provisions and in a few mainstream schools.

#### *Pre-school*

In pre-school centres, children's annual reviews were generally well attended by the various agencies. In addition, in a few centres staff collaborated effectively with EA teams and made good use of identified key workers. Most centres had an appropriate level of input from psychological services. The involvement of speech and language therapists was, at best, sporadic in a number of centres. A few centres had no therapist input.

#### *Primary schools*

In primary schools, annual reviews were generally well attended by the various agencies. ASD support teams provided additional support and valuable outreach to a number of primary schools. Input from psychological services was strong in most schools. In a few cases effective collaboration between agencies provided good support to individual families. Some schools did not receive a direct allocation of time from speech and language therapists.

#### *Secondary schools*

In secondary schools, annual reviews were generally well attended by the various agencies. In a small number of schools, therapy staff were involved effectively with parents. ASD support teams provided additional support and valuable outreach to a number of secondary schools. Input from psychological services was strong in most schools. In a few schools, inter-agency planning was in response to crisis situations rather than proactive. Input from speech and language therapists was extremely limited in a number of schools and some had no direct input from social work services.

#### *Specialist provision and independent schools*

Special schools and units had generally good multi-agency attendance at annual reviews. ASD support teams provided additional support and valuable outreach to a number of special schools. In most, the input from psychological services was strong. While most special schools had an appropriate allocation of speech and language therapy services a few had no ongoing regular input from therapy staff.

The independent schools in the sample had good multi-agency attendance at annual reviews. They had strong and regular input from speech and language therapists and psychological services. Input from the careers service was variable.

### **Recommendation 8**

*Education authorities and agencies should work together to develop plans, share strategies and commit resources to ensure that pupils with autism spectrum disorders receive appropriate support in line with their needs. Plans should be regularly evaluated and reviewed and openly shared with parents.*

# 10. HOW GOOD IS THE LEADERSHIP OF PROVISION FOR PUPILS WITH AUTISM SPECTRUM DISORDERS?

## Leadership

Most education authorities were able to articulate a clear vision for the development of provision and services for pupils with ASD in line with the principles and duties outlined in the Education (Additional Support for Learning) (Scotland) Act. All authorities had a strong desire to continue to improve services and to ensure that any gaps in provision were filled. A number of EAs were working successfully with partner agencies to develop provision in 'localities' or 'neighbourhoods'.

Not all EAs had successfully managed to ensure that their vision for the future was understood, or indeed known by, parents and school staff. Strategic plans for ASD were often stated generally within broader developments for additional support needs. While it is important to anchor ASD policy and strategy to the legislation, EAs should also ensure that strategies for ASD are made clear to all relevant stakeholders.

Most education authorities provided good leadership and direction for staff. Most had a clear vision to improve services and provide effective support for pupils with ASD. They demonstrated positive commitment to provide high quality education within a mainstream setting for pupils with ASD. A few EAs provided appropriate documentation which clearly set out the strategy for ASD.

Most senior managers in education authorities worked well with a range of agencies to provide a coordinated approach to ASD. However, almost all education authorities and independent schools, were insufficiently proactive in developing quality assurance procedures to evaluate practice for pupils with ASD.

One authority showed proactive leadership in meeting the needs of pupils with ASD by using the information derived from authority-wide evaluations and advice from an Autism Strategy Group in planning for future provision.

In the best practice in schools, headteachers had a clear knowledge and understanding of ASD and had taken opportunities to ensure their own knowledge remained up-to-date. Those headteachers who actively fulfilled their responsibility for ASD across the school were successful in ensuring that all staff had an appropriate understanding of ASD and were able to meet pupils' needs effectively. In most schools, integrated provision offered good opportunities for pupils to be taught in class groups or individually as required and provided them with access to mainstream peer and social opportunities.

In one primary school, which had a unit for pupils with ASD, the headteacher provided support, direction and guidelines through monitoring procedures and open flexible leadership.

