NHS Stoke on Trent Clinical Commissioning Group

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University Hospital of North Staffordshire NHS NHS Trust

NHS North Staffordshire Clinical Commissioning Group

Evaluation Report

Up-skilling Primary Care Nurses in the Clinical Management

of

Children With Acute Health Problems

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Contents

EVALUATION REPORT

Upskilling Primary Care Nurses in the clinical management of children with acute health problems: meeting the needs of children in practice

1. EXECUTIVE SUMMARY

Upskilling nurses who work in primary care in the clinical management of children with acute health problems is the second part of an initiative to ensure that clinicians in primary care meet the needs of children in Stoke-on-Trent and North Staffordshire. The first part of the initiative focused on Upskilling GPs, and was evaluated in April 2011. This report evaluates the nursing element of the initiative, including the nurse Master-classes which were held during June and July 2011.

The Upskilling initiative began in October 2010, when NE A PBC Cluster, Stoke, developed a business case on behalf of the Children, Young People's and Maternity commissioning programme group to invest in Up-skilling GPs and Nurses. The business case was extended to include GP consortia and commissioners from North Staffordshire.

The overall aims of the business case were that GPs and nurses are more competent and confident in the clinical management of children with acute health problems; and to reverse the year on year rise in inappropriate referrals to the Paediatric Assessment Unit (PAU) by primary care clinicians, and that GPs make fewer unnecessary referrals to outpatients

Needs assessment data collected in preparation for the business case identified that the numbers of children admitted to paediatric wards in University Hospital North Staffordshire (UHNS) with acute health problems is about twice the admission rate of other hospitals in similar communities. It also identified the top ten conditions where children referred into hospital by a GP were discharged within four hours without active clinical intervention.

Partners in Paediatrics (PiP), a partnership of organisations concerned to improve the quality and accessibility of services for children, was commissioned to project manage the delivery process for the Up-skilling GPs and Nurses business case.

Initially GPs and Nurses were invited to self rate their competence in relation to the care of children's and young people's health & wellbeing versus core competences; identify learning and service needs. For GPs this took the form of a pre-course self assessment reflection questionnaire based on ten scenarios; for Nurses, pre-course assessment of competence and confidence was assessed at two focus groups.

A paediatric pre-referral trial guidelines document for GPs was produced from a range of authoritative national and local sources, including paediatric consultants and GPs across Stoke and North Staffordshire. Paediatric urgent care referral guidelines have also been developed and both sets of guidelines have been made available to clinicians in primary care.

Six Master-classes run by paediatric consultants were held over a four week period in February and March 2011, aimed at GPs, to increase their competence and confidence in managing acute paediatric conditions. Within the GP target group a total of 114 (40%) GPs, 13 Nurse Practitioners and 9 Community Nurses took part in the Master-classes.

Four further Master-classes were held in June and July 2011 run by the same paediatric consultants, that were aimed at nurses, to increase nurse competence and confidence in managing acute paediatric conditions. Of the 109 participants, 79 came from a range of community nursing disciplines, there were 11 GPs and 19 other participants who came from other clinical backgrounds including student doctors, clinical educators and community midwives.

An evaluation report of the GP Upskilling initiative in Stoke and North Staffordshire was completed in April 2011 by Partners in Paediatrics. This second evaluation report, Up-skilling Primary Care Nurses is separate from, but complementary to, the original report which can be found on NHS Stoke and Partner in Paediatrics websites.

1.1. Evaluation

The Upskilling initiative in Stoke and North Staffordshire to support nurses in the clinical management of children with acute health problems has been assessed by the participants as an excellent resource for nurses to up-skill and update. A higher percentage of nurse participants than GPs found the different elements of the initiative either extremely useful or very useful.

The original Business Case was well developed and had the support of primary care, secondary care and commissioners; with strong leadership from the GP and nurse lead, which ensured that the project aims were addressed in a timely and thorough way. There was continuing direction for the nursing element of the Upskilling initiative from the nurse lead and ongoing commitment from the paediatric consultants at University Hospital North Staffordshire who delivered the Master-classes. Clinical involvement throughout, brought a high degree of clinical rigour to all parts of the initiative.

There was a good level of audit, preparation and pre-work undertaken in the planning and development of both parts of the initiative over many months, which ensured that all involved were receptive to the upskilling process. Consultants were willing to become engaged in the broader programme, providing advice and support for all elements from the outset. This ensured consistency, and knowledge of what would be required from trainers in delivering both sets of Master-classes. Participants were also primed about management of children with acute health problems through pre-reading, focus groups and preparation work prior to the Master-classes.

The pre-course assessment of competence and confidence of nurse practitioners and practice nurses in the clinical management of children with acute health problems was assessed through two focus groups, rather than the completion of self assessment questionnaires which were completed by some GPs. The pre-course focus groups provided a rapid assessment of the current levels of skills and competence in the nursing workforce, consequently the four nurse Master-classes offered a wider range of topics than those offered to GP to take account of the comments made by nurses in the focus groups.

The overall response from nurses to the Upskilling programme was very positive. Like the responses to the earlier GP programme, nurse participants reported that the Master-classes and supporting material provided a superb resource for up-skilling. The speakers were excellent, as were the handouts. Participants welcomed the wide range of practical tips for managing conditions in the community and many rated the explanation of the NICE and locally developed urgent care guidelines particularly highly. It was good for nurses to meet local consultants in a

learning environment, with the opportunity for group discussion and the chance to ask about concerns in practice.

This report does not evaluate the impact on referrals to secondary care. This will be a separate piece of work to be conducted 6 months on in October 2011. It will take a retrospective appraisal of referral behaviours at a GP practice level, to see to see if there is a reduction in admissions by condition and if there are reductions in admissions and outpatient referrals, differentiating the effects of the Upskilling programme and Hospital at Home scheme.

1.2. Recommendations

1. There should be an ongoing up-skilling programme for GPs and for nurses in the clinical management of children with acute health problems, including master-classes.

2. Tangible outcomes of the strategic effectiveness of the up-skilling GPs initiative are assessed against the objectives set out in the business case e.g. the evaluation of the effectiveness of the master-classes against the number of inappropriate or avoidable referrals and unplanned admissions into hospital.

3. The funding model needs to be kept under review in order to optimize the sustainability of the GP and nurse upskilling programme.

4. A standard format is developed for future Master-classes, with no more than three concurrent sessions, covering fewer topics and running for a three hour period.

5. Literature and handouts provided at Master-classes could be designed in such a way that they enable participants to cascade the learning points to members of their own practice/team.

6. Consideration is given to jointly producing a Paediatric Bulletin between secondary and primary care which provides regular up-dates on service developments, current best practice, top tips and issues of the moment.

7. Localities should be encouraged to consider opportunities to improve parent and carer education, including regular review of all information given to parents to ensure consistency across the Localities and ensure current best practice is being followed.

8. A review of advice and support programmes to mothers on breast feeding, nutrition and weaning is undertaken to ensure a standard evidence based approach to breast feeding, nutrition and weaning is delivered across NHS organisations in Stoke-on-Trent and North Staffordshire in a consistent way.

9. Circulate the unplanned/acute admission guidelines to all GPs/CCG localities supported by clinical leads for unplanned care

10. Share our learning and development approach in the upskilling of GPs and primary care nurses with others across the NHS. Make the materials available to anyone working in or for the NHS on the PIP website and GPCC portfolio with a hyperlink from the PCT website.

2. BUSINESS CASE

2.1. Introduction

In October 2010, NE A PBC Cluster, Stoke, developed a business case on behalf of the Children, Young People's and Maternity commissioning programme group to invest in upskilling GPs; this was widened to include North Staffordshire PCT.

The overall aims were that GPs and Nurses are more competent and confident in the clinical management of children with acute health problems; and to reverse the year on year rise in inappropriate referrals to the Paediatric Assessment Unit (PAU) by primary care clinicians.

2.2. Business Case Objectives

- Retain delivery of acute clinical care of children and young people within general practice/primary care settings by competent clinicians avoiding unnecessary admission to hospital and practitioners in tier 4 health settings.
- delivery of a range of clinical care of children and young people within the general practice setting by competent clinicians, avoiding unnecessary referral to practitioners in tiers 3 and 4 healthcare settings; i.e. GPs make fewer unnecessary referrals to outpatients (both first and follow up)
- Reduce costs, improve the utilisation of practice budgets and develop practice expertise in management of expenditure on secondary care.
- Improve the patient experience and in particular provide services closer to patient homes

The sequence of the initiative was to:

- Establish a clinical oversight steering group
- Work with the PCDU and Partners in Paediatrics (PIP) to adopt the classifications of core and enhanced competence of general practitioners in relation to provision of paediatric care;
- Agree protocols of best practice for clinical management for GP pre-referral, work up guidelines in relation to children & young people – as outpatients, and for acute unplanned admissions to hospital;
- Organise process by which GPs (and practice nurses if they wish) and doctors working in GP OOH services, self rate their competence in relation to the care of children's and young people's health & wellbeing versus core competences; identify learning & service needs;
- Review access and capacity for providing consultations for children/young people with acute illness, at short notice – in general practice/GP OOH settings;
- Agree training & development strategy based on learning needs and any planned service changes; upskill GPs accordingly –
    - (i) all GPs participating to match core competence and,
    - (ii) volunteer GPs to match enhanced competence; applying the quality standards described in the protocols adhering to an agreed clinical governance framework that describes professional accountability;

- Comparing referral data and hospital admissions from a previous period for these specific interventions with a prospective six month period after upskilling completed

The Business Case was approved by key representatives of the Children, Young People and Maternity Commissioning Programme Group and NE A PBC cluster steering group, that led on the commissioning of children's/young people's services before being taken over by the NHS Stoke on Trent Clinical Commissioning Group (CCG). It was discussed and supported at the Clinician to Clinician Specialty Group convened by UHNS, NHS Stoke on Trent and NHS North Staffordshire (October 2010).

