Public health

The need for and the role of a coordinator in child health surveillance/promotion

In an important sense, the clinical consultation is the primary activity of medicine, and its autonomy should be the basic principle around which the health service is organised.¹

In the case of the individual consultation initiated by the patient, it is relatively clear where the doctor's responsibilities lie in terms of providing a quality service and how this is organised. However, when a consultation is initiated by one or more of the health care team, as part of a nationally prescribed screening programme involving a number of professionals, there is an issue of who takes ultimate responsibility for the quality and delivery of the preventive programme as a whole.

The UN Convention on the Rights of the Child places a clear responsibility on the state to provide access to preventive care, such as maternal and infant health clinics and immunisation (Article 24). The UK has a long history of setting up successful maternal and infant welfare programmes from the turn of the last century,² involving doctors and health visitors with a specific role in this field. The child health surveillance/health promotion programme in the UK is one such nationally prescribed programme developed from professional consensus.

The integration of doctors previously employed by the local authority as medical officers of health working in child health clinics and schools into the NHS structure in 1974 started the move towards a clearer integration of preventive and curative services. With the 1990 NHS Act, the preschool child health surveillance programme for children became an integral part of the general practitioner (GP) contract with the school health programme being maintained by medical officers and school nurses. Pre 1974, there was a strong tradition of child public health, often headed up at district level by a principal medical officer. One of the roles of that individual was to provide an annual report on the state of the children's health in that locality and to take an "overview" of child health in that population, usually making recommendations for action to the next level up of the health service management. Who is providing that overview in the twenty first century?

It could be argued that the vacuum now left in the area of child public health is being filled by paediatricians, senior nurse managers, and public health physicians. The coordination of preventive programmes has been described in *Working together for tomorrow's children* as one of the key interface tasks for paediatricians involved in child public health.³

This task of coordinating the different elements of the child health screening programmes as laid out in the national reports by Hall⁴ and Polnay⁵ is assumed by paediatricians, usually consultant community paediatricians in over 80% of districts in the UK. This article explores some of the issues relevant to paediatricians and others who are nominated as child health surveillance coordinators for their health authorities.

What is the recommended child health surveillance (CHS) programme in the UK?

At the time of writing, the programme is being reviewed by a joint Royal College of Paediatrics and Child Health national working group chaired by Dr David Elliman, convenor of the British Association of Community Child Health. Table 1 describes the different elements of the current UK policy at the recommended ages as recommended by the last national working group. This programme encompasses components of screening, immunisation, monitoring and oversight, individual health education/health promotion, and population based health promotion. The various constituents are based on the best evidence to date. Who does what formally is very much a local decision and has not been prescribed. Many individuals are involved informally—parents, teachers, children, and young people. In order to coordinate the programme so that it can be effectively delivered and monitored, a number of functions need to be considered.

The district CHS group and its functions

Many stakeholders are involved in child health surveillance and it is advisable to create a multidisciplinary steering group to reflect this. The definition of the duties, the appointments of the individuals responsible for these coordinating functions should be a joint undertaking of the commissioning and purchasing authorities and the provider units. The responsibilities of the group and individuals should be clearly defined so that the questions or concerns about any service or programme can be directed promptly to one person.

The suggested membership of the district wide CHS steering group should include a community paediatrician, a public health clinician with special responsibility for children, preventive care group lead, health visitor professional lead, child protection lead, school nurse professional lead, hospital paediatrician, health promotion specialist, administration/information technology lead for health community, parent representative Community Health Council (CHC). The chairperson of this group is known as the district child health surveillance programme coordinator. The six functions of the steering group are detailed below.

- (1) TO SHARE OWNERSHIP OF THE PROGRAMME AND TO DEVELOP AGREED WRITTEN AIMS, OBJECTIVES, REFERRAL GUIDELINES, ADMINISTRATIVE PROCESSES, AND TRAINING STANDARDS

This should be encapsulated in a district wide policy document available to all those who require it. Clear referral guidelines need to be produced by a variety of secondary care providers—paediatric general and orthopaedic surgeons, cardiologists, audiologists, psychologists, and psychiatrists—to ensure that those in primary care know what to do once a screen is positive or a case is suspected. It would be advisable for guidelines to be produced for referrals *within* primary care teams, for example, between health visitors and GPs, receptionists, practice nurses for problems such as feeding difficulties, immunisation queries, developmental concerns. This

