CRF 1A Guideline

If there is ever any doubt over any inclusion or exclusion criteria do not enrol a child until you have checked with the senior study team

Date and time of Presentation: List the date and time that the child presented to the emergency department that resulted in this hospital admission

1. Inclusion Criteria: The child must fit all the criteria listed in the study protocol prior to approach for consent in to the study. Please tick the following boxes to indicate if the child is eligible for inclusion.

NB If the child does not fit the inclusion criteria CRF1 does not need to be completed

1.1 The child must have both 1.1 and 1.2 to be eligible. The child must have met admission to ward criteria. This does not include the paediatric short stay unit (PSSU).

Exception if the child is located in the PSSU due to the children's ward being full with no beds available and the medical plan states to be admitted to ward then the child can be included.

1.2 The child must be under two years of age, when the child reaches their second birthday they are no longer eligible.

1.3 Diagnosis of pneumonia; this can be either diagnosed by medical clinical assessment or by the chest x-ray report – as recorded in the patient medical record. Pneumonia fulfilling the WHO definition for severity (presence of at least 2 of 5 characteristics each age defined; tachypnoea, indrawing, colour, feeding, level of consciousness) with or without consolidation on CXR.

If you are unsure this should be confirmed by the assigned medical team (which should include a senior doctor, either a senior paediatric registrar or a paediatric consultant). If there is any doubt contact the on-call medical registrar or consultant for confirmation, if they are not available call either of the principal investigators;

Dr Adrian Trenholme
021 576818
Ext. 7016

Dr Cass Byrnes
021 2459115

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021 494392
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021 803620

1.4 Diagnosis of bronchiolitis as diagnosed by medical clinical assessment as recorded in the patient medical record **and in addition** must include one the following criteria 1.4.1, 1.4.2, 1.4.3, 1.4.4, 1.4.5.

1.4.1 A hospital admission equal to or greater than 4 days in length, this time is calculated from the Emergency Department presentation time that resulted in this hospital admission.

1.4.2 Supplemental oxygen of any volume for greater than 36 hours at any point of the hospital admission. This is intended for children who are admitted

on oxygen and stay on oxygen for greater than 36hours, however if the child has had a period off oxygen less than 4 hours then they can be included.

1.4.3 Admission to ICU or PICU due to the severity and/or complication of the current LRI infection.

1.4.4 Consolidation on CXR as reported in the CXR report from radiology service and or senior paediatric doctor. If this is unclear please check with study investigators.

1.4.5 Repeated hospital ward admissions for bronchiolitis totalling equal to or greater than 6 days within a three month (90 day) period. (The repeated admissions do not need to meet the severity criteria).

2 Exclusion Criteria

To ensure each child screened for this study does not meet any of the exclusion criteria, please ensure the child does not have any of the following:

2.1 Does the family intend to relocate (move house) from the greater Auckland region over the next 12 months. Please check this point with parents/primary caregiver when you approach them for inclusion, if there is any doubt of them staying in the Auckland region please tick yes and exclude them from the study.

2.2 Check concerto to ensure this child has not had **more than two** hospital admissions that would fit the above inclusion criteria for **severe** LRI, this does not include admissions for a diagnosis other than LRI.

For Example; A child could have three admissions one for gastroenteritis, one for cellulitis and one other admission for severe LRI. This child would be eligible.

2.3 Please check the gestation age of the child at birth to ensure the child was not born before 32 weeks. If the child was 31 weeks and 6 days they are not eligible. If the gestational dates are not confirmed by the patient's old hospital record please check with the parent.

2.4 A diagnosis of chronic lung disease should be confirmed in the child's medical record. If unsure or CLD is suspected please confirm with the senior study team.

2.5 Please refer to the guideline for enrolment of siblings. If the child has siblings up to 3½ years of age please check with the parent what the child's surname is and check the patient database. If the sibling has the same primary care giver as an enrolled child do not enrol the sibling.

2.6 Ask the parent if they or their child are enrolled in any other research studies, if they are please refer to the senior study team prior to enrolling this child in the study. ***One exception is the CRIB study,*** children can be enrolled in this study if they are also in the CRIB study.

2.7 Please review the child's medical record to screen for any chronic conditions, pending investigations for chronic conditions. A chronic condition has been defined as a medically diagnosed condition affecting the child's everyday life this includes but is not exclusive to the following:

- **Cardiovascular:** Including any congenital heart defect, and/or heart condition requiring medication or awaiting surgery *(exception a resolved PDA).*
- **Neurological:** This is defined as moderate or severe global developmental delay and/or cerebral palsy resulting from a chromosomal abnormality, an acute injury or illness resulting in long term disability. This isn't intended to exclude isolated developmental delay such as speech delay or mild global

development delay which may be familial. If mild global development, please review with senior study research team.

- **Immunodeficiency:** Defined as a child with a known immunodeficiency diagnosis under paediatric immunology service, inherited disorders e.g. any form of immunoglobulin deficiency or acquired such as HIV. For children on regular oral steroids for greater than one month follow up with senior study team.
- **Multiple congenital abnormalities:** That effect daily life such as; charge association, velocardio facial syndrome, neurofibroatosis, tuberous sclerosis. Cleft lip and palate is also excluded.
- **Enteral feeding:** A child that has or still is receiving supplemental feeding either via nasogastric tube and or PEG/gastrostomy tube.

If there is any doubt about any of the inclusion or exclusion criteria please clarify patients history with ward medical/nursing staff then discuss with a senior research team staff member prior to approaching a family to enrol
them in this study.

3. Please confirm that this child meets all of the inclusion criteria and does not meet any of the exclusion criteria. If the child meets any of the exclusion criteria please tick no and stop collecting any further data. Enter into the data base as an excluded patient.

Note: A child may be excluded before all inclusion criteria is met.

Example A child under two admitted with bronchiolitis that has not had 48 hours of oxygen, or an ICU/PICU admission or an admission of 5 days but has a chronic condition.

In this instance we would keep screening to see if the child is going to meet the inclusion criteria to ensure we collect data on all eligible patients. Therefore complete the daily screening CRF1C to see if the patient meets inclusion. If they do meet inclusion criteria complete CRF 1A and enter the information in to the database. If they don't meet inclusion do not complete CRF1A and file the daily screening sheet with the crystal report.

Screening CRF1 A

Patient Label

Date of presentation to hospital _____ Time ___:___

1. ## Inclusion criteria

Must have <u>both</u> of the following:

1.1 Being admitted to hospital ward (not including SSU) ☐Yes ☐No

1.2 Under two years of age (excluding birthday) ☐Yes ☐No

And

Must have <u>one</u> of the following diagnosed by Paediatric Consultant or Senior Registrar:

1.3 Pneumonia - clinical or radiological ☐Yes ☐No

Or

1.4 Bronchiolitis - with at least one of the following: *(tick at least one)* ☐**Yes** ☐No

- 1.4.1☐ Admission ≥ 4 days
- 1.4.2☐ Supplemental oxygen for greater than 36 hours (Including time in EC)
- 1.4.3☐ Admission to ICU or PICU for LRI
- 1.4.4☐ Airspace Consolidation on Chest x-ray (Not including atelectasis)
- 1.4.5☐ Admission ≥ 6 days within 3 months

2. ## Exclusion Criteria *(Tick all that apply, if the patient has any of the following they are excluded)*

2.1 Family intends to relocate from the greater Auckland area within 12 months ☐Yes ☐No

2.2 >2 prior hospital admissions with severe LRI *(as per study eligibility criteria)* ☐Yes ☐No

2.3 Prematurity <32 weeks gestation ☐Yes ☐No

2.4 Diagnosis of chronic lung disease ☐Yes ☐No

2.5 Sibling or other member of household enrolled *(check sibling surnames)* ☐Yes ☐No

2.6 Enrolled in another research study: ☐**Yes** ☐No

If Yes, (*Specify)* _____*(Discuss with PI)*

2.7 Child has chronic health problems of clinical significance affecting daily life ☐**Yes** ☐No

2.7.1 **If Yes,** *(tick at least one)*

- ☐Cardiovascular
- ☐Neurological
- ☐Immunodeficiency
- ☐Multiple congenital abnormalities
- ☐Enteral feeding

3. **This patient meets enrolment criteria ☐Yes ☐No – Stop here**

4. Approached for consent

4.1 ☐**Yes** By (insert name): _____

4.2 ☐**No** Reason: ☐Legal guardian not present
☐Interpreter not available
☐Social reasons
☐Already enrolled in this study
☐Missed patient *reason*:_____ _____
☐Other: _____

Consent obtained

4.3 ☐**Yes**

If Yes, Copy of ICF given to parent ☐Yes ☐No

Enrolment Number Allocated.....
→ If YES Complete CRF 1

4.4 ☐**No,** Reason: ☐ Did not want to be involved in research study
☐ Other reason:_____

If NO, the patient refused - *stop here*

CRF 1B Guideline

4. (4.1, 4.2) Please confirm you approached this family for enrolment by ticking yes. If you were unable to approach the legal guardian/parent tick no and list the reason why.

Do not give a child an enrolment number until the consent is obtained

4.3 Confirm if consent was given by the parent or legal guardian by ticking yes, then allocate the sequential enrolment number you have allocated and enter the patient into the database so the enrolment number is reserved for that child.

4.4 If the parent/legal guardian refused consent tick no, where possible please list the reason they refused. Stop collecting data on this patient and enter into the database as a refused patient.

Randomisation

Do not randomise until the consent form is signed

5 List date and time (24 hour clock) the randomisation envelope was opened.
- Once the randomisation envelope is opened please indicate which group the child is allocated to on the CRF.
- If the child is in the intervention group check with the parent as to which primary care respiratory clinic they would like to attend and tick the community clinic they have chosen.

5.1 Inform the parent of the outcome and advise them of further details if required.

Continue to complete CRF 1B

6.0 Birth History

6.1 Gestational Age: Record this as documented in patients birth notes or as stated by parent when birth notes are not available. The age is listed in whole weeks of the babies age at birth, gestational age is based on 40 weeks. Please list in whole weeks rounding down accordingly, for example

Gestational Age Rounding	
38 weeks and 6 days (38.6 weeks)	38 weeks

6.2 Birth weight: Record this in grams as documented in the patients hospital record (notes) if born at CMDHB facility alternatively check with the parent, it will also be documented in the well child book if this is available.

6.3 Age of Mother at the birth of the child, check this with the parent/legal guardian.

6.4 Neonatal intensive care unit (NICU) admission: Indicate if the chid was ever admitted to NICU if no go to Q6.5. If yes, record the information from the hospital record and/or concerto, if unavailable check with the parent/legal guardian. Discuss with senior research team if this information is not available as a request for information from other hospitals may be needed.
Any admission less ≤1 day 12 hours is counted as 1 day, anything > 1 day 12 hours is counted as 2 days and so on.

6.5 Immunisation Status: Record the current immunisation status from the clinical medical record and then confirm it with the parent/legal guardian. Please tick each of the immunisations the child received on the provided table to indicate which of the scheduled immunisations were administered at what age. The schedule is indicated by the asterisk (*) of what they should have received at each age group. Indicate if there were any delays greater than four weeks in receiving the immunisations when confirming the immunisation status with the parent/legal guardian.

Other immunisations: There are some immunisations available in New Zealand that are not part of the routine schedule please list if the child received any additional immunisations e.g. Varicella (chicken pox), influenza.

Past Medical History

Previous Hospital Presentations for respiratory infections

7A. (Including Emergency presentations ≥3 hours).
Check concerto for Emergency presentations or hospital admissions equal to or greater than 3 hours in duration that relate to a respiratory illness, insert the total number. This includes all URTIs including the following; ear infections, croup, whooping cough, pharyngitis, tonsillitis, viral infection. This also includes all LRTIs including; bronchiolitis, pneumonia, LRTI, ventolin responsive wheeze, asthma, cough, emphyema, pleural effusion, consolidation on CXR. List the total number of admissions inside the box, if they have no previous admissions move to Q8.

7B.
List any previous severe lower respiratory infections only. Severe LRTI is defined as any child that admission that would meet the inclusion criteria for this study. (please refer to CRF 1A).

Complete one row per admission:

- **Number:** include the number of each admission in the 'Num' column (first admission to most current)
- **Date:** List the date of the admission
- **Diagnosis:** Tick one of the listed options to record the discharge diagnosis or list under the other option
- **Length of stay:** Record the length of stay in days, if less than 24 hours list as one day.
- **Discharged from:** Indicate what department/ward/unit child was discharged from.

Parental Questionnaire

Please interview the parent for the answers to the following questions, this questionnaire will take approximately 15 minutes to complete so ensure the parent is able to complete it at this time. All of the questions relate to at time of enrolment i.e. 'at this current moment in time'.