# 11. SUMMARY OF RECOMMENDATIONS

## **Recommendation 1:**

*Education authorities should ensure that they hold complete information on the numbers of pupils with autism spectrum disorders for whose education they are responsible to ensure that they develop a coherent strategy for meeting a range of needs. This information should include details of provision for these pupils. Allocation of support and resources should not be restricted to those pupils with a medical diagnosis of autism spectrum disorders.*

## **Recommendation 2:**

*Education authorities should ensure that they have a suitably varied range of provision to meet the wide and varying needs of pupils with autism spectrum disorders. They should publish details of their provision for autism spectrum disorders, including planned future developments.*

## **Recommendation 3:**

*Education authorities should ensure that schools prepare clear and effective individualised educational programmes for all pupils with autism spectrum disorders and use them as planning tools to meet the specific and broader learning needs of individual pupils. They should ensure that schools also use individualised educational programmes to track pupils' progress towards meeting their potential. The Scottish Executive, education authorities and other agencies should work together to coordinate support for pupils with autism spectrum disorder, where there is a need. Education authorities should work with health boards to develop clear procedures for early identification of children with autism spectrum disorders.*

## **Recommendation 4:**

*Schools should ensure that pupils with autism spectrum disorders are given appropriate opportunities to gain an understanding of the social world they live in and to develop life skills which they can use outside school. Pupils should be given full opportunities to identify and develop their personal strengths.*

## **Recommendation 5:**

*Schools should ensure that they maximise opportunities for pupils with autism spectrum disorders to be included socially and educationally with mainstream peers.*

## **Recommendation 6:**

*Education authorities should ensure that parents receive full information about the provision they make for autism spectrum disorders. They should also ensure that parents are informed of the options available to them when their child transfers from stage to stage or school to school. Education authorities and schools should work closely with parents of children with autism spectrum disorders to plan for progression, particularly at times of transition. They should involve parents in relevant training events about autism spectrum disorders. Where appropriate, people with autism spectrum disorders could be invited to contribute to training programmes for parents and staff.*

## **Recommendation 7:**

*Education authorities should ensure that teaching and support staff have access to a programme of staff development relating to autism spectrum disorders. Continuing professional development at an appropriate level should be available to all staff in schools where there are pupils with autism spectrum disorders. Specialised training should be provided for teachers and non-teaching staff working directly with pupils with autism spectrum disorders. The Scottish Executive should work with training providers to ensure that a comprehensive and progressive programme is available.*

## **Recommendation 8:**

*Education authorities and agencies should work together to develop plans, share strategies and commit resources to ensure that pupils with autism spectrum disorders receive appropriate support in line with their needs. Plans should be regularly evaluated and reviewed and openly shared with parents.*

# APPENDIX 1: GLOSSARY

## 1. Additional support

Provision which is additional to, or otherwise different from, the education made generally available by an education authority for children and young people of the same age in schools (other than special schools) under the management of the education authority.

## 2. Applied behaviour analysis

An approach for changing behaviour that involves the systematic application of a set of principles derived from psychological theories of learning.

## 3. Asperger syndrome

A disorder that affects the way a person communicates and relates to others. A number of traits of ASD are common to Asperger syndrome including:

- difficulty in communicating
- difficulty in social relationships
- a lack of imagination and creative play.

However, children, young people and adults with Asperger syndrome usually have fewer problems with language than those with ASD, often speaking fluently though their words can sometimes sound formal or stilted. Children, young people and adults with Asperger syndrome also do not have the accompanying learning disabilities often associated with ASD; in fact, children, young people and adults with Asperger syndrome are often of average or above average intelligence.

## 4. Attention deficit disorder

Deficit in the ability to sustain attention.

## 5. Attention deficit hyperactivity disorder

A developmental disorder of early childhood causing problems with attention, activity levels and impulsivity.