2.3. Needs Assessment

Assessment data collected by both Stoke and North Staffordshire PCTs in preparation for the joint Business Case identified that the numbers of children admitted to paediatric wards in the UHNS with acute health problems is about twice the admission rate of other hospitals in similar communities; of those admitted about 50% are discharged within a day without further interventions that could not have been carried out in their own homes. The GP OOH service admits about 10% of children seen, which compares well with OOH services in other areas where paediatric hospital admission rates are higher.

The NHS Institute for Innovation and Improvement has identified 19 conditions that are amenable to provision in primary and community care settings as opposed to secondary care, and where productivity gains are possible from service redesign; of these, four conditions are relevant to paediatric admissions: ENT infections, Gastroenteritis, Asthma/Wheezing and Convulsions.

The Business Case identified the need to reverse the year on year rise in referrals to the Paediatric Assessment Unit (PAU) by primary care clinicians. In 2009/10 there were approximately 5,500 paediatric admissions (average 25 per day). 62% of these were children referred by a GP in or out of hours and of these, 60-70% were discharged within 4 hours after assessment or short stay observation – without active clinical intervention. LOS at 2 days or less is common. Many of these children are given open access for 24-48 hours as a safety net for parental anxiety and for professional security. (*See Figure 1*).

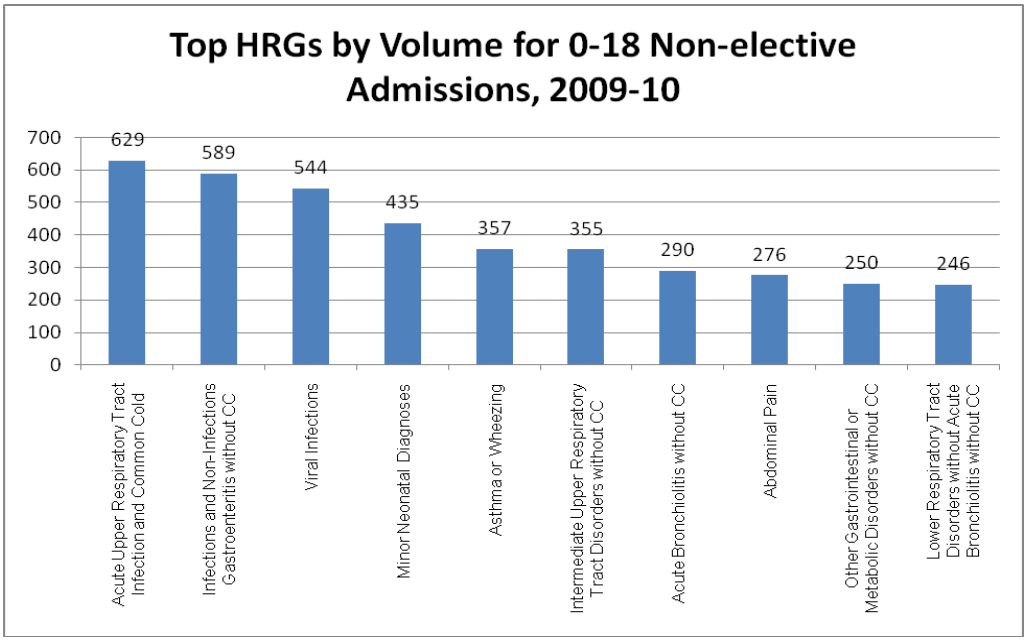

Figure 1: Causes for non-elective admissions in 0-18 year olds registered with

The most common age range constituting these admissions is children aged 1-3 years with numbers reducing by age thereafter. The rate of admissions over the week remain constant Monday to Friday with significantly fewer being referred on a Saturday but increased numbers from Sunday. Slight seasonal variation exists with the winter months having higher numbers of referrals. Thus there seems great potential for managing more ill but stable child patients in general practice or GP OOH services.

Upskilling GPs and confirming good access for parents/carers and children should help to retain care of ill but stable children in general practice; and should retain the care of children/young people with acute illness in primary care & their own homes so long as it is safe to do so and where children are only cared for in hospital if the care they require cannot be delivered in their home.

2.4. Hospital at Home

A parallel Business Case was also approved in October 2010 across Stoke and North Staffordshire for extending the Hospital at Home nursing service to accept direct referrals of ill but stable children from GPs in surgeries or OOHs between 8am - 10pm seven days per week, rather than admit them to hospital when first assessed in general practice, if appropriate. It was expected that usual GP care would provide continuity for the acutely ill child with subsequent admission to hospital if the patient's condition worsened with or without telephone advice from a paediatrician linked to the urgent care pathway for paediatrics. The Hospital at Home initiative started in February 2011.

2.5. Partners in Paediatrics

Partners in Paediatrics (PiP) was initiated in 1998, in response to paediatricians' shared sense of concern about current and future provision of children's services. PiP is a partnership of organisations concerned to improve the quality and accessibility of services for children across the area served the by the participating organisations. It aims to encourage and develop collaborative approaches to the delivery, commissioning and improvement of children's services. To this end, PiP works with children's organisations and professionals, and with children, young people and their families to:

- Develop high quality clinical guidelines and pathways of care
- Facilitate the development of clinical networks
- Work with, and inform commissioners on the improvement of services
- Provide educational fora and undertake training & research
- Promote and share good practice.

PiP was commissioned to project manage the delivery process for the Upskilling GPs business case, by working with the Steering Group, commissioning leads and others in NE A PBC cluster to:

1. Establish a clinical oversight group
2. Develop referral and acute referral guidelines (revising established guidelines – pre-referral and acute substantively)
3. Identify expert authors and peer review group
4. Create competence self rating assessment questionnaire to identify learning and service needs of GPs and practice nurses. In the case of nurses this through focus groups.
5. Evolve clinical audit or structured reflection template to evidence/ measure application of learning
6. Develop and run Master-classes for GPs and Nurses January - July 2011
7. Create alternative educational and reference resources eg online primary care paediatric guidelines
8. Collate secondary care usage data with Health Intelligence Unit to measure impact of learning/upskilling in terms of change in referral behaviour by October 2011
9. Development of Primary Care paediatric competency framework

3. DELIVERY OF THE BUSINESS CASE

3.1. Paediatric Pre-Referral Guidelines

In February 2011 the paediatric referral guidelines document was produced from an amalgamation of the PBC GP referral guidelines, information available from the Map of Medicine, occasional other sources such as NICE and the Fit for the Future paediatric pathways. Where there was conflicting advice, Map of Medicine and NICE have been given precedence. The Guidelines have been developed by Drs Alistair Pullan and Ruth Chambers; then further revised and finalised in line with comments and suggestions from a range of paediatric consultants and GPs across Stoke and North Staffordshire. The Guidelines are to assist GPs in their decisions as whether or not to refer to outpatients, and in their pre referral work up of children and young people and can be found on the PCT website.

3.2. Paediatric Urgent Care Referral Guidelines

The Paediatric Urgent Care Referral Guidelines have been developed by a number of local GPs and paediatric consultants using NICE guidelines, Map of Medicine, Fit for the Future paediatric pathways and urgent care referral guidelines from other areas; they have been further revised and finalised in line with comments and suggestions from a range of paediatric consultants and GPs across Stoke and North Staffordshire.

Completed guidelines include clinical assessment tools for:

- Babies/children under 2 years with suspected bronchiolitis
- Febrile child 0-5 years
- Suspected gastro-enteritis 0-12 years
- Acute abdominal pain under 12 years

See Appendix 2 for Paediatric Urgent Care Referral Guidelines (June 2011)

3.3. GP Pre-course Competence Assessment

GPs, nurses, and doctors working in GP OOH services, were invited to self rate their competence and confidence in relation to the care of children's and young people's health & wellbeing versus core competences, and identify learning and service needs.

In the case of GPs, this took the form of a reflective challenge. The reflective challenge exercise, including relevant scenarios, had been developed by the lead GP and business manager, and then shared with consultant paediatricians for comment. GPs were asked to consider ten scenarios relating to different babies and children; then asked to self rate themselves in relation to how confident they were to manage each child, and to know whether the child should be referred to outpatients or admitted to hospital. The only person who was asked to judge the responses was the GP him or herself.

Then they were asked to complete one reflective review of a recent case where a child registered in their practice was referred to outpatients or admitted to hospital. GPs were asked to assess, in retrospect, whether there was anything they, or others in the practice (or

Out of Hours) could have done for the child at a previous consultation, that could have prevented their deterioration or have meant that the practice team managed the health problem without the need for referral.

The purpose of the exercise was to ask GPs to reflect whether they were as competent and confident as they should be when managing children's acute and every day health problems; especially when the diagnosis is not certain and/or it is not clear whether the child needs admission to hospital or outpatient referral.

They were also asked to summarise their learning needs for each of the ten scenarios and complete at least one review of an outpatient referral or hospital admission and send in the completed documents for analysis. In doing so, GPs were able to claim one hour of funded time.

3.4. Nurse Pre-Course Competence Assessment

The pre-course assessment of competence and confidence of nurse practitioners and practice nurses in the clinical management of children with acute health problems was assessed through two focus groups, rather than the completion of self assessment questionnaires.

3.4.1. Nurse Focus Group 1

Up skilling in Paediatrics – Everyday Illness Tuesday 25th January 2011 3-5 pm.

Kellie Johnson, Primary Care Nurse Lead, Dr Alistair Pullan, GP Furlong Medical Centre and seven nurses were present, including two nurse prescribers and one nurse practitioner.