8. Indicate who is present when you are completing the questionnaire, tick as many boxes as required. Only tick legal guardian if different from the Mother or Father.

9. Read this question aloud to the parent exactly as it is worded and document their answer, it is important to ask this question before any other questions to ensure that the answer is not influenced by the subsequent questions.

10. Ethnicity

Ethnicity will be recorded by the census questionnaire this will allow us to compare this group of children with the national census data.

The interviewer states: please use this card to tell me which ethnic group or groups your child belongs to.

- New Zealand European
- Mäori
- Samoan
- Cook Islands Maori
- Tongan
- Niuean
- Chinese
- Indian
- Other (such as Dutch, Japanese, Tokelauan). Please state.

The interviewer ticks all that apply. Asking the question in this way allows for more than one ethnicity to be selected. It also allows reporting of all other ethnic groups chosen by the person in the open ended 'other' category. It facilitates self-identification and allows the person to pick one or a number of categories that they identify with. This method reduces interviewer bias.

Additional Information on collecting ethnicity (as from Statistics NZ)

Ethnicity is the ethnic group or groups that people identify with or feel they belong to. Ethnicity is a measure of cultural affiliation, as opposed to race, ancestry, nationality or citizenship. Ethnicity is self perceived and people can belong to more than one ethnic group. An ethnic group is made up of people who have some or all of the following characteristics:

- a common proper name
- one or more elements of common culture which need not be specified, but may include religion, customs, or language
- unique community of interests, feelings and actions
- a shared sense of common origins or ancestry, and
- a common geographic origin.

This definition is based on the work of Smith (1986).

Collection of ethnicity presents some difficulties. People report a range of aspects of their identities such as cultural affiliation, ancestry, nationality and race when asked for ethnic group identification. Evidence suggests that people may answer the question easily but not understand the ethnicity concept being asked for. Another difficulty is that some may report one ethnic group but identify with more than one, or report more but in fact identify with fewer groups. Finally, a number of people object to answering an ethnicity question and may refuse to answer or may answer facetiously. When collecting ethnicity information, people need to be able to state their specific ethnic groups without being forced to identify themselves in a more general category. Detailed ethnic group information is to be collected in order to allow categorisation at the most detailed level of the Standard Classification of Ethnicity, level four. Data can be aggregated into a smaller number of categories as users require.

http://www2.stats.govt.nz/domino/external/web/carsweb.nsf/55d63ae38ba3a25e4c2567e6007f6686/35d9b7e17a1d6151cc25701100031353?OpenDocument

11. Household and Housing

11.1 This question is intended to ascertain how many adults are living in the house with the child at the time of enrolment, even if there are visitors staying at that current time they are counted. Adults are classified as aged over 15 years.

11.2 This question is intended to ascertain how many children are living in the house with the child at the time of enrolment. Children are classified as aged under 15 years.

11.2.1 Further categorise the total number of children in to the listed categories of ages as listed. The age listed included the day of their birthday e.g. 5 years to 9 years = Include from 5th birthday to 9 year up until the day of their 10th birthday.

11.3 The birth order of the enrolled child, include all siblings born to the mother of the enrolled child.

11.4 List all children who currently reside in the house (total number collected for Q9.2) who attend a day care including the following: registered daycare, care and/or kindergarten, playcentre, PORSE or equivalent. If you are unsure please list any group the child attends so a senior research team member can review the information.

11.5 This question is to assess the ability of the main carer to access healthcare when required and in addition will also enable the CHW's to assess ability to follow up the family. Do they have access to a car between the hours of 9am-5pm.

11.6, 11.6.1 to 11.6.5 This residence is where the child and their family live most of the time, their current residence.

NOTE: if a family is currently living in a garage count number of rooms as zero, and list 'garage' under other for Q11.6.5

11.7 Please collect this data according to the lists included, this question is the same as the national census, and this will enable our research team to compare these families with national and local populations.

11.8 Home insulation includes any form of insulation in the building e.g. in the ceiling, walls or under floor commonly found products include pink batts, glass wool, eco batts and Expol underfloor insulation.

11.9 This refers to the presence of mould/mildew in the house including wet windows in the mornings. This question does not refer to whether the mould or mildew is cleaned off but whether it occurs in the household.

11.10 This included full or part time work and short term contract work.

NOTE: Where parents share custody of a child document the family situation for where the child spends most of their time. If the child spends equal amount of their time at two different homes record two sets of data for each home on the CRF. When entering the information in the database enter the 'worst' exposure this child has. *Example: if there are 2 smokers in one household and 4 smokers in the other household enter 4 in to the database, or where there is more home overcrowding.*

12. Smoking

This includes any time within the pregnancy for a period greater than six weeks. Record the average number of cigarettes smoked per day over a week.

12.1 The smoking question relates to any smoke exposure, including people that smoke outside.
12.2-12.5 List the number of immediate family who smoke
12.6 List if the family members have been already referred or going to be referred to the smoking cessation service during this hospital admission. If the parent is still considering this tick unsure and follow up will be conducted at a later date to see if a referral was made.

13. Family History Asthma/Eczema

13.1-13.2 confirm history of Asthma or Eczema in only the listed family members this does not include the extended family.

14. Feeding

14.1 Breast milk fed includes both breastfed and fed expressed breast milk.

14.1.1 Record if the child is still receiving breast milk

14.1.2 List what age (whole months) they stopped receiving breast milk *If still receiving breast milk indicate this by ticking the 'Currently Breast fed' Box, if it is not know when they ceased BF then tick 'Unsure'.* Anything < 3 weeks is 0 months and anything ≥ 3 weeks can be rounded up to one month.

Note: Even if the child is now receiving solid foods but not receiving any other form of milk (additional formula) this is still considered exclusive breast feeding.

14.1.3 List the age in whole months of when the child stopped receiving exclusive breast milk. Tick N/A (not applicable) if the child was never exclusively breastfed or if they are still exclusively breastfed (Given mother's milk exclusively without additional formula feeding). Anything < 3 weeks is 0 months and anything ≥ 3 weeks can be rounded up to one month.

14.2 Vitamin supplements, 13.2, 13.2.1 and 13.2.2 Confirm if the child is taking any additional prescribed or non prescribed supplemental vitamins. While not common the child may be receiving vitamin C, iron or vitamin D. Please include any non prescribed vitamins, even if you are unsure if its relevant please include it.

14.3 Choking or Gagging during feeding, 13.3.1, This question is trying to ascertain that the child does not have any colic or reflux symptoms and/or ENT problems that might be resulting in aspiration.

14.4 Vomiting during feeding, 13.4.1, This question is trying to ascertain that the child does not have any colic or reflux symptoms and/or ENT problems that might be resulting in aspiration.

14.5 If the parent responds yes to this question **14.3 or 14.4** a senior research team member should review this patient prior to discharge where possible. This may need investigation please inform the medical team caring for the child while in hospital.

14.6 For study investigator to complete only when a review has been undertaken as Q13.3 or Q13.4 was recorded as yes and a review by a study investigator was required.

15. Cough

15.1 A 'cough prior to this illness' refers to a different episode/illness before this illness began (greater than 7 days before this hospital admission).

15.1.1'An episode of cough' is defined as a period of illness where the child develops a cough for more than 24hrs and then the cough goes away (the child has no cough) for a period of at least 7 days before starting a new episode.

16. Wheeze

16.1, 16.1.1-16.1.2 Please refer to the electronic training file to hear what a wheeze sounds like. You may have to explain what wheeze is for parents. To explain this to parents you can use terms such as *'whistling', 'crackling', 'noisy,' 'squeaky' 'rasping' sounding breathing*.

17. Shortness of breath

17.1 This can be also described to parents as *'rapid, fast breathing'* or you can also describe what it looks like *'ribs sucking in'* or in infants less than 6 months old *'head bobbing, nasal flaring or tacheal tug'*.

18. Asthma

18.1 Doctor diagnosis of asthma only included here, this may be any doctor from a GP, hospital specialist or if a/hrs clinic tick GP.

19. Allergies

19.1 An allergy of any kind can be included here this may be parental impression or medically diagnose and may include; a medication allergy, food allergy, hay fever, bee stings, atopic allergy, common allergens other than food may include grass, dust, animals, pollens.

19.2 Eczema, check if the parent has ever been told by a health professional that their child has eczema and/or has persistent itchy skin irritation. The definition of eczema: is a form of dermatitis, or inflammation of the epidermis (the outer layer of the skin).

20. Ear/Nose

The intent behind ear/nose questions is to ascertain if the child has occasional or continued infection of the upper airway.

20.1 Ear infection as diagnosed by a health professional and/or had a definite sign of ear infection such as exudate coming from the ears.

20.2 Record the frequency of the runny nose, this is just an impression from the parent.

21. Medication

21.1 This question refers to prescribed medications that they have had previously. You may also look at concerto if the parent is unsure as it will list them there. If the parent answers yes please list and/or tick all medications that the child has had any anytime prior to this hospital admission.

21.1.1 Paracetamol other names include pamol, parapaed, paracare, acetaminophen,

21.1.2 Blue inhaler is referring to any inhaler that is a bronchodilator such as ventolin, salbutamol, respigen. (if yes please indicate frequency)

21.1.3 Other inhalers this may include preventer inhalers such as flixotide. (if yes please indicate frequency)

21.1.4 Oral steroids, this may include redipred, predisolone

21.1.5 Antiobiotics examples may include; amoxycillin, Amoxycillin and clavulanic acid, penicillin, erythromycin, flucloxicillin.

22. Clinical Examination at enrolment

The clinical examination is to be undertaken by the research nurse who has completed the study training and/or one of the study investigators. The clinical examination is to be undertaken prior to discharge from hospital, ideally the day of discharge or as close to discharge as possible.

22.2 Record your name or the person who undertook the clinical examination.

22.3 -30.7 Record the following observations

22.8 Record what you observe and hear, examine of the child's chest shape and listen for any audible inspiratory stridor, look at the child's fingers for any early signs of clubbing. If you are ever unsure please confirm your findings with the senior research team.

22.9 Record if you hear the child cough during your examination period and record the nature of the cough. Please refer to cough sounds training for clarification of dry or wet cough.

23. Additional Comments

Record any additional comments in this section this could be related to additional findings during the clinical examination or additional information regarding the families' social situation that the community clinics should be aware when providing health care for this child and family.

24. Hospital Admission Summary

Clinical Information & Admission Data

24.1-24.2 List the date and time the child was discharged, the date listed on the discharge summary.

24.3-24.4 List the discharge diagnosis listed on the discharge summary. If there is any question, or this diagnosis does not appear consistent with the diagnosis expressed by the senior medical staff caring for the patient and/or the clinical tests performed please ask the on call consultant or senior medical registrar or Dr Adrian Trenholme to review and confirm the diagnosis.

25. Observations

The observations are as recorded in the initial assessment completed at presentation to the emergency department. The observations are located on the front sheet of the emergency care assessment form.

25.1, 25.2 Record respiratory rate and heart rate if not recorded on emergency form write *N/A.*

25.3 If oxygen saturations on air are not available please check if they were taken either at the GPs (located on the referral letter), in the ambulance and/or at triage. If oxygen was given prior to oxygen being given in EC/at admission mark as *N/A.* i.e. oxygen given in ambulance prior to admission,

25.4 List the weight as recorded in the emergency department, in kilograms (kg).

25.5 List the patients' work of breathing as listed by the admitting paediatric doctor.
25.6 List if the admitting **paediatric** doctor recorded wheeze and/or crackles in their respiratory examination of the child.

26. Oxygen treatment given

This refers to the **maximum** oxygen given during the entire hospital admission.

27. Admission to:

List as many locations the child was admitted to during this hospital admission.

28. Interventions:

List if any of the listed treatments were given at any point during the hospital admission for any duration.

29. Medications:

This question refers to only the medications given during this hospitalisation. (For a list of examples please refer to Q21).

30. Clinical Tests:

30.1-30.1.1 Nasopharyngeal sample: Please indicate if the sample was taken during this hospital admission, and indicate the test result by ticking the appropriate box. If the test was negative please tick *'no virus found'.*

30.2 Full blood count: Haemoglobin (Hb) and Red cells:

Indicate if the two tests listed as part of the FBC were abnormal the reference range varies with age so please refer to the result as shown on concerto which will indicate the correct reference for the age of the child as part of the result (or refer to table below). For RBC results refer to the comment on red cell morphology at the bottom of the table (see screen shot).