## 6. Autism

A lifelong developmental disability that affects the way a person communicates and relates to people around them. The ability to develop friendships is impaired, as is their capacity to understand other people's feelings. All people with autism have impairments in social interactions, social communication and imagination. This is referred to as the 'triad of impairments'. "Autism is a severe disorder of communication, socialisation and flexibility in thinking and behaviour, which involves a different way of processing information and of seeing the world." Jordan, 1999)

## 7. Autism spectrum disorders

Autism spectrum disorders (ASD) are typically characterised by a 'triad of impairments'. The following description of the triad has been adapted from Jordan R.(1997):

- **Social-Impaired:** deviant and delayed or atypical social development, especially interpersonal development. The variation may be from 'autistic aloofness' to 'active but odd' characteristics.
- **Language and communication-Impaired:** deviant language and communication, verbal and non-verbal. Deviant semantic and pragmatic aspects of language.
- **Thought and behaviour-Rigidity:** Rigidity of thought and behaviour and impoverished social imagination. Ritualistic behaviour, reliance on routines, extreme delay or absence of 'pretend play'.

All of the above behaviours should be out of keeping with the individual's chronological age. Individual manifestations vary with the individual's degree of intelligence, individual personality and presence of additional disorders. In addition, changes in the way the disorder presents itself occur with age, especially in the more able individuals. Many children, young people and adults with ASD also have an over-sensitivity to sound, smells, touch, taste and visual stimulation.

## 8. Behaviour disorders

Disorders characterised by persistent and repetitive patterns of behaviour that violate societal norms or rules or that seriously impair a person's function.

## 9. Behaviour therapy

Scientifically-based approach to modifying and shaping behaviour by identifying the triggers and reinforcements of specific behaviours.

## 10. Behavioural techniques

Psychotherapeutic approaches which use classical conditioning and operant learning techniques in an attempt to eliminate or modify problem behaviour, addressing the person's overt behaviour rather than their thoughts, feelings, or other cognitive processes.

## 11. Challenging behaviour

Behaviour of such intensity, frequency or duration that the physical safety of the person or others is likely to be placed in serious jeopardy. Behaviour which is likely to seriously limit or deny access to, or use of, ordinary community facilities, or impair a child's personal growth, development and family life.

## 12. Coordinator

Person responsible for ensuring, so far as is possible, that the services required to deliver the additional support identified in the coordinated support plan are in place for the child or young person and for taking action to secure services when necessary.

## 13. Coordinated support plan

A statutory strategic planning document to coordinate the provision of services for those children and young people who meet the criteria, to help them work towards their long-term educational objectives.

## 14. Cognitive behavioural therapy

A technique for the treatment of mental disorder that is based on the concept that how people perceive the world and themselves influences their behaviour and emotions.

## 15. Communication disorders

Impaired ability to communicate usually due to speech, language or hearing disorders.

## 16. Compulsions

Stereotyped behaviours that are repeated again and again. They are not inherently enjoyable, nor do they result in the completion of inherently useful tasks.

## 17. Developmental delay

An abnormal, slower rate of development in which a child demonstrates a functioning level below that observed in most children of the same age.

## 18. Developmental disabilities

Generic term relating to all children and adults with a substantial continuing disability originating in childhood.

## 19. Diagnosis

The skill of distinguishing one disorder from another. The opinion arrived at as to the nature of a disease.

## 20. Dysphasia

Difficulty in understanding language and in self-expression.

## 21. Dyspraxia

Impairment or immaturity of the organisation of movement with associated problems of language, perception and thought.

## 22. Early Bird

A three month parental programme, which involves weekly group training sessions and home visits to help parents understand about ASD and support parents in developing communication and managing behaviour.

## 23. Echolalia

The repetition or echoing of verbal utterances made by another person.

**24. Elective mutism**

Condition in which children talk in one situation, for example, at home, but remain silent elsewhere, for example, at school.