All nurses present work in general practice with varying levels of experience. They mainly came into contact with children through:

- Immunisation
- Travel arrangements
- Asthma
- General walk in patients – "anything"

Possible presentations included:

- Flu like symptoms
- Pyrexia
- Cuts, grazes, stings, minor burns
- Minor illness, viral illness
- ENT
- Rashes
- Hay fever
- Constipation
- Feeding issues
- Weight management
- Dressings
- Suture removal
- Head injury
- Smoking cessation
- Alcohol intervention (age dependent)

What the nurses would like to see in the master classes included:

- Red flags
- Weight management

- Acute illness – top tips approach and when to refer
- Gastroenteritis
- Minor ailments
- Skin
- ENT
- Referral – who to contact?
- Pyrexia and information post immunisations
- Paediatric life support
- Distraction therapy
- Child consent and children's rights
- CAMHS team input

It was noted that nurses are sometimes in surgery when there is no GP cover. Not all nurses have any formalised paediatric training post qualifying. Nurses reported that they work within their level of competency based on their background experience.

Question raised were whether:

(i) there needs to be standardisation of the practice nurse and nurse practitioner role in relation to paediatric assessment?

(ii) all practice nurses looking after children should have access to paediatric training courses?

3.4.2. Nurse Focus Group 2

Up skilling in Paediatrics – Urgent Care Thursday 27 January 7 p.m. – 9 p.m.

A second focus group was held with Nurse Practitioners and OOHs nurses to discuss the Up-skilling of GPs and Nurses project currently taking place in Stoke and North Staffordshire. Dr Alistair Pullan, Kellie Johnson, and Jenny Hawkes were also in attendance. The various elements of the project were described and the Master-classes discussed.

Nurse practitioners and OOHs nurses identified training, which they felt could enhance their competence and confidence in managing children's acute health problems as follows:

- Fever management/febrile child
- Wheezy child
- Rashes and skin problems
- Abdominal pain
- Constipation
- Distraction techniques
- Communication
- Parent Education
- APLS

A consistent approach to clinical assessment, training methods and materials/equipment re managing children's acute health problems should be adopted across all practices, walk in centres, OOHs, minor injuries units, and with all groups of nurses who see a large percentages of children, this should include health visitors and school nurses. There should also be consistency with acute nursing paediatric care in hospital - both in-patient and out-patient. There should also be clear governance in practice across Stoke and North Staffs in relation to children's care.

Whilst all nurses have regular training and updating in safeguarding matters some nurses have had little experience or training relating to managing children's health problems. Many practice nurses see very few children in the course of their work and the Up-skilling approach might be

more relevant to those nurses who see higher numbers of children. It was suggested that the Up-skilling training could be cascaded from the nurses who have received the training to those nurses who have little involvement with child health.

All present felt that Health Visitors should have a greater input into clinical assessment, and that their knowledge of the family and locality is very important. GPs would prefer to have HVs attached to GP practices as they can help GPs with diagnosis. It was reported that Moorlands/Cheadle Practice now have GP attached HVs again. It was also reported that Melissa Hubbard is already undertaking Master-classes for some practices.

Parent support and education is hugely important and there should be a greater degree of consistency in the verbal and written information given to parents. The nurses felt that is important to liaise with pharmacists who are managing minor illnesses in children and giving out condition specific information. The group described a range of information leaflets that they give to parents, some GPs have paper leaflets on various conditions from various sources, some have electronic information leaflets that they download and give to parents when needed. The OOHs service has a range of standardised verbal information which they give to parents. Wolstanton Medical Centre has produced a general leaflet on childhood illness. UHNS also have a range of leaflets that they give out. Some of the leaflets need updating and proof reading. The group felt that it would be good to get some consistency about the content so that the same messages are being given to parents. There was also some discussion about the use of technology, such as mobile phones, to give out information.

The group were asked if there was anything more they thought nurses could do in managing children's acute and everyday health problems. This is their list:

- Asthma from 8+ (Recognise symptoms, develop standardised personal asthma plans)
- Audiometry - hearing tests
- Spirometry training
- More minor stuff
- Education of parents and carers
- New parents classes on managing minor illness
- Removal of sutures
- Burns and dressings

OOHs nurses use a triage assessment phone system when undertaking telephone triage. However, nurses perceived that there appears to be limited complementary training, assessment and recording systems for OOHs call handlers who take calls directly from the public.

3.4.3.Evaluation

The rapid assessment process used in the focus groups and the subsequent analysis provided timely feedback, with relevant information both on training needs and on the current level of competence and confidence in primary care nurses who are assessing and managing children in the community.

Primary Care Nurse Lead Comment

"For me the nurse focus groups provided key information. I initially was not aware that nurses without formalised paediatric training were caring so autonomously for children or that resources being shared with parents were so varied."

Additional comments on nurse Up-skilling and input to clinical management of children with acute health problems and involvement of parents/carers were made by a consultant paediatrician.

"I think we should consider a model where the practice nurses form the core of the skill set for managing basic paediatric asthma care with input from general practitioners and hospital specialists as the care level steps up. I would therefore weight the Up-skilling process with this in mind.

I also think that we should consider education and involvement of parents and families and perhaps school nurses and health visitors in the process. We need them to understand how proactive management (reducing exposure to environmental tobacco smoke etc) could reduce the likelihood of repeated acute deterioration. I know this is a tall order but we need to figure out how to get the families and children to take an active part in managing their condition"

4. MASTER-CLASSES

4.1.The Master-classes

Six Master-classes for GPs and four Master-classes for nurses delivered by paediatric consultants were held over a four week period to:

- Increase GPs' and Nurses' ability in managing acute (primary care) paediatric conditions
- Increase GPs' and Nurses' confidence that they have managed the condition in such a way as to provide robust defence against any future mishap or unpredicted deterioration in child's condition (avoiding 'defensive medicine' admissions to hospital)
- Increase the ability of the GP/nurse to inspire confidence in patient/carer that the child's condition is being safely and effectively managed, minimising inappropriate seeking of second opinion at A&E
- to re-establish clinical dialogue between primary and secondary care which appears to have disappeared over the past few years
- to introduce participants to the Hospital at Home scheme via a short presentation

Initially the first series of Master-classes were intended for GPs as Nurse Master-classes were to be run later in the year, but because of the interest expressed, a number of primary care nurses also attended the GP Master-classes. Topics included the top ten conditions identified in the needs assessment, usually three or four main topics were presented concurrently over a two and a half hour period.

138 total participants attended the six GP Master-classes including: 116 GPs, (40% of target group), 13 Nurse Practitioners and 9 Community Nurses.

Similarly, although the second series of four Master-classes were intended primarily for nurses, a number of GPs who had been unable to attend the first series attended the Nurse Master-classes. Topics included the top ten conditions identified above, but the range was extended to include topics identified in the nurse focus groups such as rashes, allergies, red flags and safety netting.

109 total participants attended the four Nurse Master-classes including: 79 Nurses, 11 GPs and 19 others. The breakdown between the two PCT was: 59 participants from Stoke PCT and 48 from North Staffs. PCT, 2 were not employed by PCTs

Attendance at Nurse Master-Classes

Nurse Practitioners	Practice Nurses	Health Visitors	School Nurses	GPs	*Other
17	28	24	10	11	19

*Other category included: telephone triage nurses, student doctors, nurse and clinical educators and community midwives

The Master-classes were facilitated by Drs Yuvaraj Venugopal, Vasudevan Asuri, the Primary Care Nurse Lead and the PiP consultant, with topic areas presented by paediatric consultants from University Hospital North Staffordshire.

Topics included:

- Respiratory problems in children
- Failure to thrive
- Gastroenteritis
- Abdominal pain/constipation
- NICE Guidelines
- Rashes
- Allergies
- Mixture of presentations

Each Master-class included two brief plenary sessions: setting out the purpose of the Up-skilling initiative, an update on the Hospital at Home pilot at the beginning, with an evaluation session at the end. Participants were split into groups for the individual sessions within the Master-classes and the topic specific presentations were run concurrently, with groups moving around accordingly, group sizes varied from 7 to 12. Some participants who had not been able to attend previous GP or Nurse Master-classes also attended.

The format of each Master-class was informal with participants encouraged to ask question throughout; within some topic areas they were asked what they wanted to know and which issues they wanted to cover. It was made clear that the consultants were not there to teach, rather to discuss jointly how to manage risk and accepting that everyone has different views, including parents.

Each Master-class was scheduled to take 2½ hours with either three or four concurrent sessions running. Where there were three sessions taking place, each session tended to run for 40 minutes; where there were four concurrent sessions taking place, each session had to be shortened to 30 minutes.

4.2. Evaluation of Master-classes

At the end of each Master-class, participants were asked to rate the individual sessions and overall organisation by means of tick boxes and written comments. Participants were asked write down what they found useful, what other upskilling they would like, and give evidence of how any learning from the sessions would be applied.

In total, 88.48% of participants responding found the overall content of the Master-classes either extremely useful or very useful. However, there were a significant number of nurses who did not want to rate consultant colleagues. A detailed analysis of the evaluation responses can be found at Appendix 1.