Full Blood Count

Haemoglobin	111	g/L		105-136
RBC	4.73	x E12/L		4.0-5.3
Haematocrit	0.34			0.31-0.40
Mean Cell Volume	72	fL		69-84
Mean Cell Haemoglobin	23.5	pg		22-29
RDW	14.5			12.0-16.0
Platelets	290	x E9/L		150-575
MPV	9.6	fL		9.0-12.2
WBC	14.7	x E9/L		6.4-17.0
Neutrophils	9.4	x E9/L	H	0.9-5.9
Monocytes	1.2	x E9/L		0.3-1.5
Lymphocytes	4.1	x E9/L		3.5-11.5
Blood Film				
Authorised by				

Blood Film
RED CELLS - normal morphology
Reported by: Gillian Blackwell

- The RBCs are **normal** if specified as normal or there if is rouleaux or agglutination present without increased numbers of cells (see below).
- The RBCs are **abnormal** if there are an increased numbers of cells i.e echinocytes, polychromatic cells, hypochromic cells, stomatocytes, poikilocytes, spherocytes, microcytes, macrocytes or target cells.

Please check with Charissa or Adrian if you are unsure of the result

Note: if the child has more than one FBC record the lowest Hb that was reported during their admission. Where there are multiple tests please print out a 'cumulative report' showing all results and attach to the CRF for the GP clinic.

Age		2 DAYS	1 WEEK	2 WEEK	1 MONTH	2 MONTHS	4 MONTHS	1 TO 4 Years
RBC	x 10^{12}/L	3.5 - 6.0	3.2 - 6.4	3.1 - 6.0	2.9 – 4.8	3.3 - 4.8	4.0-5.3	4.0-5.4
HB	g/L	152-228	135-215	125-205	93-158	97-130	105-136	105-136

30.3 Blood Culture: This result may not be available for up to 14 days, so it will need to be followed up by the team at a later date . When it is available list the organism found if positive.
30.4 Chest X-ray: Enter the total number of chest x-rays taken for this hospital admission.

31. Medications at discharge

This only refers to medications prescribed to be taken after the child is discharged.

32. Discharge Follow up

List any services that the child is actively referred to, while the discharge summary is sent to the GP this is not considered an active referral and the term 'thank you for your on-going care' is not an active referral. An active referral would have to provide instructions within the discharge summary asking the GP to see the patient for a specific reason e.g. review of medications, screening for iron deficiency or a repeat chest x-ray review.

33. Discharge summary and discharge medication.

Handover sheet and discharge summary

Abbreviations

- CHW: Community health worker
- CLD: Chronic Lung Disease
- CPAP: Continuous Positive Airway Pressure
- CRF: Case report form
- DTap-IPV Hib-HepB: Diphtheria, Tetanus, Pertussis, Polio, Haemophilus Influenzae type B and Hepatitis B combined vaccine. Infanrix®-hexa.
- ED: Emergency Department
- GP: General Practitioner
- Hib: Haemophilus Infuenzae Tybe B vaccine
- LRI: Lower respiratory infection
- LRTI: Lower respiratory tract infection
- MMR: Measles, Mumps and Rubella Vaccine
- NICU: Neonatal Intensive Care Unit
- Per min: 1 minute
- PSSU: Paediatric Short Stay Unit
- RDS: Respiratory Distress Syndrome
- SSU: Short Stay Unit
- TB BCG: Tuberculosis Bacillus Calmette-Guérin is a vaccine against tuberculosis
- URTI: Upper respiratory tract infection

CRF 1B - Randomisation

Date of randomisation _____ **Time** _____

5. **Enrolment/Randomisation Number.....**

(NB: Attach randomisation card to case report form)

☐ **Non Intervention Group**

☐ **Intervention Group**

Community Clinic

☐ Otara

☐ Manurewa

☐ Mangere

☐ Pukekohe

5.1 Parent/s informed of outcome of randomisation ☐No ☐Yes *by:*_____ _

Patient Label

6. Birth History

6.1 Gestational age: _____ *(whole weeks)*

6.2 Birth weight: _____ *(gms)*

6.3 Age of mother at birth of child *(select)* ☐<20 years ☐20-25 years ☐ >26 years

6.4 **NICU admission**

☐No ☐**Yes** (Length of stay): _____days

If Yes;

6.4.1 **Interventions:**

CPAP >1 hour	☐Yes	☐No
Intubation	☐Yes	☐No

6.4.2 **Other discharge diagnosis:**

RDS	☐Yes	☐No
Neonatal sepsis	☐Yes	☐No
Feeding difficulties	☐Yes	☐No
CLD	☐Yes	☐No
Meconium exposure	☐Yes	☐No
Pneumonia	☐Yes	☐No

Other: *(Specify)* _____

_____

_____

6.5 Parental history of immunisation status at enrolment

6.5.1 Immunisations up-to-date at admission:

☐Yes ☐**No** ☐Too young for immunisations ☐Unknown

6.5.2 **If No,** ☐No immunisations

☐Overdue for next immunisation

AGE	(Please tick in box for immunisations given)					
	DTaP-IPV Hib-HepB	Hib	MMR	Pneumococcal	TB BCG	Immunisation delayed by >4 weeks from recommended time Y/N
Birth					* ☐Unknown ☐Yes ☐No	
6 weeks	*			*		
3 months	*			*		
5 months	*			*		
15 months		*	*	*		
4 years	(DTap-IPV) *					

Other immunisation _____ Date: _____

Other immunisation _____ Date: _____

Other immunisation _____ Date: _____

Past Medical History

7. Previous Hospital presentations ≥3 hours:

A/ ☐ Total number of previous respiratory EC presentations ≥3 hours and hospital admissions (including all URTI's and LRTI's).

B/ List previous severe **lower** respiratory admissions: *(severe = inclusion criteria)*

Num	Date	Diagnoses
	___/____/___	**LRTI** *(Specify)* ☐Bronchiolitis ☐Pneumonia ☐LRI ☐Other: _____ **Length of stay** _____days ICU/PICU: ☐Yes ☐No **Discharged from**: ☐Ward ☐SSH
	___/____/___	**LRTI** *(Specify)* ☐Bronchiolitis ☐Pneumonia ☐LRI ☐Other: _____ **Length of stay** ____days ICU/PICU: ☐Yes ☐No **Discharged from**: ☐Ward ☐SSH

Parental Questionnaire at Enrolment

8. Relation to child: ☐Mother ☐Father ☐Grandparent ☐Aunt/Uncle ☐Other_____

9. Do you consider your child healthy? ☐Yes ☐No ☐Unsure

10. Parent reported Ethnicity of their child *(Show parent card)*

Ethnicity:
☐New Zealand European
☐Maori
☐Samoan
☐Cook Island Maori
☐Tongan
☐Niuean
☐Chinese
☐Indian
☐Other: *(Specify)* _____
_____

11. **Household and Housing**

11.1 How many adults live in the household? _____
(Adults are 15 years and older, including visitors)

11.2 How many children live in the household? _____
11.2.1 0-4 years _____ 5-9 years _____ 10-14_____

11.3 Birth order of enrolled child: ☐1 ☐2 ☐3 ☐4 ☐5 ☐more _____

11.4 Number of children attending day care: ☐0 ☐1 ☐2 ☐3 ☐more _____

11.5 Do you have the following available to you?
11.5.1 Access to a car for you to use between 9am-5pm ☐Yes ☐No
11.5.2 Access to a telephone ☐Yes ☐No

11.6 Concerning your home, is it:
11.6.1 ☐Housing New Zealand
11.6.2 ☐Private rental
11.6.3 ☐Your own home
11.6.4 ☐Temporary accommodation
11.6.5 ☐Other: *(Describe)* _____

11.7 How many rooms are there in your dwelling?
(Do not count bathrooms, showers, toilets, laundries, halls, garages, and pantries)

Count; Count open-plan rooms such as kitchen-lounge-dining as three rooms

	Bedrooms.
	Kitchens.
	Dining rooms.
	Lounges or living rooms.
	Rumpus rooms, family rooms etc
	Conservatories you can sit in.
	Studies, studios, hobby rooms etc.
	Total

11.8 Does the house have insulation ☐Yes ☐No ☐Unsure

11.9 Is there mildew (mould) or damp patches in your home? ☐Yes ☐No ☐Unsure

11.10 How many people in your house are currently in paid employment?
☐0 ☐1 ☐2 ☐3 ☐more _____

12. **Smoking**

12.1 Did Mother smoke during pregnancy? ☐**Yes** ☐No ☐Unsure
12.1.1 **If yes,** number of cigarettes smoked per day? _____cig/day

12.2 Child currently smoke exposed?
☐No ☐**Yes** ☐Unsure

If Yes, *(tick at least one)*
12.2.1 Does the Mother/Main caregiver smoke ☐Yes ☐No
12.2.2 Does the Father smoke ☐Yes ☐No ☐N/A
12.2.3 Other household member smoke ☐Yes ☐No
12.2.4 Do they smoke inside ☐Yes ☐No ☐Unsure
12.2.5 Number of smokers in the house:_____
12.2.6 Referred to smoking cessation service ☐Yes ☐No ☐Unsure

13. **Family History**

13.1 Is there a family history of Asthma in any of the following:
☐No ☐Sibling ☐Parent ☐Aunt/Uncle ☐Grandparent ☐Unsure

13.2 Is there a family history of Eczema in any of the following:
☐No ☐Sibling ☐Parent ☐Aunt/Uncle ☐Grandparent ☐Unsure

Child's Medical History

14. **Feeding**

14.1 Was the child breast milk fed at anytime?
☐No ☐**Yes** ☐Unsure

If Yes, *(tick at least one)*
14.1.1 Still breast milk fed ☐Yes ☐No ☐Unsure
14.1.2 Breast milk fed until_____ months of age ☐ Currently Breast Fed ☐ Unsure
14.1.3 Duration of exclusive breast milk feeding_____ months of age ☐N/A

14.2 Do you give your child vitamin supplements?
☐No ☐**Yes** ☐Unsure

14.2.1 **If Yes;** ☐Frequently ☐Occasionally
14.2.2 Name of Vitamin; ☐Vitadol C ☐Iron ☐Vitamin D ☐Other:_____

14.3 When your child feeds do they **choke,** or **gag**?
☐No ☐**Yes** ☐Unsure

14.3.1 **If Yes**, how often? ☐Most feeds ☐1 or more times per day ☐1 or more times per week ☐Rarely ☐Not sure

Continue to Q14.4

14.4 When your child feeds do they **vomit**?
☐No ☐**Yes** ☐Unsure

14.4.1 **If Yes**, how often? ☐Most feeds ☐1 or more times per day ☐1 or more times per week ☐Rarely ☐Not sure

14.5 **If yes to Q14.3 or Q14.4 please discuss with senior research staff**
14.6 **Investigator review:** ☐Yes ☐No ☐*Not available*

15. **Cough**

15.1 Has your child ever had a cough before this episode of illness?
☐ No ☐ **Yes**

15.1.1 **If Yes,** nature of cough: ☐Dry ☐Wet ☐Not sure
15.1.2 How many episodes of cough: ☐<3 ☐ 3-6 ☐>6
15.1.3 Has your child coughed **every day** or **nearly every day** since birth?
☐Yes ☐No ☐Unsure

16. **Wheeze**

16.1 Has your child ever had a wheezing episode before this episode of illness?
☐No ☐ **Yes**

16.1.1 How many episodes of wheeze: ☐<3 ☐ 3-6 ☐>6
16.1.2 Has your child woken up at night with wheezing prior to this episode?
☐Yes ☐No ☐Unsure

17. **Shortness of breath**

17.1 Has your child ever had an episode of shortness of breath before this episode of illness?
☐No ☐**Yes**

17.1.1 How many episodes: ☐<3 ☐ 3-6 ☐>6

18. **Asthma**

18.1 Has a doctor ever told you your child has Asthma?
☐No ☐**Yes**

If Yes, *(whom)* ☐GP ☐Specialist

19. **Allergies**

19.1 Does your child have any allergies? ☐**Yes** ☐No ☐Unsure
If Yes, (*name)* _____ _____
19.2 Does your child have eczema? ☐Yes ☐No ☐Unsure

20. **Ear/Nose**

20.1 Has your child ever had an ear infection? ☐Yes, *(number)*_____ ☐No
20.2 How often does your child have a runny nose? ☐Always ☐Often ☐Sometimes ☐Never