Table 1 Summary of recommended UK child health programme

Age	Review and screening procedures	Immunisation	Health promotion
Newborn	<p><i>Review:</i> Family history Pregnancy Birth</p> <p><i>Full physical examination including:</i> Weight Heart and pulses Hips Birth marks Testes Head circumference plotted Eyes (exclude cataracts and squint) Guthrie test after 6 days (PKU, hypothyroidism) Sickle cell (if indicated)</p> <p><i>Consider:</i> Risk factors for hearing loss Refer to <i>Can your baby hear you?</i> in PHCHR</p> <p>If high risk then refer for otoacoustic emission, brainstem auditory evoked response</p>	BCG (high risk) Hep B (if mother is a carrier)	<p>Cot death prevention Feeding technique Nutrition Baby care Crying Sleep Car safety Family planning Passive smoking Dangers of shaking baby Sibling management</p>
10–14 days	<p>Guided by results and review of neonatal check</p> <p>Assess and establish levels of support and assistance required Review sickle cell and thalassaemia test (if appropriate)</p>	<p>Review BCG and Hep B status</p> <p>Introduce to immunisation programme and obtain informed consent</p>	<p>Nutrition Breast feeding Passive smoking Accident prevention: bathing, scalding and fires Explanation of tests and results Encouraging parents to request results of all tests Significance of prolonged jaundice Depression, coping and help (parents/carers)</p>
6–8 weeks	<p><i>Review:</i> Parental concerns, e.g. vision, hearing, activity Risk factors including significant family history</p> <p><i>Full examination including:</i> Weight Head circumference Length Centile plotting Hip check Testes Eyes: red reflex, squint, movement, tone and general development Heart and pulses Report Guthrie results back to parents</p>	1st DT Pert Hib/Pol Meningococcal C	<p>Immunisation Nutrition and dangers of early weaning Accidents: fires, falls, overheating, scalds Refer parent to <i>Can your baby hear you?</i> in PHCHR Recognition of illness in babies and what to do Fever management Crying Sleeping position Passive smoking Review of car safety Depression (parents/carers)</p>
2–4 months	Parental concerns	2nd and 3rd DT Pert Hib/Pol Meningococcal C	<p>Weighing as appropriate Maintain previous health promotion Promotion of language and social development Refer parent to <i>Can your baby hear you?</i> in PHCHR Deter future use of baby walkers</p>
6–9 months	<p>Hip check Distraction hearing test (catch up for missed neonatal screen, infants moving in) Discussion of developmental progress, asking specifically about vision, hearing and language development Check weight and head circumference as required or if parental concern Observe behaviour and look for squints</p>		<p>Parental concerns Nutrition</p> <p>Refer parent to <i>Can your baby hear you?</i> in PHCHR</p> <p>Accident prevention: fires, choking, scalding, burns, gate guard etc Review of transport in cars Dental care Play and development needs</p>
13 months		MMR	
18–24 months	<p>Parental concerns, behaviour, vision and hearing Observe gait</p> <p>Emphasise value of comprehension and social communication in relation to speech development (speech and language screening tests) Measure height and plot</p>	Review immunisation status	<p><i>Safety:</i> Accident prevention: falls from heights, drowning, poisoning, road safety <i>Development:</i> Language and play Management and behavioural issues Promote positive parenting Toilet training Diet, nutrition, prevention of iron deficiency</p>
39–42 months	<p>Enquiry and discussion of vision, squint, hearing, behaviour, language acquisition, development—referral as necessary Education needs and choices Notification of any special educational needs and choices Measure height and plot Check testicular descent has been recorded, if not examine Where concerns re: hearing impairment, perform test (e.g. McCormick toy discrimination test)</p>	<p>Check immunisation status</p> <p>DT/polio (preschool booster) 2nd MMR</p>	<p><i>Safety:</i> Accident prevention: burns, road safety, drowning, poisoning, falls from heights <i>Development:</i> Language and play socialisation</p> <p>Management of behaviour issues School readiness Nutrition/diet Dental care Toilet training</p>

Table 1 continued

Age	Review and screening procedures	Immunisation	Health promotion
5 years school entrant	Review preschool record including a check for record of testicular and heart examination School entrant review—parent and school nurse Establish teachers/parental concerns Height (plot and compare with previous measurements), weight and hearing sweep Visual acuity (Snellen) Observation of gait and fine motor skills	Review of immunisation status	Obtain consent for planned programme and health checks Access to school health School health surveillance programme Sleep Friendships/settling at school Accident prevention, road safety, stranger danger Dentist, dietician Management of medicines at school Care in the sun
Year 3 7–8 years	Teacher concerns Review of records Height, weight, vision General health check Issues raised by child		Accident prevention, road safety, safety at play, stranger danger Friendships Exercise, nutrition and dental care Care in the sun
Year 7 11–12 years	Visual acuity Colour vision General health check Issues raised by young person Support for individual programmes of care		Accident prevention Relationships Exercise/nutrition Smoking Dental care Management of medication in school Puberty/sexual health Care in the sun
Year 8 12–13 years		Heaf Test BCG	
Year 10 14–15 years	General health check including height, weight, vision where concerns Issues raised by young person	Td/polio booster	Substance abuse—alcohol, smoking, drugs, solvents Diet/exercise Testicular self examination, promotion of cervical cytology Sexual health Promotion of general practitioner well woman/man check Information about health services, e.g. Teenage clinics Health shop Dental health Careers Stress management
Year 11 15–16 years	Self referral—issues raised by students	Information to school leavers on need for immunisations as adult catch up immunisation	Self referral—issues raised by students