Participant's Responses ***(Total: 106 participants)***						
Topic	**Extremely useful**	**Very useful**	**Useful**	**A bit useful**	**Not useful**	**No response**
1 Gastro	68	26	6	0	0	6
2 Failure to thrive	41	8	4	1	0	52
3 Febrile illness/fits	68	23	13	0	0	2
4 Respiratory	65	14	4	0	0	23
5 ENT	36	7	4	0	0	59
6 Allergies	43	12	10	3	0	38
7 Rashes	46	13	8	2	0	37
8 Hospital at Home	62	21	15	2	0	6

% Participant's Responses ***(Total: 106 participants)***						
Topic	**Extremely useful**	**Very useful**	**Useful**	**A bit useful**	**Not useful**	**No response**
1 Gastro	64%	25%	6%	0%	0%	6%
2 Failure to thrive	39%	8%	4%	1%	0%	49%
3 Febrile illness/fits	64%	22%	12%	0%	0%	2%
4 Respiratory	61%	13%	4%	0%	0%	22%
5 ENT	34%	7%	4%	0.%	0%	56%
6 Allergies	41%	11%	9%	3%	0%	36%

7 Rashes	43%	12%	8%	2%	0%	35%
8 Hospital at Home	58%	20%	14%	2%	0%	6%

4.3. Summary of the Evaluation Responses

Participants reported that the entire series of Master-classes were very informative. The speakers were excellent; and the content and delivery was very relevant to day-to-day practice. Some GPs and nurses who attended the earlier Master-classes came to subsequent Master-classes to pick up on sessions that they had missed or simply to listen again to the discussions.

The sessions were delivered in small informal groups which encouraged discussion and questions. Participants found the relaxed atmosphere and interactive format helpful to learning. It was good for primary care clinicians to meet local consultants and have the opportunity to see each other face to face.

The Master-classes covered a relevant selection of important everyday topics, which included the most common conditions. A wide range of learning points was identified by both GP and Nurse participants.

Key learning points included:

- Application of NICE/local urgent care guidelines
- Management and treatment of specific conditions
- Treatment pathways and highlighting of key presenting features
- Difference between allergy and intolerance
- Protocols e.g. rehydration protocol (use of flat "Coke" no longer in vogue)
- When and when not to refer
- Risk Assessment
- Red flags
- Management conditions and treatment in the community
- How to educate and reassure parents
- Practical tips such as use of nasal aspiration, use of pulse oximeter monitors for babies and children in practices
- Update of local services available such as hospital at home, constipation clinic

Key topics identified for future Up-skilling events:

- Regular up-skilling and refresher courses
- Regular updates on new services, medications and guidelines
- Psychiatry and adolescent metal health
- Diabetes
- Common paediatric orthopaedic problems

Key improvements to the Master-classes:

- Need longer running time for each Master-class and individual sessions x 44
- Repetition of this type of Master-class format at least annually
- Later start time in the evening e.g. after 6.30 p.m.
- Earlier start time for afternoon session e.g. 1.30 p.m.
- More time for questions
- Some sessions felt rushed when four topics were included in the Masterclass
- Stop moving about and hold all lectures in one room
- Fewer topics but greater depth

Full details of comments made and the learning points can be found in Appendix 1.

4.4. Consultant Feedback

The consultants leading the Master-classes reported that there was the same excellent level of engagement, with nurses as in the earlier series with GPs. Participants showed great interest and asked appropriate questions. Questions and concerns in practice were raised and it was useful for everyone to have an open discussion. Like the participants, consultants felt that this process will be more effective if it is repeated at regular intervals.

There may be a need to address the different learning needs of GPs and Nurses, with GPs needing more confidence in diagnostic and management planning, whilst Nurses (unless trained in assessment) need to be able to implement management plans.

Some common themes in group discussions from all the Master-classes related to:

- How to retain the clinical management of a sick child in the community who is seen in practice in the early evening, at OOHs, or on a Friday? The imminent start-up of the Hospital at Home Service was seen as an opportunity for nurses to provide short term assessment, treatment, and give reassurance to parents and GPs.
- How to address parental anxiety. There were a number of questions in several sessions that related to working with parents to convince them that observation at home was the best choice. Some GPs and Nurses feel pressurised by the family to refer to secondary care
- Advice on up-dates in treatments, techniques and latest guidelines

Some consultants reported that there was a difference in the level of training and advice required by different groups of nurses. Some nurses, such as school nurses, do not undertake assessment, diagnosis and treatment to the same extent as others e.g. nurse practitioners; and their training needs are different.

As with the first series of Masterclasses, consultants felt that the subsequent series had been well received and should make a difference by increasing Nurses confidence. Both series of Master-classes should allow dialogue and relationships to build between primary and secondary clinicians, this has to be the foundation on which integrated care can be built. It was felt that there will be more use of the Hospital at Home service. In some specialties, however, more training will be required and a longer time may be needed to build up and maintain GPs and nurses confidence.

Whilst some of the consultants liked the way the Master-class sessions were run concurrently with each session lasting approximately half an hour covering several topics, others felt that it

would have been better to run one topic for the entire Master-class for a longer time period and a larger class *e.g.* at least 45 minutes for 15 people.

Service developments following on from the Master-classes could include a joint project between primary and secondary care to work out specific integrated pathways which could be more effective than a generic programme.

As for the future, the Master-classes were viewed as just the beginning and that there is a willingness from all sides to get involved.

4.5. Primary Care Nurse Lead Feedback

The master classes have enabled nurses to understand the business case and local trends behind the training and meet professionals who are working together to improve patient/parent experiences and care.
The master classes have also facilitated the networking of nurses from the wider multidisciplinary team which has created enlightening discussion and encouraged standardisation of training that will effect consistent messages given to parents.

The practical nature of the content with top tip advice has been highly praised with many requests for an ongoing training programme.

The format for individual sessions was not the same for each Master-class, sometimes there were three concurrent sessions, sometimes there were four. There was a variation of content too, depending on speaker availability, with a wider range of topics covered than in the GP Master-classes. When there were four concurrent sessions running, the individual sessions felt rushed and there was little time for questions.

It is recommended that a standard format is developed for future Master-classes, with no more than three concurrent sessions, covering fewer topics and running for a three hour period.

5. CONCLUSION and RECOMMENDATIONS

5.1. Conclusion

The initiative in Stoke and North Staffordshire to Up-skill GPs and Nurses in the clinical management of children with acute health problems has been assessed as highly successful, more worthwhile than initially anticipated and has resulted in a wide range of spin offs. A high percentage of participants found the different elements of the initiative either extremely useful or very useful.

The Business Case was well developed and had the support of primary care, secondary care and commissioners. There was strong drive and commitment from the GP and nurse lead, the PCT programme manager for Acute Children's services and supporting senior managers, which ensured that the project aims were addressed in a timely and thorough way. There was widespread input from individual senior GPs, nurse leads and from the paediatric consultants at University Hospital North Staffordshire.

There was a high level of audit, preparation and work undertaken in the planning and development of the initiative over a six month period, which ensured that all involved were receptive to the up-skilling process. Consultants were willing to become engaged in the broader programme, providing advice and support for elements from the outset, e.g. preparation of the scenarios and guidelines. This ensured consistency, and knowledge of what would be required from trainers in delivering the Master-classes.

Participants were also primed about management of children with acute health problems through pre-reading and preparation work prior to the Master-classes e.g. self assessment questionnaires and Nurse focus group meetings.

The project was managed by Partners in Paediatrics through a small steering group, meeting monthly over six months. Clinical matters were addressed by a separate clinical oversight group which met twice over the period of the project. Both sets of meetings were well attended and clinical involvement brought a high degree of clinical rigour to the development of the overall initiative, the Master-classes, guidelines, course handouts and literature.

The Upskilling Master-classes for Nurses in primary care were very well received and attended, the attitude was positive and there was a willingness to exchange ideas. There were some differing views raised by a very small number of participants about breast feeding and nutrition advice, which were discussed with the consultants delivering the sessions.

Recommendations

1. There should be an ongoing up-skilling programme for GPs and for nurses in the clinical management of children with acute health problems, including master-classes.

2. Tangible outcomes of the strategic effectiveness of the up-skilling GPs initiative are assessed against the objectives set out in the business case e.g. the evaluation of the effectiveness of the master-classes against the number of inappropriate referrals into hospital.

3. The funding model needs to be kept under review in order to optimize the sustainability of the GP and nurse up-skilling programme.

4. A standard format is developed for future Master-classes, with no more than three concurrent sessions, covering fewer topics and running for a three hour period.

5. Literature and handouts provided at Master-classes could be designed in such a way that they enable participants to cascade the learning points to members of their own practice/team.

6. Consideration is given to jointly producing a Paediatric Bulletin between secondary and primary care which provides regular up-dates on service developments, current best practice, top tips and issues of the moment.

7. Localities should be encouraged to consider opportunities to improve parent and carer education, including regular review of all information given to parents to ensure consistency across the Localities and ensure current best practice is being followed.

8. A review of advice and support programmes to mothers on breast feeding, nutrition and weaning is undertaken to ensure a standard evidence based approach to breast feeding, nutrition and weaning is delivered across NHS organisations in Stoke-on-Trent and North Staffordshire in a consistent way.

9. Circulate the unplanned/acute admission guidelines to all GPs/CCG localities supported by clinical leads for unplanned care.

10. Share our learning and development approach in the upskilling of GPs and primary care nurses with others across the NHS. Make the materials available to anyone working in or for the NHS on the PIP website and GPCC portfolio with a hyperlink from the PCT website.

5.3 Acknowledgements to:

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From Partners in Paediatrics:

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Jenny Hawkes, PiP Consultant/Project Manager
Julia Greensall, Network Development Manager

The PCT commissioners wish to thank PIP and in particular Jenny Hawkes for their unwavering support which led to a really successful project and meaningful clinical interaction between primary & secondary care.