21. **Medications**

21.1 Has your child ever had any of the following medications?

21.1.1 Paracetamol ☐Yes ☐No

21.1.2 Blue inhalers (Ventolin, Respigen) ☐**Yes** ☐No

If Yes, *Frequency*; ☐Everyday ☐Occasionally

21.1.3 Other inhalers (Flixotide, Pulmicort) ☐**Yes** ☐No

If Yes, *Frequency*; ☐Everyday ☐Occasionally

21.1.4 Oral steroids ie; Redipred/other ☐Yes ☐No

21.1.5 Antibiotics ☐**Yes** ☐No

If Yes, *(List type)* _____

☐Unknown

21.1.6 Other (*List)* _____

_____

22. Clinical Examination at enrolment

Patient label

22.1 **Date of Examination:** _____

22.2 **Name of Nurse/Doctor:** _____

22.3 Resp rate per min (At this examination)	22.4 Heart Rate per min (At this examination)	22.5 Oxygen sats- if on oxygen list how much	22.6 Work of breathing	22.7 Head Circumference
		_____% ☐None ☐<1L ☐1-2L ☐>2L	☐Normal ☐Mild ☐Moderate ☐Severe	_____Cm

22.8 **Respiratory** *(tick at least one)*

☐Normal ☐Chest recession
☐Stridor ☐Chest wall deformity
☐Clubbing
☐Other *(Specify)* _____

22.9 **Cough during examination**

☐No cough
☐Dry cough
☐Wet cough
☐Other *(Specify)* _____

23. **Additional Comments:** _____

24. Hospital Admission Summary

24.1 **Discharge Date:** _____ 24.2 **Time:**_____:_____	24.3 **Discharge Diagnoses:** ☐Bronchiolitis ☐Pneumonia ☐Bronchopneumonia ☐LRTI ☐Asthma ☐Other, *(Specify)*_____
24.4 **Secondary Diagnosis:** ☐None	

25. Observations on arrival at hospital (EC)

25.1 Resp rate Per min	25.2 Heart rate Per min	25.3 Oxygen sats On air	25.4 Weight	25.5 Work of breathing *(tick at least one)*	25.6 Respiratory exam *(tick at least one)*
		☐N/A	_____ Kg	☐ Normal ☐ Mild ☐ Moderate ☐ Severe ☐N/A	☐ Wheeze ☐Crackles ☐N/A

26. Maximum oxygen used during admission:

None	<1L	1-2L	>2L

27. Admission to:

Emergency	☐Yes	☐No
SSU	☐Yes	☐No
Kidz First Ward	☐Yes	☐No
ICU MMH	☐Yes	☐No
PICU Starship	☐Yes	☐No
Starship Ward	☐Yes	☐No

28. Interventions:

Mechanical Ventilation	☐Yes	☐No
CPAP	☐Yes	☐No
High Flow O_2	☐Yes	☐No
CRIB study	☐Yes	☐No
IV fluids	☐Yes	☐No
NG tube feeds	☐Yes	☐No

29. Medications given during admission:

Antibiotics	☐**Yes**	☐No
If Yes, (*Specify*) _____	_____	_____
Bronchodilators	☐**Yes**	☐No
If Yes, (*Specify*) _____	_____	_____
Steroids (oral or IV)	☐Yes	☐No
Inhaled Steroids	☐Yes	☐No

30. **Clinical Tests**

30.1 Nasopharyngeal sample:
☐No ☐**Yes** Date:_____

30.1.1 **If Yes, Viruses isolated:** *Please tick all viruses found*

☐No virus found	☐Influenza A	☐Influenza B	☐H1N1
☐Adenovirus	☐Para Influenza 1/2/3	☐Human metapneumovirus	☐RSV
☐Cytomegalovirus	☐Pertussis	☐Rhinovirus / Enterovirus	

Other:_____

30.2 Full blood count taken:
☐No ☐**Yes**

If Yes, Abnormal Hb ☐Yes ☐No
Abnormal red cells ☐Yes ☐No

30.3 Blood culture taken:
☐No ☐**Yes**

If Yes, Blood culture positive ☐Yes ☐No

Organism:_____

30.4 Chest x-ray taken: ☐**Yes** ☐No

If Yes, number taken; _____

31. **Discharge Medications**

Antibiotics	☐**Yes**	☐No
If Yes, (*Specify)* _____	_____	_____
Bronchodilators	☐**Yes**	☐No
If Yes, (*Specify)* _____	_____	_____
Steroids (oral or IV)	☐Yes	☐No
Inhaled Steroids	☐Yes	☐No

Other (*Specify)* _____

32. **Discharge Follow up** ☐**Yes** ☐No

If Yes,

Home care nursing	☐Yes	☐No
Out patient clinic	☐Yes	☐No
GP	☐Yes	☐No

Other (*Specify)* _____

33. **Discharge Summary**

Attach discharge summary, chest x-ray report and blood test results.

Patient Label

CRF 1C - Daily screening sheet

Date of presentation: ___/___/___ Time __:___

Date of discharge: ___/___/___ Time __:___

Patient NZ Resident ☐Yes ☐No

1. **Location**

☐Kidz First Medical Room No. _____
☐Kidz First Surgical Room No. _____
☐ICU
☐Starship SSH Notified ☐Yes ☐No
☐Discharged

2. **Reason for additional screening** (*tick at least one*)

2.1 ☐Bronchiolitis not yet eligible
2.2 ☐Unconfirmed diagnosis
2.3 ☐Clarify medical history
2.4 ☐No legal guardian present
2.5 ☐Awaiting consent from legal guardian
2.6 ☐Social (*Describe reason)*_____
_____
2.7 ☐Enrolled/Randomised CRF1 incomplete
2.8 ☐Post enrolment readmission further follow up required (1E form) ☐AE or ☐ SAE
2.9 ☐Awaiting discharge date

3. **Additional Information:**

Number of previous severe respiratory admissions_____

Chest x-ray taken: Yes ☐ No☐

_____
_____
_____
_____
_____
_____ ☐PTO

Results/information still outstanding:

Tick if required	Tick when completed
☐ NPA	☐
☐ FBC	☐
☐ CXR Report	☐
☐ Blood Culture	☐
☐ Discharge Summary	☐
☐ Hours on oxygen	☐
☐ Notes needed ☐ Tick if Ordered- Date: ……/…../…….	☐
☐Other (*specify)*	☐

4. Outcome
☐Completed CRF 1A
☐Completed CRF1A+B
☐Completed CRF 1E
☐Patient did not meet inclusion criteria
☐**1A and B entered on database**
☐**Letter to GP- LLC to complete**

Patient Label

3. **Additional Information continued:**

Daily screening sheet Guideline 1C

This form is to enable handover between research nurses for all currently active patients on the screening log found in the research database (i.e is still an in-patient).

A form must be completed for every patient who is:

- being actively screened for possible inclusion in the study **or/**
- currently enrolled and randomised but not yet discharged **or/**
- already enrolled and randomised and have returned to the emergency department or are re-admitted to hospital

Insert the **date and time of presentation** to the emergency department (not the date you are completing the form). This will help determine eligibility for patients with bronchiolitis are yet to meet the inclusion criteria.

Insert the **date and time of discharge** from the hospital ward to their primary care practitioner. This will help determine eligibility for patients with bronchiolitis are yet to meet the admitted for equal to or greater than 6 days within 3 months inclusion criteria.

1. Location: List the current patient location when you are completing the form **or** where the patient will be located so the research nurse can find them the following day. As this location may change several times during the child's in-patient stay keep updating this section, inserting a date next to each amendment.

2. Select one or more reasons for completing the screening form as indicated. Provide as much information for your colleagues as possible.

2.1 Bronchiolitis not yet 4 days duration and/or not yet 36 hours oxygen.
2.2 and **2.3** You are unable to confirm the diagnosis and are awaiting a decision from the medical team and/or awaiting test results to confirm diagnosis. (provide a summary of this in the additional comments section).
Infants admitted with fever no focus should be monitored for at least 48 hours and/or until a diagnosis is found.
2.4 There was no legal guardian present for consent, indicate a time the legal guardian may be present, if this is after hours contact the senior research team to see if anyone is available to consent the person outside of normal working hours.
2.5 The legal guardian has requested further time to consider consent, where possible arrange a time window to return to the legal guardian to obtain an answer regarding the study.
2.6 Where there are social circumstances that require further investigation/information prior to approaching the legal guardian for consent. For example a child in CFYS care where you are awaiting confirmation on who the legal guardian is and/or a child is under investigation for child protection issues. (Please refer these cases to the principal investigator or project manager).
2.7 Awaiting discharge date to complete the screening- where the patient is admitted with Bronchiolitis but does not meet the severity criteria.
2.8 Awaiting further information to enable you to complete CRF1 to ensure eligibility (Please leave additional information).

Note: A child may be excluded before all inclusion criteria is met.

Example A child under two admitted with bronchiolitis that has not had 36 hours of oxygen, or an ICU/PICU admission or an admission of 4 days but has a chronic condition.

In this instance we would keep screening to see if the child is going to meet the inclusion criteria to ensure we collect data on all eligible patients. Therefore complete the daily screening CRF1C to see if the patient meets inclusion. If they do meet inclusion criteria complete CRF 1A and enter the information in to the database. If they don't meet inclusion do not complete CRF1A and file the daily screening sheet with the crystal report.

2.8 To be completed for patients who are already enrolled who re-present to hospital. Form 1E has been commenced however, further information is still required up until discharge or all lab results are reported.

3. Provide as much detail as possible for your colleagues to ensure they understand each individual situation. This information will not be in the database it is a handover information area to communicate to each other.

4. Once the daily screening sheet is complete indicate the patient outcome.

Enter all CRFs into database once complete.

Once this form is complete:

- For all enrolled and randomised patients; file screening form 1C with the crystal report from the day the patient presented to the emergency department. The crystal reports are filed in the filing cabinet in the research office on the Kidz First Medical floor end of C Pod.
- For all patients not enrolled; file CRF1A and screening form 1C with the crystal report from the day the patient presented to the emergency department. The crystal reports are filed in the filing cabinet in the research office on the Kidz First Medical floor end of C Pod.
- Patient not eligible, i.e. confirmed diagnosis is asthma. Document diagnosis on crystal report from the day the patient presented to the emergency department. Complete the screening log in the data and dispose of the paper form in the confidential bin.

CRF 1E **Patient Label**

Patient Enrolment No. ☐

1. Emergency department or Hospital Admission following Enrolment

1.1 **Hospital admission number post study enrolment** *(insert number)* ☐

1.2 **ED/SSU presentation number post study enrolment** ☐

1.3 **Date Admitted:** _____ **Time:**____:____ 1.4 **Date Discharged:** _____**Time:**____:___	1.5 **Discharge Diagnoses:** ☐Bronchiolitis ☐Pneumonia ☐Bronchopneumonia ☐LRTI ☐Asthma ☐Other, *(Specify)*_____
1.6 **Secondary Diagnosis;** ☐None	

2. Observations on arrival at hospital

2.1Temp	2.2 Resp rate per min	2.3 Heart rate per min	2.4 Oxygen sats on air	2.5 Weight	2.6 Work of breathing *(tick at least one)*	2.7 Respiratory exam *(tick at least one)*
_____	_____	_____	_____% ☐N/A	____Kg	☐Normal ☐Mild ☐Moderate ☐Severe ☐N/A	☐Wheeze ☐Crackles ☐N/A

3. Maximum oxygen used during admission:

None	<1L	1-2 L	>2 L

4. Admission to:

Emergency	☐Yes	☐No
SSU	☐Yes	☐No
Kidz First Ward	☐Yes	☐No
ICU MMH	☐Yes	☐No
PICU Starship	☐Yes	☐No
Starship Ward	☐Yes	☐No

5. Interventions:

Mechanical Ventilation	☐Yes	☐No
CPAP	☐Yes	☐No
High Flow O_2	☐Yes	☐No
CRIB study	☐Yes	☐No
IV fluids	☐Yes	☐No
NG tube feeds	☐Yes	☐No

6. **Medications Given:**

Antibiotics	☐**Yes**	☐No
If Yes, (*Specify)* _____	_____	_____
Bronchodilators	☐**Yes**	☐No
If Yes, (*Specify)* _____	_____	_____
Steroids (oral or IV)	☐Yes	☐No
Inhaled Steroids	☐Yes	☐No

7. **Clinical Tests**

7.1 Nasopharyngeal sample:
☐No ☐**Yes** Date:_____

7.1.1 **If Yes, Viruses isolated:** *Please tick all viruses found*

☐No virus found	☐Influenza A	☐Influenza B	☐H1N1
☐Adenovirus	☐Para Influenza 1/2/3	☐Human metapneumovirus	☐RSV
☐Cytomegalovirus	☐Pertussis	☐Enterovirus / Rhinovirus	

Other:_____

7.2 Full blood count taken:
☐No ☐**Yes**

If Yes, Abnormal Hb	☐Yes	☐No
Abnormal red cells	☐Yes	☐No

7.3 Blood culture taken:
☐No ☐**Yes**

If Yes, Blood culture positive	☐Yes	☐No

Organism:_____

7.4 Chest x-ray taken: ☐**Yes** ☐No
If Yes, number taken; _____

8. **Discharge Medications**

Antibiotics	☐**Yes**	☐No
If Yes, (*Specify)* _____	_____	_____
Bronchodilators	☐**Yes**	☐No
If Yes, (*Specify)* _____	_____	_____
Steroids (oral or IV)	☐Yes	☐No
Inhaled Steroids	☐Yes	☐No

Other (*Specify)* _____

9. **Discharge Follow up** ☐**Yes** ☐No
If Yes,

Home care nursing	☐Yes	☐No
Out patient clinic	☐Yes	☐No
GP	☐Yes	☐No

Other (*Specify)* _____

10. **Additional Information for Clinic Staff:**

_____

_____

11. **Healthy Lungs Follow Up:**

☐ N/A Control patient
☐ No follow up required
☐ Community respiratory f/up
☐ Secondary/tertiary clinic follow up
☐ Community Nurse home visit

CRF1E Guideline

Emergency department (ED)/Short Stay unit (SSU) or Hospital Admission following Enrolment

This form is to be completed for patients who either present to the ED/SSU and/or admitted to hospital who are currently enrolled in the study (both control and intervention groups). This data should only be collected for each enrolled patient from enrolment until the patient has completed the 24 month follow up clinic visit *(for all presentations and admissions for any diagnoses)*

A short stay unit stay is counted as an ED presentation.