would help strengthen a recognition of each other's expertise in this setting. It is useful to have intelligence outside the group nationally and internationally to ascertain the most up to date evidence base and ensure that the policy and referral guidelines are updated accordingly.

There is a need to protect children from avoidable harm and the health authority and providers from litigation. The emergence of clinical and corporate governance has highlighted the importance of training in ensuring delivery of high quality services which should minimise harm. Standards need to be set in this area and staff regularly updated. This is an area for future development with staff being expected to attain different levels of competencies depending on their role in the system. This could form the basis of a local certificate in child health surveillance which would be required by all staff involved in this activity. Training in CHS might also contribute to the National Vocational Qualification (NVQ) scheme. It is also important that day nursery and social worker training and orientation is arranged so that there is a familiarity with the main components of the child health surveillance programme. This is of particular relevance in the light of moves to improve the health status of "looked after" children. GPs working in areas with a high prevalence of child abuse and neglect may benefit from a more focused and local training approach.⁶

(2) TO DEVELOP QUALITY STANDARDS FOR PROVISION OF CHS IN PRIMARY CARE AND SCHOOL AND METHODS FOR MONITORING THESE

Table 2 is an example of such standards (preschool) set by an interprofessional group of GPs, health visitors, and

community paediatricians. Methods of monitoring include coverage and timeliness of individual screening reviews via parent held record returns and validation with clinical notes, practice visits to discuss equipment, administrative and management processes, and feedback of performance and parent questionnaire.⁷ In view of the rarity of conditions being screened for, periodic detailed review of critical adverse incidents is a useful method of audit to ascertain lessons for future action.⁸

Critical incidents can also be used for teaching—an examination of local data on "late" diagnosed hip developmental dysplasia indicated the presence of early physical signs which were ignored, and reiterated the need to hone physical examination skills and more importantly to act on the findings. An examination of referrals made from child health surveillance reviews in the first 18 months has shown a high false positive rate for a number of key conditions.⁹ Regular review of referral guidelines and developing more accurate screening tools could prevent unnecessary parental anxiety and hospital appointments.

(3) TO ENSURE EQUITABLE DELIVERY OF THE PROGRAMME AND THAT "HARD TO REACH" CHILDREN AND THOSE LOOKED AFTER ARE NOT MISSED BY THE UNIVERSAL PROGRAMME
There are a number of vulnerable groups of children—travellers, asylum seekers, those looked after by the local authority—who are at risk of not being provided with the mainstream package of preventive care. An "enhanced" service is required to reach these children, often using the expertise of health visitors and school nurses.^{10–12} Targeting health visitor resources and improving access to preventive

Table 2 Suggested model for quality standards and outcome measures for child health surveillance

STRUCTURE*Waiting room/clinic area*

- Suitable temperature of the room (comfortable for child in vest)
- Adequate seating
- Generally clean room
- Someone to welcome parents
- Toys in waiting area
- Notice board on child health issues
- Pram park (lockable) or space for prams in waiting room
- Appropriate child health records available
- Full set of standard growth charts available (boys/girls/weight/height/head circumference)
- Relevant child health leaflets freely available
- Baby weighing scales (electronic)
- Scales suitable for weighing a child
- Provision for private discussion with a parent
- Provision for breast feeding in private
- Child toilet seat/potty in toilets

Examination room

- Toys available
- Suitable temperature for child in vest
- Measuring mat (standard)
- Appropriate height measure
- Tape measure
- Equipment for developmental assessment, e.g. crayons/paper/cubes

Safety

- Electrical, e.g. plug covers, wires
- Furniture, e.g. no sharp corners at head height, radiators, stacked chairs
- Fire exits/stair safety, e.g. open stairs, low windows
- Toys/play material, e.g. broken toys
- Clinical equipment, e.g. sharps bins, scissors out of reach of children

Other comments

- Staff should be suitably trained
- If vaccines kept for immunisations:
 - fridge thermometers (max/min) present
 - fridge temperature checked daily
- Provision of interpreters where necessary