Appendix 1

Responses from Participants

15/6/11

Content of Master-class

	Extremely useful		Very useful		Useful		A bit useful		Not useful		No response	
Gastro	14	73.7%	3	15.8%	0	0.0%	0	0.0%	0	0.0%	2	10.5%
Failure to thrive	5	26.3%	0	0.0%	1	5.3%	0	0.0%	0	0.0%	13	68.4%
Febrile illness / fits	17	89.5%	2	10.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Respiratory	16	84.2%	3	15.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
E.N.T.	4	21.1%	1	5.3%	1	5.3%	0	0.0%	0	0.0%	13	68.4%
Allergies	0	0.0%	0	0.0%	1	5.3%	0	0.0%	0	0.0%	18	94.7%
Rashes	0	0.0%	0	0.0%	1	5.3%	0	0.0%	0	0.0%	18	94.7%
Hospital at home	13	68.4%	3	15.8%	0	0.0%	0	0.0%	0	0.0%	3	15.8%

What will you do as a result of attending the Master-class?

i) Write a new practice protocol?

ii) Review and change current protocol?

iii) Share best practice with team members?

iv) Undertake an audit to demonstrate need for change/improvement?

	No answer		Yes		No		Maybe	
i)	12	63.2%	2	10.5%	4	21.1%	1	5.3%
ii)	9	47.4%	5	26.3%	4	21.1%	1	5.3%
iii)	1	5.3%	18	94.7%	0	0.0%	0	0.0%
iv)	11	57.9%	3	15.8%	5	26.3%	0	0.0%

Appendix 1

Responses from Participants (Contd.)

21/6/11

Content of Master-class

	Extremely useful		Very useful		Useful		A bit useful		Not useful		No response	
Gastro	17	63.0%	6	22.2%	2	7.4%	0	0.0%	0	0.0%	2	7.4%
Failure to thrive	20	74.1%	4	14.8%	2	7.4%	1	3.7%	0	0.0%	0	0.0%
Febrile illness / fits	16	59.3%	7	25.9%	4	14.8%	0	0.0%	0	0.0%	0	0.0%
Respiratory	21	77.8%	4	14.8%	2	7.4%	0	0.0%	0	0.0%	0	0.0%
E.N.T.	20	74.1%	5	18.5%	2	7.4%	0	0.0%	0	0.0%	0	0.0%
Allergies	15	55.6%	5	18.5%	4	14.8%	2	7.4%	0	0.0%	1	3.7%
Rashes	18	66.7%	5	18.5%	3	11.1%	1	3.7%	0	0.0%	0	0.0%
Hospital at home	18	66.7%	6	22.2%	2	7.4%	1	3.7%	0	0.0%	0	0.0%

What will you do as a result of attending the Master-class?

i) Write a new practice protocol?

ii) Review and change current protocol?

iii) Share best practice with team members?

iv) Undertake an audit to demonstrate need for change/improvement?

	No answer		Yes		No		Maybe	
i)	16	59.3%	2	7.4%	8	29.6%	1	7.4%
ii)	16	59.3%	5	18.5%	5	18.5%	1	7.4%
iii)	2	7.4%	23	85.2%	1	3.7%	1	7.4%
iv)	17	63.0%	1	3.7%	5	18.5%	4	14.8%

Appendix 1

Responses from Participants (Contd.)

22/6/11

Content of Master-class

	Extremely useful		Very useful		Useful		A bit useful		Not useful		No response	
Gastro	13	48.2%	11	40.7%	3	11.1%	0	0.0%	0	0.0%	0	0.0%
Failure to thrive	4	14.8%	2	7.4%	0	0.0%	0	0.0%	0	0.0%	4	14.8%
Febrile illness / fits	13	48.2%	9	33.3%	4	14.8%	0	0.0%	0	0.0%	0	0.0%
Respiratory	3	11.1%	1	3.7%	1	3.7%	0	0.0%	0	0.0%	2	7.4%
E.N.T.	2	7.4%	1	3.7%	0	0.0%	0	0.0%	0	0.0%	3	11.1%
Allergies	6	22.2%	4	14.8%	0	0.0%	0	0.0%	0	0.0%	3	11.1%
Rashes	17	63.0%	7	25.9%	2	7.4%	1	3.7%	0	0.0%	0	0.0%
Hospital at home	14	51.9%	4	14.8%	7	25.9%	1	3.7%	0	0.0%	0	0.0%

What will you do as a result of attending the Master-class?

i) Write a new practice protocol?

ii) Review and change current protocol?

iii) Share best practice with team members?

iv) Undertake an audit to demonstrate need for change/improvement?

	No answer		Yes		No		Maybe	
i)	21	77.8%	1	3.7%	5	18.5%	0	0.0%
ii)	19	70.4%	4	14.8%	4	14.8%	0	0.0%
iii)	2	7.4%	25	92.6%	0	0.0%	0	0.0%
iv)	22	81.5%	3	11.1%	2	7.4%	0	0.0%

Appendix 1

Responses from Participants (Contd.)

13/7/11

Content of Master-class

	Extremely useful		Very useful		Useful		A bit useful		Not useful		No response	
Gastro	24	72.7%	6	18.2%	1	3.0%	0	0.0%	0	0.0%	2	6.1%
Failure to thrive	12	36.4%	2	6.1%	1	3.0%	0	0.0%	0	0.0%	18	54.6%
Febrile illness / fits	22	66.7%	5	15.2%	5	15.2%	0	0.0%	0	0.0%	1	3.0%
Respiratory	25	75.8%	6	18.2%	1	3.0%	0	0.0%	0	0.0%	1	3.0%
E.N.T.	10	30.3%	0	0.0%	1	3.0%	0	0.0%	0	0.0%	22	66.7%
Allergies	22	66.7%	3	9.1%	5	15.2%	1	3.0%	0	0.0%	2	6.1%
Rashes	11	33.3%	1	3.0%	2	6.1%	0	0.0%	0	0.0%	19	57.6%
Hospital at home	17	51.5%	8	24.2%	6	18.2%	0	0.0%	0	0.0%	2	6.1%

What will you do as a result of attending the Master-class?

i) Write a new practice protocol?

ii) Review and change current protocol?

iii) Share best practice with team members?

iv) Undertake an audit to demonstrate need for change/improvement?

	No answer		Yes		No		Maybe	
i)	22	66.7%	2	6.1%	8	24.2%	1	0.0%
ii)	18	54.5%	9	27.3%	6	18.2%	0	0.0%
iii)	2	6.1%	31	93.9%	0	0.0%	0	0.0%
iv)	23	69.7%	3	9.1%	7	21.2%	0	0.0%

Appendix 1

Written Responses from Participants

What was useful/best aspects of the training?

NICE guidelines - Red/amber/green flags		28
Hospital at Home		22
All excellent, up-to-date information	16	
A brilliant resource for nurses to up-skill and up-date		5
Excellent hand-outs	5	
General up-date		4
Assessment of ill child	3	
Referral pathways - not always via G.P.	3	
Excellent presentations advice from all consultants		3
Realisation that own practice is of good standard		2
Relevant to general practice and nurse practitioning		
Very beneficial		
Confidence giving		
More clinical advice – able to treat and provide more advice		
Refresher in treatment of minor illness		
Useful background information		
Supporting children and families at home		
Good direct, informal contact with presenters		
Management of different illnesses		
Where to go to get information		
Advice and reassurance to parents		
Referral patterns		
Good history-taking		
Chance to ask about concerns in practice/Case Studies	2	
Opportunity to enquire about clinical cases	2	
Question and answer session was great!		
Opportunity for group discussion/ Meeting people		
A couple of things from each speaker		
Discussion of treatment pathways and highlighting key presenting features of condition		
Management pathways		
Think WTI in children		
Being able to talk about personal worries of cases		
Discussion of differentials in the various sessions		
Could have listened all night to Dr. Hubbard		
Some practical tips for managing conditions in the community		
When and when not to refer		
New methods of assessing children		
Copies of all presentations		
Assessment tools		
UTI common cause of paediatric illness		
Scenarios very useful		
Importance of obtaining full history / Observing		

What was useful/best aspects of the training? (*Contd.*)

Repiratory practical tips	12	
Nasal suction in babies	10	
The use of O2 saturation monitors		5
Respiratory problems		
Stridor management		
Dexamethasone stat		
Learnt to advise kissing technique re. foreign bodies in nostrils		
Session on gastro-enteritis G/E consultant very good		7
Febrile and gastro illnesses very useful/ Refresher on acute febrile illness		5
Assessment of dehydration	3	
No flat Coke/lemonade	2	
Advice about constipation re. Movicol/ Movicol can be mixed with anything		2
No longer regarding of milk in gastro-enteritis		
How much fluid to give child with gastro-enteritis		
Rehydration – graduated no longer needed		
Use of anti-pyretics		
Difference between allergy and intolerance/consider cow's milk allergy	4	
Asthma/hay-fever signs and symptoms, viral V.asthma wheeze	3	
Different rashes	3	
Safety netting	3	
Febrile illnesses/ibuprofen/paracetamol	3	
Dealing with ENT symptoms, very informative	3	
Confidence in rashes		
Temperature not always crucial		
Videoing of fits		
Paediatric dermatology pictures		

What could be done to improve the Master-classes?

Longer sessions	44
Nothing	12
More classes regularly	9
Well organised and informative - more please	7
Failure to thrive would have been useful	3
Master-classes on a specific illness, e.g. allergies	3
More topics	2
Greater opportunity to ask questions	2
Later start	

Brilliant - but not all covered
I may have learned more at BP session
Felt like some content had been missed out
First session seemed rushed
Fewer topics but greater depth
Continued programme maybe more specialised conditions

Convenience of sessions
Reduce number of sessions to allow more discussion time
Either a 1 day course or two afternoon sessions
Not all information is in the folders
Difficult to assimilate the amount of information given out
Not got all the notes

More on allergies
Allergy presentation would have been useful
More on dermatology - my weak area
Case histories in dermatology - in-depth discussion of conditions
More up-dates on rashes

A little more room
To stop moving about and all lectures in one room - one at a time
Have up-dates
Practice issues
Could be done in the day-time

What new skills have you learned?