Note: This form does not need to be completed for the hospital admission when the child was recruited in to the study.

Patients previously lost to follow up should also have a form completed. Fill out a re-establishment of contact form with the family and ask for updated contact details and forward this to the clinic nurse with the parents/legal guardians permission (you need to document permission was granted and ask the parent to sign your documentation).

1.1 Hospitalisation number post study enrolment.
The number of ED/SSU or hospital admission should be listed sequentially from the point of enrolment in the study.

Example:
Patient **John Smith**

- Admission: 01 Jan 2010 prior to enrolment = 0 **No Forrm Completed**
- Admission: 03 March 2010 *Enrolled in intervention study* = 0 **No Form Completed**
- Admission: 04 July 2010 = **1 hospitalisation**
- Admission: 10 October 2010 = **2 Hospitalisations**
- Emergency Department visit (no admission) 15 October 2010 = **1 ED presentation**
- ED and SSU stay 18 October 2010 **= 2 ED presentations**

Note: An ED/SSU presentation number is only allocated for patients who are discharged from the ED without a hospital admission.

Clinical Information & Admission Data

1.3 List the date and time the child was admitted. This is the date the child presented to the emergency department that resulted in the hospital admission.
1.4 List the date and time the child was discharged, the date listed on the discharge summary.
1.5 List the discharge diagnosis listed on the discharge summary. If there is any question, or this diagnosis does not appear consistent with the diagnosis expressed by the senior medical staff caring for the patient and/or the clinical tests performed ask the on call consultant or senior medical registrar or Dr Adrian Trenholme to review and confirm the diagnosis.

2. Observations
The observations are as recorded in the initial assessment completed at presentation to the emergency department. The observations are located on the front sheet of the emergency care assessment form. If not recorded on emergency form write *N/A.*

2.1 Record the temperature in Degrees Celsius
2.2, 2.3 Record respiratory rate and heart rate
2.4 If oxygen saturations on air are not available please check if they were taken either at the GPs (located on the referral letter), in the ambulance and/or at triage. If oxygen was given prior to oxygen being given mark as *N/A.* i.e. oxygen given to ambulance prior to admission,
2.5 List weight as recorded in the emergency department, kilograms (kg).
2.6 List the patients difficulty of breathing as described by medical staff.
2.7 List if the admitting **paediatric** doctor recorded wheeze and/or crackles in their respiratory examination of the child.

3. Oxygen treatment given: This refers to the **maximum** oxygen given during the emergency department visit or hospital admission.

4. Admission to: List as many locations the child visited or was admitted to during this hospital admission.

5. Interventions: List if any of the listed treatments were given at any point during the hospital admission for any duration.

6. Medications: This question refers to only the medications given during this hospitalisation. (For a list of examples please refer to Q23).

7. Clinical Tests:

7.1-7.1.1 Nasopharyngeal sample: Please indicate if the sample was taken during this ED visit or hospital admission, and indicate the test result by ticking the appropriate box. If test negative, tick *'no virus found'.*
7.2 Full blood count: Haemoglobin (Hb) and Red cells:
Indicate if the two tests listed as part of the FBC were abnormal the reference range varies with age so please refer to the result as shown on concerto which will indicate the correct reference for the age of the child as part of the result (or refer to table below).

Age		2 DAYS	1 WEEK	2 WEEK	1 MONTH	2 MONTHS	4 MONTHS	1 TO 4 Years
RBC	x 10^{12}/L	3.5 - 6.0	3.2 - 6.4	3.1 - 6.0	2.9 – 4.8	3.3 - 4.8	4.0-5.3	4.0-5.4
HB	g/L	152-228	135-215	125-205	93-158	97-130	105-136	105-136

7.3 Blood Culture: This result may not be available for up to 14 days, so it will need to be followed up by the team at a later date . When it is available list the organism found if positive.
7.4 Chest X-ray: Enter the total number of chest x-rays taken for this hospital admission.

8. Medications at discharge: This only refers to medications prescribed to be taken after the child is discharged.

9. Discharge Follow up: List any services that the child is actively referred to, while the discharge summary is sent to the GP this is not considered an active referral and the term 'thank you for your on-going care' is not an active referral. An active referral would have to provide instructions within the discharge summary asking the GP to see the patient for a specific reason e.g. review of medications, screening for iron deficiency or a repeat chest x-ray review.

10. Additional Information: Write in any information that may be helpful to the community clinic team.

11. **Healthy Lungs Follow Up:** Select an option for follow up by the Health Lungs Team following the discharge of the patient. ***This may require discussion at the weekly Thursday morning team meetings***. Please notify a senior team member (Shirley, Lyndsay, Kirstin) if a case needs discussion and you will not be at the meeting.

- Select N/A if the patient is in the Control group
- *No follow up required:* Select this option if the admission was not severe and was not respiratory related or the patient presented to EC/SSU and was not admitted to the ward.
- *Community Respiratory follow up:*
    - Respiratory re-admits are to be followed up within one month in the community if non ICU admit and not previously seen in the respiratory secondary/tertiary clinic.
    - Respiratory re-admits are to be followed up within 2 weeks in the community or as a secondary follow up if the community clinics are fully booked where the re-admit was to ICU or the child has been previously seen in the respiratory secondary/tertiary clinic.
- *Secondary/tertiary follow up:* Respiratory re-admits that require ICU or where the child has previously been seen in the respiratory secondary/tertiary clinic may be referred back to the respiratory secondary/tertiary clinic.
- *Home visit:* Cases are to be discussed at the weekly team meetings, where a family is hard to contact a respiratory home visit from the community nurse may be required.

Check with Lyndsay if uncertain about attendance at secondary/tertiary clinic or check the orange secondary/tertiary patients manila folder on her desk.

CRF 1F **Patient Label**

Family Contact Details

Child's preferred name:_____

Child lives with: ☐Mother ☐Father ☐Both ☐Other: _____

Main Caregiver's name:_____

Relationship to child: ☐Mother ☐Father ☐Other:_____

Home Phone_____ Cell phone 1:_____ _____

Cell phone 2:_____ _____

Work phone :_____ _____

Address:_____

_____

_____

Email Address _____

Do you attend a Church or identify with a Marae? ☐Yes ☐No

If Yes, (*Specify which)*_____ _____

Contact person _____

Address _____

Do you give permission to use this information as a means of contact? ☐Yes ☐No

If we cannot contact you through the above is there another way to contact you? ☐**Yes** ☐No

If Yes, *(Detail):* _____

_____

_____

Other caregivers name:_____

Relationship to child: ☐Mother ☐Father ☐Other:_____

Contact Details

Home phone: _____ Best time to call: ☐am ☐pm ☐Anytime

Cellphone: _____

Address: _____

_____

Email Address _____

Alternative Contact

Relationship to parent/main caregiver: _____

Name: _____

Home phone: _____ Cellphone: _____

Address: _____

_____

Email Address _____

General Practitioner
Name: _____
Phone: _____ _____
Address: _____
_____

Are you currently supported by a Community Health Worker/Coordinator ☐**Yes** ☐No
If Yes; *(Specify)*
Name: _____
Phone: _____ _____
Address: _____
_____

1 - Emergency General Practitioner*(used out of hours)*
Name: _____
Phone: _____ _____
Address: _____
_____

2 - Emergency General Practitioner *(used out of hours)*
Name: _____
Phone: _____ _____
Address: _____
_____

Well Child Provider: ☐Plunket
☐GP/Nurse
☐South Seas
☐Other: _____

Clinic Visit

1 month	☐ Checked patient contact details
	☐ Checked General Practitioner details
4.5 months	☐ Checked patient contact details
	☐ Checked General Practitioner details
8 months	☐ Checked patient contact details
	☐ Checked General Practitioner details
11.5 months	☐ Checked patient contact details
	☐ Checked General Practitioner details
15 months	☐ Checked patient contact details
	☐ Checked General Practitioner details
18.5 months	☐ Checked patient contact details
	☐ Checked General Practitioner details
22 months	☐ Checked patient contact details
	☐ Checked General Practitioner details

Clinic Visit One

Patient Label

Date of Clinic _____
(Aim: 4 weeks from date of discharge)

1. Confirmed parental details: ☐No ☐Yes
   1.1 Relation to child: ☐Mother ☐Father ☐Grandparent ☐Aunt/Uncle ☐Other

Parental Questionnaire

2. Since leaving the hospital on _____ date *(Insert hospital discharge date)*
   did your child ever fully recover? ☐No ☐Yes

3. Did the following symptoms completely disappear since their hospital discharge?

3.1 Cough	☐**No**	☐Yes	☐Didn't have
3.1.1 **If No,** Nature of cough; ☐Dry ☐Wet ☐Not Sure			
3.2 Wheeze	☐No	☐Yes	☐Didn't have
3.3 Runny Nose	☐No	☐Yes	☐Didn't have
3.4 Fever	☐No	☐Yes	☐Didn't have
3.5 Shortness of Breath	☐No	☐Yes	☐Didn't have
3.6 Other: *(Specify)*_____	_____	_____	_____

4. Has the child had any new illnesses since the hospital discharge?

4.1 Lower respiratory infection	☐No	☐Yes
4.2 Upper respiratory infection	☐No	☐Yes
4.3 Ear infection	☐No	☐Yes
4.4 Skin infection	☐No	☐Yes
4.5 Gastroenteritis	☐No	☐Yes
4.6 Fever unknown cause	☐No	☐Yes
4.7 Other: *(Specify)*_____	_____	_____

5. Has the child received any antibiotics since the hospital discharge? ☐No ☐Yes

6. **Since hospital discharge has the child visited;** *(Reason/Date)*

6.1 General Practitioner	☐No	☐Yes	_____
6.2 Well Child Provider	☐No	☐Yes	_____
6.3 Kidz First Emergency Care	☐No	☐Yes	_____
6.4 Starship Children's Emergency Care	☐No	☐Yes	_____
6.5 Admitted to Kidz First Ward	☐No	☐Yes	_____
6.6 Admitted to Starship Hospital	☐No	☐Yes	_____
6.7 Admitted to other Hospital	☐No	☐Yes	_____
6.8 Other: *(Specify)* _____	☐No	☐Yes	_____

Intervention Required

7. **Ear Health**

7.1 Do you think your child has a hearing problem? ☐No ☐Yes

7.2 Have they ever had a hearing test?

☐No ☐**Yes**

7.2.1 **If Yes,** *Whom (tick at least one)*
- ☐General Practitioner
- ☐Public Health Nurse
- ☐Audiologist
- ☐Newborn hearing screen
- ☐Unsure
- ☐Other: *(Specify)*_____

7.2.2 Did they find a hearing problem? ☐No ☐Yes ☐Unsure

Hearing: ☐ No ☐ Yes

8. **Oral Health**

8.1 Does your child have any teeth?

☐No ☐**Yes**

8.1.1 **If Yes,** How often do you brush your child's teeth?
- ☐Hardly ever
- ☐Sometimes
- ☐Daily
- ☐Twice Daily