**25. Facilitated communication**

Approach to assist people with no speech or with dysfunctional speech to find alternative means of communication. The facilitator normally supports a client's hand, wrist or arm while that person uses a communicator to spell out words, phrases or sentences.

**26. Functional analysis**

Careful observation of a previously defined behaviour in a previously defined environment to understand the relationship between the behaviour and the environment.

*Dictionary of mental handicap*, M Lindsey

**27. Gaze**

A gaze is a fixed look. It is used in social behaviour as part of the visual checking occurring during interpersonal interactions and usually involves looking at another person's face. Gaze aversion or abnormal eye contact have been reported in individuals with ASD since Kanner's original paper in 1943.

**28. Hanen parent programme**

A training programme for caregivers of children who have early language delay. The Hanen Centre in Toronto, Canada, first developed these family-focused, early language interventions to empower direct caregivers with the knowledge and experience they need to help children develop language use. They include interactive, experiential group sessions for caregivers (there are separate programmes for parents and early childhood teachers) using videotape analysis, group discussions, and simulated practice activities, in combination with individual consultation through videotaping and feedback sessions.

**29. Hyperactivity**

A pattern of behaviour in children who have problems concentrating and who are always overactive.

**30. Imitation**

Mimicking to learn a model's behaviour or responses

**31. Individualised educational programme**

Written document which outlines the steps to be taken to help children and young people who have additional support needs to achieve specified learning outcomes.

**32. Language disorders**

Disorders, usually due to cognitive or neurological dysfunction, resulting in problems in symbolisation or in delays in language and speech development.

**33. Language skills**

The use of language for communicative competence. The ability to use language as a tool to aid interaction within society, via communication with individuals and groups.

**34. Lovaas method**

Intensive, behaviourally-based or training approach to working with young children with ASD, based on the theories of Ivar Lovaas at the University of California, Los Angeles.

**35. Nonverbal communication**

Communication through use of facial expression, posture, gesture and body movement.

**36. Obsessions**

Ideas, images or impulses which enter a person's mind again and again in stereotyped form. They are almost invariably distressing.



**37. PECS**

The Picture Exchange Communication System (PECS) is an augmented alternative communication system designed to teach functional communication to children with limited speech, using a system of cards that illustrate objects, concepts, and activities.

**38. Personal Learning Planning**

Process by which children, young people and parents are involved in discussions with the school about the goals of learning, including those for personal development. Its focus is on supporting dialogue and ultimately about engaging children and young people in their own learning.

**39. Repetitive behaviour**

Abnormally intense preoccupation with one subject or activity; distress over change; insistence on routines or rituals with no purpose; repetitive movements, such as hand flapping.

**40. Social stories**

Use of a short story form to inform a child about a social skill or social meaning.

**41. Stereotypy**

A behavioural condition characterised by a lack of variation in patterns of thought, motion and speech; by repetition of said patterns; or both.

**42. Son-Rise**

A treatment program for autism, autism spectrum disorders and other disabilities related to communication and interaction. The program was developed by Barry Neil Kaufman and his wife Samahria Lyte Kaufman in the late 1960s and early 1970s, while working with their own son who was diagnosed with autism as a toddler.

**43. TEACCH**

Treatment and Education of Autistic and related Communication Handicapped Children is a whole-life approach to helping children and adults with ASD, developed by Eric Schopler in North Carolina. The principles and concepts of the TEACCH system are improved adaptation; parent collaboration; assessment for individualised treatment; structured teaching; skill enhancement; cognitive and behaviour therapy and generalist training.

**44. Theory of mind**

A philosophical concept of the understanding one has that another person has an individual perspective on states of affairs, that this consciousness depends in part on information which they may have which is not available to oneself and vice versa.

**45. Triad of impairments**

Impairments affecting social interaction, social communication and imagination which are essential features of an autism spectrum disorder.

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## APPENDIX 3: LITERATURE REVIEW

The literature review commissioned for this report by HMIE is available on the HMIE website:

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