NICE guidelines	17
Up-dating previously held skills but refreshing some aspects of practice	16
Refer to hospital at home	12
Nasal aspirations	7
Assessment/guidance/management of constipation	5
Do assessments with more understanding	4
Informed re. rashes	3
Practical help for parents of child with mild respiratory problems	3
Improved management of stridor	3
Posture advice for parents	3
Different pathways	3
Rash recognition	3
D & V advice	3
More confident	3
Improved knowledge base for telephone triage	2
Help to improve the triage of patients	2
Better able to advise parents	2
Importance of sats. Monitor	2
Better referral patterns	2
All information relevant	2
Test urine often in children	2
Improved clinical skills/observations	2
How and when to use lactulose or movicol	2
Increased history-taking and observation	2
Not to use flat Coke or lemonade	
To use the tools more to make decisions	
How to manage a wheezy child	
Allergy management	
New ways of handling allergies vs. intolerance	
Need a clear pathway for failure to thrive	
Early weight-loss clinic run by infant, feeding, breast-feeding support	
Management of airways in babies	
Differential diagnosis	
Improved management of conditions	
Need to give specific guidance to parents, etc.	
When to seek further medical assistance	
Clear instructions to carer	
Gastro advice	
Assessing children in practice more effectively	
Highlighted awareness	
Be more assertive with parents to give them confidence	
Assessment of dermatology and respiratory illness	
How to remove foreign objects	
Information helps to advise parents	
Read more	
Guidelines for fever	
Hydrating young infants	
Assessment of ill child	
Dermatology	

What will you do as a result of attending the Master-class?

Request sats monitor with paed. probe	5
More classes please	3
Very informative and excellent speakers	2
Inform my practice	2
Continue to up-date knowledge	2
Make the move from hospital setting to home	
Implement current guidance	
Reflect on cases - current and future	
Work closely with GP	
Continue to assess and prescribe as appropriate	
Be a better practitioner and provide more accurate advice	
Give up-to-date advice to parents	
Need this to maintain safe practice	
Guidelines for parents on what to monitor when prescribed	
Protocols reviewed and changed recently at clinical meeting	
Re-visit NICE guidelines	
Begin to see children as part of minor illness clinics	
Audit children attendance/admission to A&E	
Encourage colleagues to attend	
Undertake further training	
Make more formal documentation to follow during consultations	
Use hospital at home	
Asthma management	
May enrol on Level 6 module	
Share hospital at home with practice G.P.s	
Contact Sadie Jane for paediatric visit	
Require the right equipment	

Appendix 2

Urgent Care Guidelines

Clinical Assessment Tool for Babies/Children Under 2 years with Suspected Bronchiolitis

Management Out of Hospital Setting

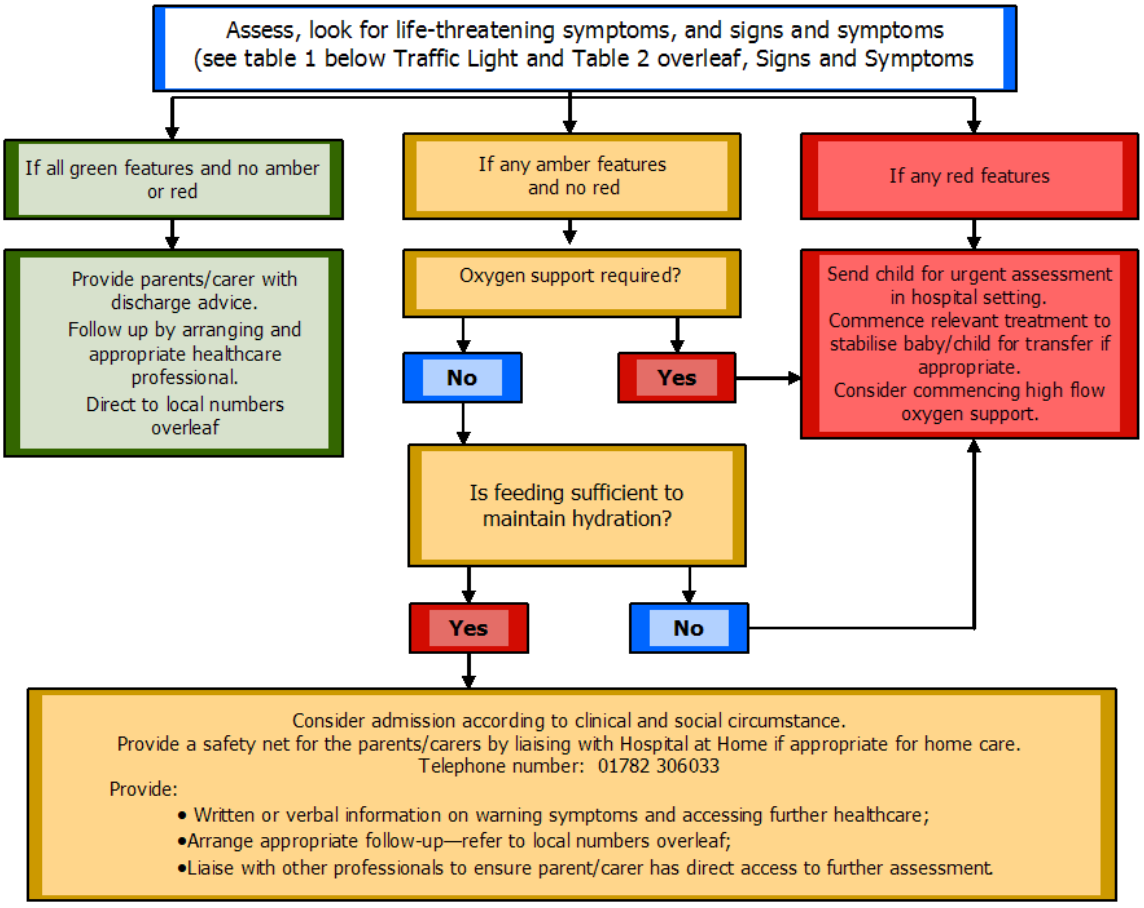

Table 1: Traffic light system for identifying severity of illness

	Green—low risk	Amber—intermediate risk	Red—high risk
Behaviour	Alert Normal	Irritable Not responding normally to social cues Decreased activity No smile	Unable to rouse Wakes only with prolonged stimulation No response to social cues Weak, high-pitched or continuous cry Appears ill to a health-care professional
Skin	CRT ≥ 2 seconds Normal colour skin, lips & tongue Moist mucous membranes	CRT 2-3 seconds Pale/mottled Pallor colour reported by parent/carer Cool peripheries	CRT over 3 seconds Pale/mottled/ashen blue Cyanotic lips and tongue
Respiratory Rate	Under 12 months <50 breaths/minute Over 12 months <40 breaths/minute No respiratory distress	<12 months 50-60 breaths / minute >12 months 40-60 breaths / minute	All ages > 60 breaths / minute
SATS in air	95% or above	92-94%	92%
Chest recession	None	Moderate	Severe
Nasal flaring	Absent	May be present	Present
Grunting	Absent	Absent	Present
Feeding Hydration	Normal—no vomiting	50—75% fluid intake over 3-4 feeds +/- vomiting Reduced urine output	<50% fluid intake over 2-3 feeds +/- vomiting. Significantly reduced urine output
Apnoeas	Absent	Absent	Present*

CRT: capillary refill time SATS: Saturations in air *Apnoea for 10-15 secs or shorter if accompanied by a sudden decrease in saturations/central cyanosis or bradycardia

Appendix 2
Contd.

Clinical Assessment Tool for Babies/Children Under 2 years with Suspected Bronchilitis

Management Out of Hospital Setting

Healthcare professionals should be aware of the increased need for hospital admission in infants with the following:

- Pre-existing lung disease, congenital heart disease, neuro-muscular weakness, immune-incompetence.
- Age< 6 weeks (corrected)
- Prematurity
- Family anxiety
- Re-attendance
- Duration of illness is less than 3 days and Amber—may need to admit.

Table2: Signs and Symptoms can include:

- Rhinorrhoea (runny nose)
- Cough
- Poor feeding
- Vomiting
- Pyrexia
- Respiratory distress
- Apnoea
- Inspiratory crackles +/- wheeze

Useful Telephone Numbers

GP (family to complete)	.....	
HV (family to complete)	.....	
North Staffs Urgent Care (Out of hours G.P.)	.....	01782 719100
Walk-in Centres:	Haywood	01782 581112
	Midway	01782 663757
	Leek Minor Injuries Unit	01538 487100
	Hanley Health Centre	03001236759
NHS Direct: Open 24 hrs.—7 days	.....	0845 454647
	Or www.nhsdirect.nhs.uk	

This guidance is written in the following context:

This assessment tool was arrived at after careful consideration of the evidence available, including, but not exclusively, NICE guidance and NHS evidence. Healthcare professionals are expected to take it fully into account when exercising their clinical judgement. The guidance does not, however, override the individual responsibility of healthcare professionals to make decisions appropriate to the circumstances of the individual patient, in consultation with the patient and/or guardian or carer.

Appendix 2
Contd.