8.1.2 Has your child ever had a dental (teeth) review? ☐No ☐**Yes**

8.1.2.1 **If Yes,** *Whom* *(tick at least one)*
- ☐Dentist
- ☐Dental Nurse
- ☐Well Child Provider
- ☐General Practitioner
- ☐Public Health Nurse
- ☐Other: *(Specify)*_____

8.1.2.2 Did they find any dental caries? ☐No ☐Yes ☐Unsure

8.2 If you are on tank water do you use fluoride tablets? ☐No ☐Yes ☐N/A

Oral: ☐ No ☐ Yes

9. **Nutrition**

9.1 Diet adequacy survey completed? ☐No*(Complete assessment form)* ☐Yes

9.2 Has the child stopped breast milk feeding since the last clinic?

☐No ☐**Yes** ☐Unsure ☐N/A

If Yes; *(tick at least one)*

9.2.1 Breast milk fed until_____ months of age

9.2.2 Duration of exclusive breast milk feeding_____ months of age ☐N/A

Nutrition: ☐ No ☐ Yes

10. **Smoking**

10.1 Does the child live with any smokers?

☐No ☐**Yes**

If Yes,

10.1.1 Number of current smokers in the house_____*(insert number)*

10.1.2 Does anyone smoke inside? ☐No ☐Yes ☐Unsure

Smoking: ☐ No ☐ Yes

11. **Housing**

11.1 Has the child moved residence since hospital discharge? ☐No ☐Yes

Housing: ☐ No ☐ Yes

Clinical Examination

12. **Date of Examination:** _____

13. Baseline Chest X-ray completed ☐No *(Complete respiratory intervention form)* ☐**Yes**
    13.1 **If Yes,** *where: (tick at least one)* ☐Hospital ☐Community ☐Other, *(specify)*_____

14. **Observations**

14.1Temp	14.2 Resp rate per min	14.3 Heart rate per min	14.4 Oxygen sats on air	14.5 Weight	14.6 Length / Height	14.7 Work of breathing
_____	_____	_____	_____% ☐N/A	_____Kg	_____CM	☐Normal ☐Mild ☐Moderate ☐Severe

15. **Examination of Teeth**
    15.1 Examination of teeth completed?
    ☐No ☐**Yes**
    If Yes, *(tick at least one)*
    15.1.1 Dental caries present ☐No ☐Yes
    15.1.2 Previous fillings present ☐No ☐Yes

16. Assessment completed by _____ *(Initial)*

17. **Nursing Summary/Notes:**

_____

_____

_____

_____

_____

_____

18. **Respiratory Examination** *(tick at least one)*

18.1 Normal	☐No	☐Yes	18.6 Chest recession	☐No	☐Yes
18.2 Stridor	☐No	☐Yes	18.7 Chest wall deformity	☐No	☐Yes
18.3 Wheeze	☐No	☐Yes	18.8 Clubbing	☐No	☐Yes
18.4 Crackles	☐No	☐Yes			
18.5 Other*(Specify)* _____	_____		_____		

If treatment required complete respiratory intervention form

18.9 Nasal discharge	☐No	☐Yes
18.10 Pharyngitis	☐No	☐Yes
18.11 Enlarged tonsils	☐No	☐Yes

19. **Cough during examination?** ☐No cough ☐Dry cough ☐Wet cough

20. **Examination of the ears**

20.1 **Right Ear** *(tick at least one)*

20.1.1 ☐ Normal
20.1.2 ☐ Abnormal
20.1.3 ☐ Examination not performed

20.2 **Left Ear** *(tick at least one)*

20.2.1 ☐ Normal
20.2.2 ☐ Abnormal
20.2.3 ☐ Examination not performed

21. **Examination of the Heart**

21.1 Heart murmur heard ☐ No ☐ Yes
21.2 Review next clinic ☐ No ☐ Yes

22. **Condition of the Skin** *(tick at least one)*

22.1 ☐ Normal
22.2 ☐ Impetigo
22.3 ☐ Tinea
22.4 ☐ Scabies
22.5 ☐ Eczema
22.6 ☐ Insect bites
22.7 ☐ Boils
22.8 ☐ Cellulitis
22.9 ☐ Other, *(Specify)*_____

23. **Investigations – For follow up**

23.1 ☐ Consent not given
23.2 ☐ Delay until child well
23.3 ☐ Iron Studies (green) including Ferritin and CRP*
23.4 ☐ Vitamin D* (red)
23.5 ☐ FBC (purple)
23.6 ☐ Other *(Specify)*_____

* Fill these bottles first

24. **Significant Findings:**_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

25. Assessment completed by _____ *(Initial)*

26. **Intervention Assessment this visit**

	To be completed by GP/ Nurse Practitioner **Intervention form completed at clinic**	To be completed by Nurse **Additional visit or follow up needed prior to next scheduled visit?**
26.1 Respiratory	☐No ☐Yes	☐No ☐Yes
26.2 Nutrition	☐No ☐Yes	☐No ☐Yes
26.3 Skin	☐No ☐Yes	☐No ☐Yes
26.4 Ear Health	☐No ☐Yes	☐No ☐Yes
26.5 Smoking Cessation	☐No ☐Yes	☐No ☐Yes
26.6 Immunisation	☐No ☐Yes	☐No ☐Yes
26.7 Oral Health	☐No ☐Yes	☐No ☐Yes
26.8 Housing	☐No ☐Yes	☐No ☐Yes
26.9 Social	☐No ☐Yes	☐No ☐Yes
26.10 Other *(Specify)……..*	☐No ☐Yes	☐No ☐Yes

27. Follow up with; *(tick at least one)*

- ☐N/A
- ☐Community Health Worker
- ☐Primary Care Clinic Doctor/Nurse Practitioner
- ☐Study Community Clinic Nurse
- ☐Patients GP
- ☐Referral to Secondary/Tertiary Clinic

*Reason for follow up:*_____

_____

_____

_____

Date: _____ Time: _____ or ☐ To be arranged

CRF2 Guideline

Clinic Visit One

Prior to the clinic please ensure that you have received the hospital admission and discharge information (CRF1 and CRF1 summary) from the hospital team, if you do not have the information please contact

Lyndsay Le Comte
Lyndsay.lecomte@ccrep.org.nz
021 803620

Date of Clinic: Insert the date the child actually attended the clinic (not the booked appointment date). Clinic visit one is ideally fours weeks after hospital discharge.

1. The parental details should be confirmed at every clinic visit to ensure we maintain the most up to date records in case the contact details change. Record and date any changes on the patients' *contacts sheet*.

1.1 Record the relationship of the person who brought the enrolled child to the clinic appointment, if it is someone other than the parent/legal guardian add their name and contact details to the existing contact sheet.

Parental Questionnaire

The parent/person bringing the child to the clinic should answer the following questions. Where it is not the parent and they are unable to provide answers, where possible, make phone contact with the main carer to ascertain correct information.

2. This question should be pre-empted prior to the child arriving in the clinic by inserting the date of discharge from the hospital discharge summary. 'Fully recovered' means **no ongoing symptoms of lower respiratory infection**, this may include runny nose, cough (dry or wet), wheeze, fevers, lethargy, fast or noisy breathing.

3. Ask each of these questions individually as stated on the case report form.

3.1 Ascertain if the child's cough completely went away after hospital discharge.

3.1.1 Record if the caregiver thinks the cough was dry or wet, if they do not know tick unsure.

3.2 Refer to the electronic training file for wheeze sounds. You may have to explain what wheeze is, use terms such as *'whistling', 'crackling', 'noisy,' 'squeaky' 'rasping' sounding breathing*.

3.3 Record if the child continued to have a 'runny nose' since hospital discharge.

3.4 A fever is defined as a temperature over 38 degrees Celsius. However, not all parents record temperature with a thermometer. If the caregiver reports the child 'felt hot' and they believed the child had a fever record yes.

3.5 Shortness of breath can be described as *'rapid, fast breathing'* or you can describe what it looks like *'ribs sucking in'* or in infants less than 6 months old *'head bobbing, nasal flaring or tracheal tug'*.

3.6 Other includes; any ongoing symptoms the child still has following their illness that resulted in the hospital admission.

4. The question intends to identify any new infections since hospital discharge. If the illness/ symptoms are similar to their previous illness a new illness refers to the child being well for 7 consecutive days before becoming ill again.

- **Lower respiratory infection:** bronchiolitis or pneumonia, parents may describe this as coughing, wheezing, fast or noisy breathing.
- **Upper respiratory infection:** Croup, pharyngitis, red throat, enlarged tonsils, runny nose, sinus infection, whooping cough, viral infection affecting upper airway.
- **Ear infection:** otitis media, otitis externa, exudate coming from the ears.
- **Skin infections:** scabies, infected bites, infected eczema, tinea, boils.
- **Gastroenteritis:** vomiting and/or diarrhoea for > 24 hours
- **Fever unknown cause:** defined as parental reporting the child feeling hot to touch with lethargy, and/or a recorded temperature > 38°C with no consistent symptoms of illness lasting for > 24 hours.
- **Other:** list any other reported illnesses since hospital discharge.

5. List if the child has received or has been prescribed antibiotics since discharge from hospital.

6. List any health professionals the child has visited since their hospital discharge, GP includes their regular GP, community based after hour's accident and medical centre, or a casual visit to another GP. Specify the date where possible if the parent is unsure provide an estimated date.

Intervention required column (to be completed by the clinic nurse)

7. Ear Health: has the caregiver ever thought the child has a hearing problem.

7.1 This is the caregivers assessment of the child's hearing.
7.2 Select if a hearing testing has been done, if No go to question 8. If Yes select who completed the hearing test.

7.2.2 Record the outcome of the hearing test or tick unsure if the caregiver does not know the outcome.

8. Oral Health: if the child is too young (teeth can start showing from 4 months of age) and does not have any teeth indicate 'no' and go to question 9.

8.1 Does the main caregiver brush the child's teeth and how frequently.

8.1.2-8.1.2.1 Check if the child has ever had a dental review by any of the following practitioners; Dentist, Dental Nurse, Well child provider including plunket, General Practitioner, Public Health Nurse or if other please specify who.
8.1.3 Record the outcome of the dental review by asking if any caries were identified i.e. any fillings or teeth extractions required.

8.2 If the family lives rurally they may be on tank water, if so do they use fluoride tablets. If the residence where the child lives is not on tank water, tick N/A (not applicable).

9. Nutrition

9.1 The diet adequacy survey needs to be completed for all children.

9.2 Breast milk fed includes both breastfed and fed expressed breast milk. Record if the child is still receiving breast milk

9.2.1 List what age (whole months) they stopped receiving breast milk. Anything < 3 weeks is 0 months and anything ≥ 3 weeks can be rounded up to one month.
9.2.2 List the age (whole months) when the child stopped receiving exclusive breast milk. Or tick N/A if they were never exclusively breast fed. Anything < 3 weeks is 0 months and anything ≥ 3 weeks can be rounded up to one month.

Note: Exclusive = without additional other milk/formula. A child receiving solid foods but not any other form of milk/additional formula is still considered exclusive breast feeding.

10. Smoking: This question is asked at enrolment and at clinic one to ascertain if any additional people have moved into where the family are currently residing. Complete this screening even if previously the child was not smoke exposed.

11. Housing: Has the house where the child lives (greater than 4 days a week) changed since the last contact with study staff? If yes refer to CHW for housing intervention.

Clinical Examination
12. Insert the date the clinical examination was completed.

13. A **baseline chest x-ray** should be completed for every child in the intervention arm of the study at the beginning of the study. If the child has not had a chest x-ray complete the respiratory intervention form. The first chest x-ray should be completed during their hospital admission; the Kidz First research team will notify you if the paediatric radiologist recommends a repeat chest x-ray.

14. Record the following observations as collected at the clinic visit.

14.1 Temperature in degrees celsius (tympanic membrane thermometer)
14.2 Record respiratory rate for young infants. We recommend recording the respiratory rate for the full minute to ensure accuracy.
14.3 Record heart rate per minute
14.4 Record oxygen saturations on air, tick N/A if this is unable to be collected.
14.5 List the weight in kilograms (kg).
14.6 The patients length/height should be recorded at every clinic visit as part of the assessment of growth and development, record in centimetres.
14.7 Assess if the child has any increased work of breathing.