PROCESS

- When a parent and child attend a baby clinic:
 - They should be made welcome
 - There should be opportunity for the parent to ask questions
 - Weights should be recorded in the appropriate records and explained
 - Time should be spent with the parent, questions answered/explanations/reassurance given
 - Possibility of discussion in a private room should be offered
 - Appropriate follow up arrangements should be made

Baby clinics should have:

- An appointment system allowing parents to attend with and without an appointment
- A doctor and health visitor available to be seen by parents

At each child health surveillance review:

- Parental concerns should be discussed
- Physical assessment of the child should be made
- Assessment of developmental progress should be made
- Weight and, if appropriate, height and head circumference should be measured accurately and compared with standard centile charts
- Health education issues should be discussed
- Immunisations should be reviewed
- Results should be recorded in the personal child health record
- Appropriate follow up arrangements should be made
- There should be a call up system
- There should be a recall system for non-attenders

Other comments

- There should be liaison between doctors and health visitors
- Child health surveillance should be seen as a continuous process and not a system of checks at specific ages
- In this health authority (HA), the programme of child health surveillance reviews that is followed should be consistent with the HA preschool child health surveillance policy and the HA personal child health record

OUTCOME

- Parent satisfaction
 - Parents will feel able to discuss their concerns:
 - with their health visitor
 - with their doctor
 - Parents will feel welcome at the baby clinic
 - Parents should have the results of any assessment explained to them so that they can understand

Uptake and timeliness of child health surveillance reviews (preschool targets)

- All babies should have neonatal examination during first 48 hours of life
- 90% of 10–14 day reviews should be done by 4 weeks
- 90% of 6–8 week reviews should be done by 12 weeks
- 90% of 6–9 month reviews should be done by 10 months
- 90% of 18–24 month review should be done by 28 months
- 90% of 3 year reviews should be done by 3 years 9 months

Immunisation rates

- 95% of children should be fully immunised by 2 years

Adapted from Blair ME, Hampshire A, Crown N, *et al.* *An audit of preschool child health surveillance in Nottingham 1993–6. Final report.* London: Department of Health, 1997.

services for those living in disadvantaged circumstances can help to reduce health inequalities.^{13 14}

(4) TO INTRODUCE AND COORDINATE NEW PROGRAMMES AND ALTERATIONS TO EXISTING PROGRAMME

As technology advances, there is a need to re-evaluate the relevance of the existing programme and consider the cost benefit aspects of new screening tools, for example, tandem mass spectroscopy,¹⁵ and programmable otoacoustic emissions for neonatal hearing screening.¹⁶ Alongside this is the consideration of how best to manage change in the way individuals work with appropriate explication, training, and monitoring of the proposed programme modifications.

(5) ESTABLISH, DEVELOP, AND MAINTAIN INFORMATION SYSTEMS

This is an essential aspect of monitoring the programme as above. The coordinator has to develop a close link with child health and hospital information systems managers in order to exploit the potential they give for monitoring and audit.⁸ The NHS number will soon be issued from birth which will enable tracking of infants in the first few weeks of life. This may help improve the monitoring of the neonatal biochemical screening programme—a process which has been found deficient.¹⁷

An accurate integrated district special conditions register will allow for retrospective audits to be completed on children with cerebral palsy, significant sensory impairment, and those with long standing illness, and facilitate screening programme enhancement.¹⁸

The “overview” function which was discussed earlier will be made possible with the adoption of an interagency “child health core data set”.¹⁹ This has the potential for forming the basis of an annual report for health authority, providers, and voluntary organisations, informing future service development and monitoring health improvement programmes for children.²⁰ Most of the systems above are for the benefit of health providers. ChildServe is a preventive programme set up by Paul Dworkin in Connecticut, USA and allows access for both children and families to a computerised inventory of services and programmes to promote development.²¹

(6) TO FACILITATE CONSULTATION WITH PARENTS, CHILDREN, AND VOLUNTARY GROUPS IN THE PLANNING AND IMPLEMENTATION OF THE PROGRAMME

Parents are often the first to suspect a problem in their child's health and development. Well produced parent information can support early detection of an impairment, help prevent accidents, and promote immunisation uptake.²² Parent information leaflets and guidance are produced for the parent held record and for distribution in health centres and hospitals. It is important to keep these up to date with changes in the national programme and relevant for the local population's needs. Feedback from parent and voluntary groups needs to be actively sought by the steering group to ensure parentally relevant outcomes

such as “reassurance of normality”, “privacy for breast feeding”, and “safe pram parking” are built into the programme monitoring cycle.²³

Summary and conclusions

A programme of preventive and clinical care involves many people, often from different agencies and organisations. The goals have to be clear along with individual and corporate responsibilities. The role of the child health surveillance coordinator is to bring these elements together to ensure provision of an up to date, evidence based, acceptable, and effective programme.

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