Clinical Assessment Tool for the Febrile Child 0–5 Years

NHS

Management by a non-paediatric practitioner

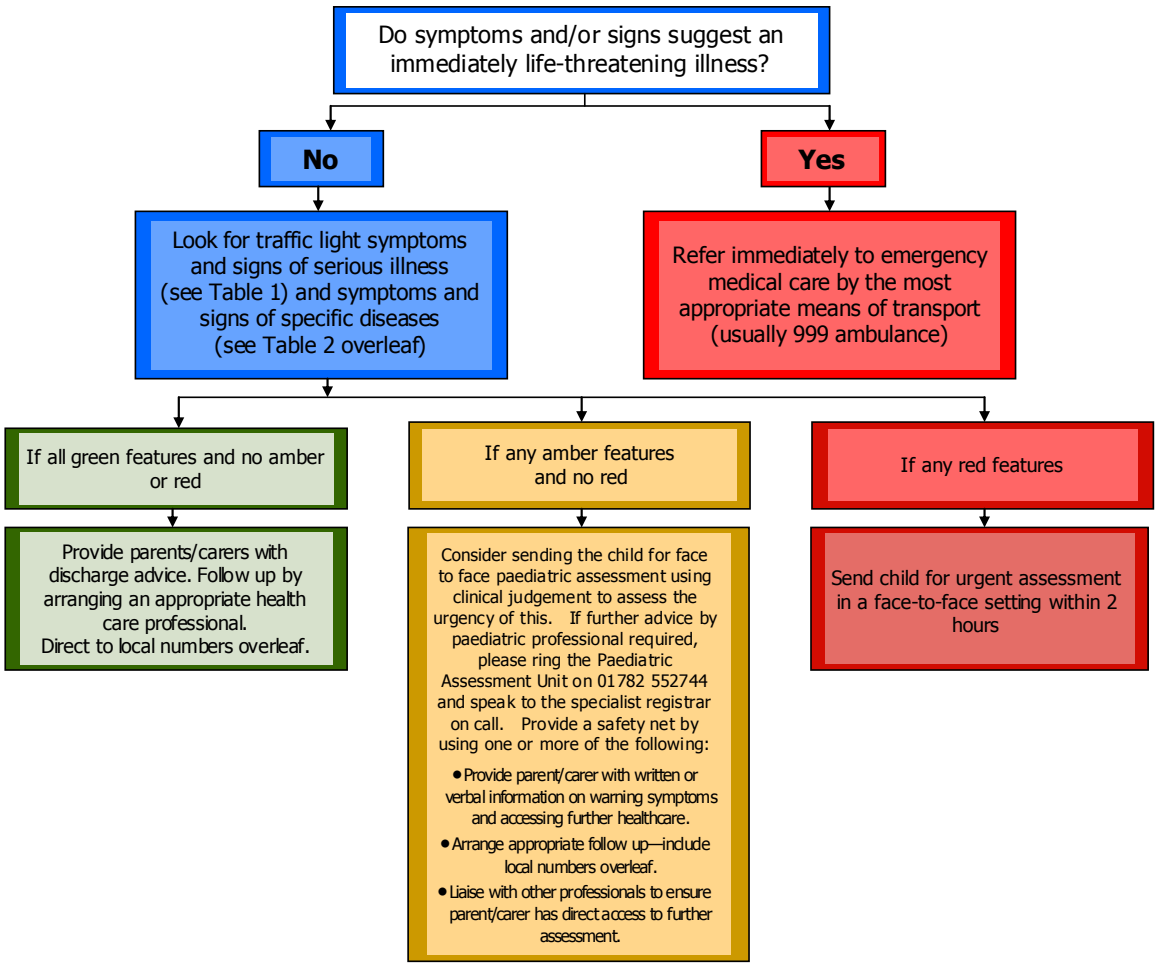

Table 1: Traffic light system for identifying signs and symptoms of clinical dehydration and shock

	Green—low risk	Amber—intermediate risk	Red—high risk
Colour	• Normal colour of skin, lips and tongue	• Pallor reported by parent/carer	• Pale/mottled/ashen/blue
Activity	• Responds normally to social cues • Content/smiles • Stays awake or awakens quickly • Strong normal cry/not crying	• Not responding normally to social cues • Wakes only with prolonged stimulation • Decreased activity • No smile	• No response to social cues • Appears ill to healthcare professional • Unable to rouse or if roused does not stay awake • Weak, high-pitched or continuous cry
Respiratory		• Nasal flaring • Tachypnoea: -RR>50 breaths/minute age 6-12 months -RR>40 breaths/minute age >12 month • Oxygen saturation≥95% in air • Crackles	• Grunting • Tachypnoea: RR> 60 breaths/minute • Moderate or sever chest indrawing
Hydration	• Normal skin and eyes • Moist mucus membranes	• Dry mucus membrane • Poor feeding in infants • CRT ≥ 3 seconds • Reduced urine output	• Reduced skin turgor
Other	• None of the amber or red symptoms or signs	• Fever for ≥ 5 days • Swelling of a limb or joint • Non-weight bearing/not using an extremity • A new lump >2 cm	• Age 0-3 months, temperature ≥ 38°C • Age 3-6 months, temperature ≥ 39°C • Non-blanching rash • Bulging fontanelle • Neck stiffness • Status epilepticus • Focal neurological signs • Focal seizures • Bile stained vomiting

CRT: capillary refill time RR: respiration rate

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Appendix 2
Contd.

Clinical Assessment Tool for the Febrile Child 0–5 Years

Management by a non-paediatric practitioner

Diagnosis to be considered	Symptoms and signs in conjunction with fever
Meningoccoccal disease	Non-blanching rash, particularly with one or more of the following: •an ill-looking child •lesions larger than 2mm in diameter (purpura) •CRT 3 seconds •neck stiffness
Meningitis[1]	•neck stiffness •bulging fontanelle •decreased level of consciousness •convulsive status epilepticus
Herpes simplex encephalitis	•focal neurological signs •focal seizures •decreased level of consciousness
Pneumonia	•Tachypnoea, measured as: 0-5 months RR>60 breaths/minute 6-12 months RR>50 breaths/minute >12 months RR>40 breaths/minute •crackles in the chest •nasal flaring •chest indrawing •cyanosis •oxygen saturation 95%
Urinary tract infection (in children aged older than 3 months)[2]	•vomiting •abdominal pain or tenderness •lethargy •urinary frequency or dysuria •irritability •offensive urine or haematuria
Septic arthritis/osteomyelitis	•swelling of a limb or joint •non-weight bearing •not using an extremity
Kawasaki disease3	**Fever lasting longer than 5 days and at least four of the following:** •Bilateral conjunctival injection •Change in upper respiratory tract mucus membranes *(for example, injected pharynx, dry cracked lips or strawberry tongue)* •cervical lymphadenopathy •change in the peripheral extremities *(for example, oedema, erythema or desquamation)* •polymorphous rash

CRT: capillary refill time **RR:** respiration rate

[1] Classical signs (neck stiffness, bulging fontanelle, high-pitched cry are often absent in infants with bacterial meningitis.
[2] Urinary tract infection should not be considered in any child younger than 3 months with fever.
See "Urinary tract infection in children" (NICE clinical guideline, publication expected August, 2007).
[3] **Note:** in rare cases, incomplete/atypical Kawasaki disease may be diagnosed with fewer features.

Useful Telephone Numbers

GP (family to complete) .....

HV (family to complete) .....

North Staffs Urgent Care (Out of hours G.P.) 01782 719100

Walk-in Centres:
Haywood 01782 581112
Midway 01782 663757
Leek Minor Injuries Unit 01538 487100
Hanley Health Centre 03001236759

NHS Direct: Open 24 hrs.—7 days 0845 454647
Or www.nhsdirect.nhs.uk

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Clinical Assessment Tool for the Child with Suspected Gastro-enteritis 0-12 Years

NHS

Management Out of Hospital Setting

Child presenting with diarrhoea and/or vomiting:
Assess for signs of dehydration, see Table 1 below.

If all green features and no amber or red

No clinical dehydration

Preventing Dehydration:

- Continuous breastfeeding and other milk feeds
- Encourage fluid intake
- Discourage fruit juices and carbonated drinks (especially those children in Box 2)
- Offer Oral Rehydration solution (ORS)as supplemental fluid to those at increased risk of dehydration (Box 2)
- Refer to Box 4 for stool microbiology advice

Provide parents/carers with advice leaflet. Follow up by arranging an appropriate health care professional.
Direct to local numbers overleaf.

If any amber features and no red

Clinical dehydration

Based on clinical judgement and severity of child (considering Box 2)
or Home Admit

- Home with advice for children under 4 years to give 50ml/kg of an ORS over 4 hours without delay, often and in small amounts. Over 4 years, encourage ORS
- Continue breastfeeding.
- Consider supplementing with usual fluids (including milk feeds/water, but not fruit juices or carbonated water.
- If after 2 hours child is not tolerating ORS or is vomiting, child should be promptly reviewed by a Health Care Professional. Refer to Box 4 for stool microbiology advice.
- Give advice sheet.

If any red features

Clinical shock suspected or confirmed

Send child for urgent assessment in hospital setting.
Commence relevant treatment to stabilise baby/child for transfer if appropriate.
Consider appropriate transport means (999)

If there is blood or mucus in the stool or suspicion of septicaemia or if the child is immunocompromised discuss with the Paediatric Registrar

- Consider referral to H@H team if appropriate Tel.01782 306033
- Consider admission according to clinical and social circumstance.
- Seek further advice (or refer to) Paediatric Registrar
- En route parents should be encouraged to give child fluids often and in small amounts (including milk feeds/water, but not fruit juices or carbonated drinks.)