Work of Breathing	**Mild**	**Moderate**	**Severe**
Respiratory rate	<2 months > 60/min 2-12months 50/min		>70/min
Nasal flare & / or grunting	Absent	Absent	Present
Feeding	Normal	-Less than usual -Frequently stops Quantity > half normal	-Not interested -Choking -Quantity < half normal
Chest wall indrawing	None/mild	Moderate	Severe
Behaviour history	Normal	Irritable	Lethargic
Cyanosis	Absent	Absent	Present

PSNZ, Guideline, Wheeze and chest infection in infants under 1 year, 2005 (http://www.paediatrics.org.nz/files/guidelines/Wheezeendorsed.pdf)

Use of accessory muscles: the child may use the sternomastoid muscle to assist with breathing. In young infants this may lead to head bobbing, this is a sign of severe distress.

15. Examination of Teeth:

15.1 Were the teeth examined at the clinic?

15.1.1 Were any dental caries/decay present?
15.1.2 Were any prior fillings present?

16. The Nurse completing the observations and teeth exam should initial here.

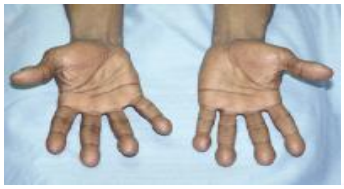
17. There may be additional information that needs to be recorded. This information is not collected as study data but will be used by the team to manage any additional relevant information or health related events pertaining to the child and their family/whanau.

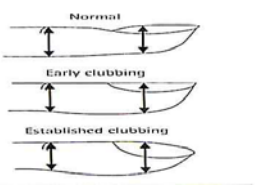
18. Respiratory Examination, After completing the respiratory exam please tick at least one of the boxes indicating your findings:

18.1 Normal: indicate if no respiratory distress was seen or anatomical clinical signs of long term respiratory distress noted.
18.2 Stridor: is a gasping sound during inhalation resulting from a partial blockage of the throat (pharynx), voice box (larynx), or windpipe (trachea).
18.3 Wheeze: is a continuous, coarse, whistling sound produced in the respiratory airways during breathing. For wheezes to occur, some part of the respiratory tree must be narrowed or obstructed, or airflow velocity within the respiratory tree must be heightened.
18.4 Crackles: crepitations or rales are heard on auscultation and sound like clicking, rattling, or crackling noises heard during inhalation.
18.5 Other: List any other abnormal respiratory finding.
18.6 Recession: Pediatric patients have a more compliant chest wall (not as rigid as an adults) any increased negative pressures generated in the thorax will result in intercostal, sub-costal or sternal recession. Greater recession = greater respiratory distress.
18.7 Chest wall deformity:

- **Harrison's sulcus** is a groove deformity of the lower ribs at the point of attachment to the diaphragm.
- **Pectus carinatumme** also known as "pigeon chest" and is used to describe a chest where the sternum is prominent. It is caused by chronic childhood asthma and rickets.
- **Pectus excavatum:** Significant sternal depression in relation to the mid clavicular rib cage.

18.8 Clubbing (Hippocratic fingers)**:** Bulbous, club like deformation of the distal portion of fingers and toes resulting from connective-tissue proliferation (see below).

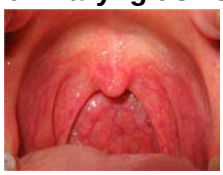




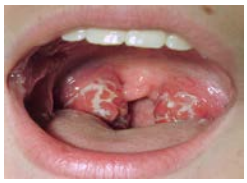
Clubbing, phalangeal depth ratio: Ratio of the distal phalangeal to interphalangeal depth. Clubbing diagnosis: when the distal phalangeal depth > interphalangeal depth (ie, phalangeal depth ratio >1).

18.9 Nasal discharge: mucous-like material that comes out of the nose.

18.10 Pharyngitis: is inflammation of the throat or pharynx.



18.11 Enlarged tonsils (Including tonsillitis):"tonsils" refer to the palatine tonsils. Acute tonsillitis is caused by bacteria and viruses and is accompanied by ear pain when swallowing, bad breath, drooling, sore throat and fever. The tonsil surface may be bright red or have a gray/white coating, while neck lymph nodes may be swollen.



19. Cough during examination: Record if you hear the child cough during your examination period and record the nature of the cough. Refer to cough sounds training for clarification of dry or wet cough.

20. Examination of the ears: Following examination with an otoscope (or auriscope) indicate if your findings for both the right and left ears were normal or abnormal. If abnormal follow the Hearing Intervention form. **Note:** An Insufflator should be used in the examination to diagnose effusion.

20.1.3 and 20.2.3 Examination not performed This indicates that the examination was not performed as the child did not tolerate the examination.

21. Examination of the Heart

21.1 Heart murmur: indicate if a heart murmur is heard on auscultation. A murmur is defined as extra heart sounds that are produced as a result of turbulent blood flow that is sufficient to produce audible noise. Further classification is not required.

Note: Innocent heart murmurs; 50% of young children are expected to have an innocent heart murmur. These murmurs are systolic and diminish with sitting and hyperextension of the cervical thoracic spine when sitting (Jordon's maneuver) in the absence of other signs of cardiac pathology.

If a child does not meet the criteria for an innocent heart murmur or you require assistance with cardiac evaluation discuss with the Pediatricians

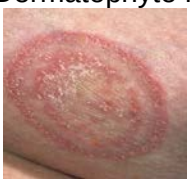
22. Condition of the skin: Record the results of the skin examination.

22.1 Normal: Tick this option if skin is normal with no inflammation or infection seen.

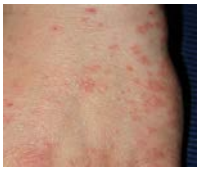
22.2 Impetigo: Primarily caused by *Staphylococcus aureus*, and sometimes by *Streptococcus pyogenes*.

- **Bullous impetigo:** causes painless, fluid-filled blisters usually on trunk, arms and legs. The skin around the blister is usually red and itchy but not sore. The blisters break and scab over with a yellow-colored crust, may be large or small, and may last longer than sores from other types of impetigo.
- **Ecthyma:** is a more serious form of impetigo where infection penetrates deeper into the skin's second layer, the dermis.
- **Signs and symptoms include:**
- Painful fluid or pus-filled sores that become deep ulcers, usually on legs and feet
- A hard, thick, gray-yellow crust covering the sores
- Swollen lymph glands in the affected area
- Little holes the size of pinheads to pennies appear after crust recedes
- Scars that remain after the ulcers heal

22.3 Tinea: refers to a skin infection with a dermatophyte (ringworm) fungus. Dermatophyte infection is confirmed by microscopy and culture of skin scrapings.

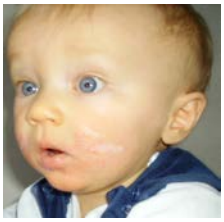


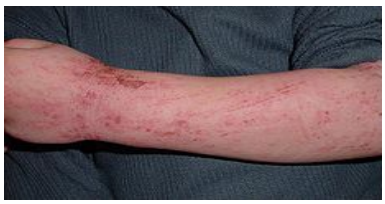
22.4 Scabies: Caused by a tiny parasite *Sarcoptes scabiei* which burrows under the host's skin, causing intense allergic itching. Scabies mites prefer thin hairless skin, and for this reason concentrate on intertriginous parts of the body below the neck (e.g., between fingers and in skin folds), avoiding callused areas. Infants may be infected over any part of the body.



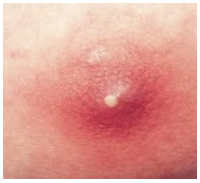
22.5 Eczema, or dermatitis: symptoms vary with all different forms of the condition. They range from skin rashes to bumpy rashes or including blisters. Common signs include redness of the skin, swelling, itching and skin lesions and sometimes oozing and scarring.

- **Seborrhoeic dermatitis:** in infants (<3months) is a non-contagious condition of skin areas rich in oil glands (eg, the face, scalp, and upper trunk). Seborrheic dermatitis is marked by overproduction of skin cells (leading to flaking) and sometimes inflammation (leading to redness and itching). It varies in severity from mild dandruff of the scalp to scaly, red patches on the skin.
- **Atopic dermatitis:** is the most common form of dermatitis for children and can affect any part of the body.





22.6 Insect Bites: Indicate if the child has multiple insect bites for example, flea or mosquitoes.
22.7 Boils (or Furuncle): is a deep infective folliculitis (infection of the hair follicle). It is almost always caused by infection by the bacterium *Staphylococcus aureus*, resulting in a painful swollen area on the skin caused by an accumulation of pus and dead tissue.



22.8 Cellulitis: a diffuse inflammation of connective tissue with severe inflammation of dermal and subcutaneous layers of the skin. Cellulitis can be caused by normal skin flora or by exogenous bacteria, and often occurs where the skin has previously been broken: cracks in the skin, cuts, blisters, burns and insect bites.
22.9 Other: Specify any other skin condition that might be affecting the child.

23. Investigations: Where consent has been given by the parent/legal guardian a blood test should be completed when the child has fully recovered from their respiratory illness. The blood is to taken via Microcollects at the practice, the total volume below of 1450 microlitres is possible. For < 1 year – heel, for 1-5 years – finger. The required tests are;

- **FBC**-250 microlitres PURPLE
- **Iron studies** including **Ferritin** and **CRP** - 600 microlitres (full) GREEN
- **Vitamin D** 600 microlitres RED

Note: If a parent/legal guardian previously refused consent for the blood test but changes their mind, the consent form must be modified prior to the blood test being obtained. The original consent form needs to be corrected, dated and resigned by the parent/legal guardian, along with your signature and date. Consent forms are stored at Kidz First.

24. Significant Findings
There may be additional information that needs to be recorded. This information is not collected as study data but will be used by the team to manage any additional relevant information or health related events pertaining to the child and their family/whanau.

25. The person completing the clinical examination and assessment should initial here.

26.1 to 26.10 Intervention assessment this visit
This table is a final summary of this clinic visit and all of the required interventions. Please tick which of the listed interventions are required and tick Yes or No if treatment requires an additional visit or follow up prior to the next scheduled visit.
Note: Respiratory intervention is compulsory for every child at every visit.

27. Additional follow up
This is to indicate if additional follow up is required for any of the interventions **prior** to the next clinic visit. Indicate who is required to complete the additional follow up and the reason for the additional follow up. Enter a date and time that suits the family for follow up with them.

Immunisation Schedule
(Update table below)

AGE	(Please tick in box for immunisations given)						
	DTaP-IPV Hib-HepB	Hib	MMR	Pneumococcal	TB BCG	Immunisation delayed by >4 weeks from recommended time Y/N	Comments
Birth					* ☐Unknown ☐Yes ☐No		
6 weeks	*			*			
3 months	*			*			
5 months	*			*			
15 months		*	*	*			
4 years	(DTap-IPV) *		*				

Flu vaccine ☐No ☐Yes _____ Date _____

Other immunisation _____ Date _____

Other immunisation _____ Date _____

Smoking

Patient Label

Date of Clinic _____

1. Relation to child: ☐Mother ☐Father ☐Grandparent ☐Aunt/Uncle ☐Other
   (To be completed for anyone who lives with the child or has extended exposure to the child and smokes.)
2. Does the person live in the same house as the child? ☐Yes ☐No
3. Treatment declined
   ☐Yes *(Form complete)* ☐**No** *(Continue)*

4. Intervention already commenced?
   (Must be within the last 8 weeks)

☐No ☐**Yes**

4.1 **If Yes**, Where; In Hospital ☐Yes ☐No
In Community ☐Yes ☐No
Other *(Specify)* _____

4.2 How many cigarettes per day were you smoking one month ago? _____cig/day
4.3 Number of cigarettes currently smoked per day? _____cig/day
4.4 Currently on NRT? ☐Yes ☐No

5. Parent/Caregiver enrolled at this GP practice?

☐No ☐**Yes**

5.1 Select site ☐Mangere *(Mangere Family Dr's)*
☐Manurewa *(Greenstone Family Clinic)*
☐Otara *(Otara Family and Christian Health Centre)*
☐Pukekohe *(Pukekohe Family Health Care)*

5.2 Enrolled in cessation programme ☐Yes ☐No
5.3 Follow up scheduled ☐Yes ☐No

6. Brief advice provided ☐Yes ☐No
   6.1 NRT prescribed today ☐Yes ☐No

<u>Further Action</u>

7. Referral to community provider ☐**Yes** ☐No
   7.1 **If Yes,** whom *(tick at least one)* ☐Community Health Worker
   ☐The person's primary care provider (GP)
   ☐Other *(Specify)* _____
   7.2 Referral Sent ☐**Yes** ☐No

8. Follow up with Community Health Worker? ☐Yes ☐No

*Reason for follow up*_____
_____

Date: _____ Time: _____ or ☐ To be arranged

9. Intervention form completed by _____ *(Initial)*

Smoking CRF Guideline

Date of Clinic: List the date that the child attended the Respiratory Community clinic.