Table 1: Traffic light system for identifying signs and symptoms of clinical dehydration and shock

	Green—low risk	Amber—intermediate risk	Red—high risk
Activity	•Responds normally to social cues •Content/Smiles •Stays awake/awakens quickly •Strong normal cry/not cry	•Altered response to social cues •Decreased activity •No smile	•Not responding normally to or no response to social cues •Appears ill to a healthcare professional •Unable to rouse or if roused does not stay awake •Weak, high-pitched or continuous cry
Skin	•Normal skin colour •Normal turgor	•Normal skin colour •Warm extremities	•Pale/Mottled/Ashen blue •Cold extremities
Respiratory	•Normal breathing	•Normal breathing (ref. To normal values Table 3)	•Abnormal breathing/tachypnoea (ref. to normal values Table 3)
Hydration	•CRT < seconds •Moist mucus membranes (except after drink) •Normal urine	•CRT 2—3 seconds •Dry mucus membranes (except for mouth breather). •Reduced urine output	•CRT >3 seconds
Pulses/ Heart Rate	•Heart rate normal •Peripheral pulses normal	•Mild/Tachycardia (ref. To nominal values Table 3) •Peripheral pulses normal	•Severe tachycardia (ref. to normal values Table 3) •Peripheral pulses weak
Blood pressure	•Normal (ref. To normal values Table 3)	•Normal (ref. To normal values Table 3)	•Hypotensive (ref. to normal values Table 3)
Eyes	•Normal eyes	•Sunken eyes	

CRT: capillary refill time RR: respiration rate

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Clinical Assessment Tool for the Child with Suspected Gastro-enteritis 0-12 Years

NHS

Management Out of Hospital Setting

Box 1 Consider other diagnosis if any of the following are present:

- Temperature of 38°C or higher (younger than 3 months)
- Temperature of 39°C or higher (3 months old or older)
- Shortness of breath or tachynopea
- Altered conscious state
- Neck stiffness
- Abdominal distension or rebound tenderness
- History/Suspicion of poisoning
- Bulging fontanele (in infants)
- Non-blanching rash
- Blood and/or mucus in stool
- Bilious (green) vomit
- Severe or localised abdominal pain
- History of head injury

Box 2 These children are at increased risk of dehydration:

- Children younger than 1 year, especially those younger than 6 months.
- Infants who were of a low birth weight.
- Children who have passed six or more diarrhoeal stools in the past 24 hours
- Children who have vomited three times or more in the last 24 hours
- Children who have not been offered or have not been able to tolerate supplementary fluids before presentation
- Infants who have stopped breastfeeding during the illness
- Children with signs of malnutrition

Box 3 Normal Paediatric Values

Respiratory Rate at rest:		Heart rate:		Systolic blood pressure	
<1yr	30-40 p/min	<1yr	110-160bpm	<1yr	70-90 mmhg
<1-2yrs	25-35 p/min	<1-2yrs	100-150bpm	1-2yrs	80-95mmhg
<2-5yrs	25-30 p/min	<2-5yrs	95-140bpm	<2-5yrs	80-100mmhg

(APLS 2005)

Box 4 Stool Microbiology Advice

Consider performing stool microbiological investigations if:

- The child has recently been abroad or
- The diarrhoea has not improved by day 7

Useful Telephone Numbers

GP (family to complete) .....

HV (family to complete) .....

North Staffs Urgent Care (Out of hours G.P.) 01782 719100

Walk-in Centres:

- Haywood 01782 581112
- Midway 01782 663757
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Children's Oral Fluid Challenge

Dear Parent/Carer,

Your child needs to drink fluid in order to prevent dehydration.

Date .....

Name .....

NHS/Hospital Number .....

D.o.B. .....

Weight .....

Please give your child ..... ml of the suggested fluid, using the syringe provided, every ten minutes.

You need to tick the boxes below each time your child has a drink, and also mark down if your child vomits or has diarrhoea. Show this chart to the doctor when your child is seen.

Thank you.

Time	Fluid given (tick please)	Vomit or diarrhoea?

Appendix 2
Contd.

Clinical Assessment Tool for the Child 0-12 years with Acute Abdominal Pain

NHS

Management Out of Hospital Setting

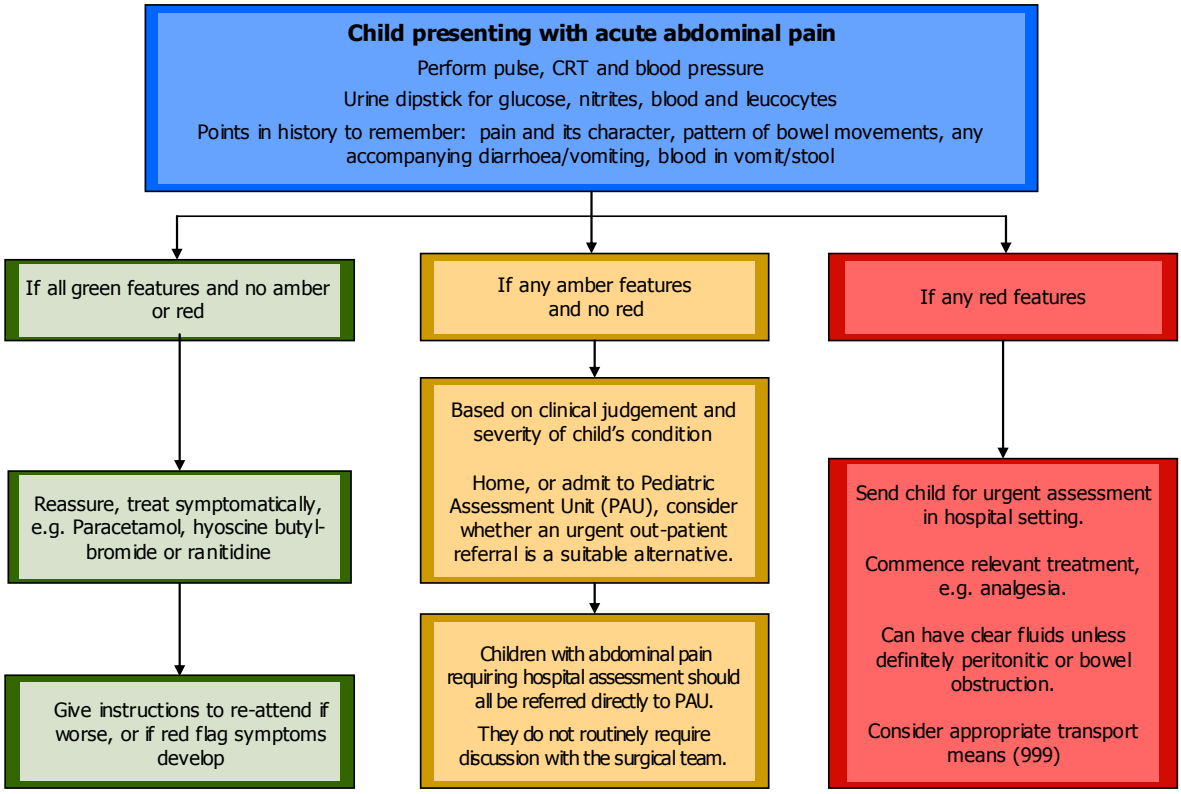

Table 1: Traffic light system for identifying higher risk children

Green—low risk	Amber—intermediate risk	Red—high risk
• Easily distracted from pain • History of contact with gastro-enteritis • Diarrhoea present (consider using gastro-enteritis pathway) • Normal observations (see values below)	• Sexually active female • Vomiting • Onset <48 hours • Under 12 years • Pyrexial • Reduced urine output • Focally tender	• Billious (green) vomit • Malaena or blood in soft stool or blood alone with mucus PR • Absent bowel sounds • Guarding and/or rebound tenderness • Haematemesis (old or fresh) • Under 4 years • Tachycardic or hypotensive • Appears ill to healthcare professionals • Abdominal distension • Pelvic mass (not faeces, which is generally indentable clears with laxatives if history of constipation • Offensive or bloodstained vaginal discharge • Unscheduled vaginal bleeding

Normal Paediatric Values

Age	Pulse	Respiratory rate
<1	110-160	30-40
1-2	100-150	25-35
2-5	95-140	25-30
5-12	80-120	20-25

These guidelines are to aid diagnosis and management, and are not a substitute for clinical judgement.

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Clinical Assessment Tool for the Child 0-12 years with Acute Abdominal Pain

Management Out of Hospital Setting

Box 1 Consider other diagnoses

Diagnoses not to miss	Possible medical/gynaecological diagnoses
• Appendicitis • Torsion of ovarian cyst • Intussception • Volvulus secondary to malrotation Testicular torsion (n.b. Some boys c/o rather than testicular pain) ***Less worrying diagnoses:*** • Gastroenteritis • Constipation • Urinary tract infection (N.B. =ve dipstick does not exclude appendicitis) • Irritable bowel syndrome • Non-specific abdominal pain	• Mesenteric adenitis • Right lower lobe pneumonia • Gastritis/peptic ulcer disease • Henoch-Schonlein purpura • Pyelonephritis • Renal stones • Gallstones • Pancreatitis • Haematocolpus • Ovarian cysts (benign and malignant) • Rarely Crohn's disease

Box 2: Admission or Referral

Admission/referral is via Paediatric Assessment Unit (PAU), Ward 112/113. Telephone: 01782 552744.

Children with abdominal pain do not need to be referred to the surgical team. They are seen and assessed by the paediatric team who will arrange senior surgical review or transfer after initiating treatment.

Useful Telephone Numbers

GP (family to complete) .....

HV (family to complete) .....

North Staffs Urgent Care (Out of hours G.P.) 01782 719100

Walk-in Centres:
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Information for Parent/Carer of a Child 0-12 years with Acute Abdominal Pain

Dear Parent/Carer,

You should seek further medical advice if:

- The pain becomes worse
- There is blood in the stool (poo)
- The child is unable to keep fluids down
- The child vomits up yellow-green fluid or green fluid
- The child vomits up fresh blood or old blood (which can look like dark brown bits in the vomit)
- They become drowsy
- The child looks very pale

Useful Telephone Numbers

GP (family to complete)	.....	
HV (family to complete)	.....	
North Staffs Urgent Care (Out of hours G.P.)	.....	01782 719100
Walk-in Centres:	Haywood	01782 581112
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