1. Please indicate who attended the clinic with the child and their relationship to the child if they are a smoker. One form is to be completed per identified smoker, extended exposure includes contact with the child at least once a week on a regular basis.

2. This question refers to if the smoker is living in the house with the child at the time of the clinic visit, even if they are visitors staying at that time they are counted.

3. A smoking cessation intervention is to be offered, if the person does not want to continue tick yes. If treatment was initiated at a prior visit or the person would like to discuss their smoking tick No.

4. Intervention commenced: Has the person has been offered smoking cessation including Nicotine Replacement Therapy (NRT) in the last eight weeks. NRT can be in the form of patches, gum, inhaler, tablet or lozenges.

4.1 If yes was it offered in a hospital or community setting?

- Hospital can include any secondary or tertiary based services i.e. the Smokefree service within Kidz First or approach from a quit card provider i.e. Nurse, Doctor, Health Care Assistant.
- Community can include any community based service i.e. Primary Care practice, Community Health Worker, Pharmacist, Midwife, other well child provider.

4.2 Record the average number of cigarettes smoked per day one month prior to the clinic appointment.

4.3 Record the average number of cigarettes currently smoked per day over a week.

4.4 Has NRT been recently prescribed and is the person using it on a regular basis to help reduce or quit smoking.

5. If the person is already enrolled as a patient at the Respiratory Community Clinic follow normal procedures for any patient who is a smoker.

5.1-5.3 Select which clinic is providing the smoking cessation support. At the time of consult was the person enrolled into a smoking cessation programme provided by the practice.

6-7 If the person is not a patient of the GP practice provide them with brief advice and discuss where they would like to receive further smoking cessation support. Where possible offer Nicotine Replacement Therapy (NRT). NRT can be in the form of patches, gum, inhaler, tablet or lozenges. Tick yes if NRT was prescribed on the day of the clinic visit.

7.1 Refer only to their own GP, Community Health Worker and the Kidz First Smokefree team. If you refer directly to another agency other than the person's GP we are not able to collect data around attendance etc.

8. If there is anything that requires further follow up in the home or with the child's family the Community Health Worker is able to do this. Enter a date and time that suits the family for the Community Health Worker to follow up with them.

9. The person completing the intervention form should initial here.

Oral Health

Patient Label

Date of Clinic _____

1. Patient enrolled with CMDHB dental services ☐Yes ☐No ☐Unsure

2. Lift the lip completed?

☐No ☐To be arranged ☐**Yes**,

If Yes, *(tick at least one)*

2.1 Teeth examined	☐Yes ☐No
2.2 Tooth brush given	☐Yes ☐No
2.3 Tooth paste provided	☐Yes ☐No
2.4 Brushing teeth demonstration	☐Yes ☐No

3. Treatment declined ☐Yes *(Form complete)* ☐**No** *(Continue)*

4. Intervention commenced at previous clinic?

☐ No ☐ **Yes**

4.1 Patient attended dental provider ☐**Yes** ☐No *(go to question 6)* ☐Unsure ☐Awaiting appointment

4.1.1 **If Yes,** whom *(tick at least one)*
- ☐Community dentist
- ☐School dental service
- ☐Secondary care
- ☐Other *(Specify)* _____

4.1.2 Antibiotics required	☐Yes ☐No ☐Unsure
4.1.3 Medical follow up required after antibiotics	☐Yes ☐No
4.1.4 Treatment complete	☐Yes ☐No ☐Unsure

Further Action

5. Referral to dental provider required ☐**Yes** ☐No
   5.1 **If Yes,** whom *(tick at least one)*
   - ☐School dental service
   - ☐Secondary care
   - ☐Other *(Specify)* _____

6. Follow up with Community Health Worker? ☐Yes ☐No

*Reason for follow up*_____

_____

Date: _____ Time: _____ or ☐ To be arranged

7. Intervention form completed by _____ *(Initial)*

CRF4 Guideline

Oral Health

Date of Clinic: List the date that the child attended the Respiratory Community clinic.

1. Please indicate if the child is enrolled with the CMDHB dental services.

Registering with the free CMDHB School Dental Clinics

- Contact the dental clinic at the school closest to the families home address; these are listed in the phone book under the school name. The Dental Therapist will either take the families details and contact them at a later date or may make an appointment straight away.
- Plunket can assist with registration. An enrolment form will need to be filled out which Plunket will send to the Auckland Regional Dental Services.
- Families can register themselves by calling **0800 TALK TEETH (0800 825 583)** from a landline (you are unable to register via cell phone) and **press 1**.

Once the child is registered the service will contact the family via an initial appointment letter. The letter identifies the dental clinic closest to their home address and asks them to attend a set appointment. The appointment can be re-negotiated if the service is rung via a landline. The service may be based within the school or by a mobile clinic visiting the school. The service will refer children onto other dental providers as appropriate.

2- 2.4 Has the lift the lip assessment been completed in the clinic today? If fully or partially completed continue onto questions 2.1-2.4 and select what was included in the assessment.

3. Following the lift the lip assessment tick **Yes** if the carer does **not** want to continue, treatment declined.

4. This question asks if oral health review by a dental provider has been initiated in a prior respiratory clinic, if no go onto question five.

4.1 If yes, since the last clinic visit has the child attended a dental provider? This includes for treatment or enrolment.

4.1.1 Select which dental provider the child attended.
4.1.2-4.1.4 Identify any further treatment required following the visit to the dental provider.

5-5.1 Following assessment does the child need to be referred to a dental provider? **If Yes,** Select the type of provider the child is referred to.

6. If there is anything that requires further follow up in the home or with the child's family, the Community Health Worker is able to do this. Enter a date and time that suits the family for the Community Health Worker to follow up with them.

7. The person completing the intervention form should initial here.

☐ Nurse Home Visit

Respiratory

Date _____

1. Respiratory antibiotic follow up

☐No ☐**Yes** *(tick at least one)*

1.1 Normal	☐No	☐Yes	1.5 Other *(Specify)* _____		
1.2 Stridor	☐No	☐Yes	1.6 Chest recession	☐No	☐Yes
1.3 Wheeze	☐No	☐Yes	1.7 Chest wall deformity	☐No	☐Yes
1.4 Crackles	☐No	☐Yes	1.8 Clubbing	☐No	☐Yes
1.9 Nasal discharge	☐No	☐Yes			
1.10 Pharyngitis	☐No	☐Yes			
1.11 Enlarged tonsils	☐No	☐Yes			

2. Cough during examination? ☐No cough ☐Dry cough ☐Wet cough

3. Infection treatment

☐No ☐**Yes**

If Yes,

3.1 New antibiotic prescription	☐Yes	☐No
3.2 Currently on antibiotics	☐Yes	☐No
3.3 Extended antibiotics required	☐Yes	☐No
If Yes, Moist cough present	☐Yes	☐No
History of continuing moist cough	☐Yes	☐No
3.4 Physiotherapy required	☐Yes	☐No

4. Asthma treatment

☐No ☐**Yes**

If Yes,

4.1 Prescribed Bronchodilators	☐Yes	☐No
4.2 Responsive to beta-agonist treatment	☐Yes	☐No
4.3 If responsive, preventative treatment required	☐Yes	☐No
4.4 Referral to asthma educator	☐Yes	☐No

5. Chest x-ray required

☐No ☐**Yes**

5.1 **If Yes,** Referral for CXR (use code HLS) ☐**Yes** ☐**No** *(go to question 5.1.2)*

5.1.1 **If Yes,** where
- ☐Mangere
- ☐Manukau
- ☐Otara
- ☐Pukekohe
- ☐Middlemore Hospital

5.1.2 **If No,** Reason for not referring? *(tick at least one)*

Patient unwell	☐Yes	☐No
Family refused	☐Yes	☐No
Child visiting relatives	☐Yes	☐No

Further Action

6. Phone call follow up	☐Yes	☐No
7. Respiratory clinic follow up scheduled	☐Yes	☐No
8. Referral to secondary/tertiary respiratory clinic	☐Yes	☐No
9. Follow up with Community Health Worker?	☐Yes	☐No
10. Follow up with Community Clinic Nurse?	☐Yes	☐No

*Reason for follow up*_____

_____

Date: _____ Time: _____ or ☐ To be arranged

11. Intervention form completed by _____ *(Initial)*

☐ Nurse Home Visit

To be completed for antibiotic follow ups

12. **Observations**

12.1Temp	12.2 Resp rate per min	12.3 Heart rate per min	12.4 Oxygen sats on air	12.5 Weight	12.6 Length / Height	12.7 Work of breathing
_____	_____	_____	_____% ☐N/A	_____Kg	_____CM	☐Normal ☐Mild ☐Moderate ☐Severe

13. **Examination of the ears**

13.1 **Right Ear** *(tick at least one)*

13.1.1 ☐Normal
13.1.2 ☐Abnormal
13.1.3 ☐Examination not performed

13.2 **Left Ear** *(tick at least one)*

13.2.1 ☐Normal
13.2.2 ☐Abnormal
13.2.3 ☐Examination not performed

14. **Summary/Plan:**

Respiratory CRF Guideline

Date: List the date that the child attended the Respiratory Community Clinic.

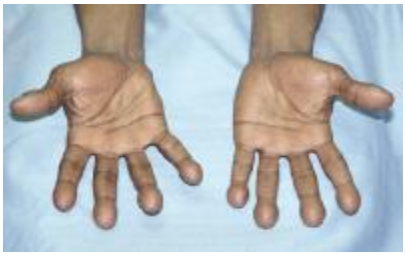
1. If the respiratory review is at clinic visit one or a regular three monthly clinic continue to question 3. If the review is an antibiotic follow up between the regular clinics complete questions 1-2.

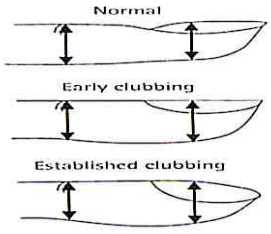
Respiratory antibiotic follow up, After completing the respiratory exam please tick at least one of the boxes indicating your findings:

1.1 Normal: indicate if no respiratory distress was seen or anatomical clinical signs of long term respiratory distress noted.
1.2 Stridor: is a gasping sound during inhalation resulting from a partial blockage of the throat (pharynx), voice box (larynx), or windpipe (trachea).
1.3 Wheeze: is a continuous, coarse, whistling sound produced in the respiratory airways during breathing. For wheezes to occur, some part of the respiratory tree must be narrowed or obstructed, or airflow velocity within the respiratory tree must be heightened.
1.4 Crackles: crepitations or rales are heard on auscultation and sound like clicking, rattling, or crackling noises heard during inhalation.
1.5 Other: List any other abnormal respiratory finding.
1.6 Recession: Paediatric patients have a more compliant chest wall (not as rigid as an adults) any increased negative pressures generated in the thorax will result in intercostal, sub-costal or sternal recession. Greater recession = greater respiratory distress.
1.7 Chest wall deformity:

- **Harrison's sulcus** is a groove deformity of the lower ribs at the point of attachment to the diaphragm.
- **Pectus carinatumme** also known as "pigeon chest" and is used to describe a chest where the sternum is prominent. It is caused by chronic childhood asthma and rickets.
- **Pectus excavatum:** Significant sternal depression in relation to the mid clavicular rib cage.

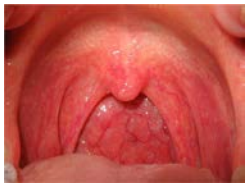
1.8 Clubbing (Hippocratic fingers)**:** Bulbous, club like deformation of the distal portion of fingers and toes resulting from connective-tissue proliferation (see below).



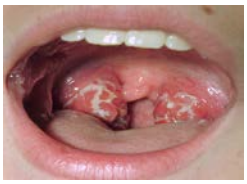


Clubbing, phalangeal depth ratio: Ratio of the distal phalangeal to interphalangeal depth. Clubbing diagnosis: when the distal phalangeal depth > interphalangeal depth (ie, phalangeal depth ratio >1).

1.9 Nasal discharge: mucous-like material that comes out of the nose.
1.10 Pharyngitis: is inflammation of the throat or pharynx.



1.11 Enlarged tonsils (Including tonsillitis):"tonsils" refer to the palatine tonsils. Acute tonsillitis is caused by bacteria and viruses and is accompanied by ear pain when swallowing, bad breath, drooling, sore throat and fever. The tonsil surface may be bright red or have a gray/white coating, while neck lymph nodes may be swollen.



2. Cough during examination: Record if you hear the child cough during your examination period and record the nature of the cough. Refer to cough sounds training for clarification of dry or wet cough.

3.-3.4 This question asks if the child needs treatment for an infection.

- **New Infection:** Mark if you are prescribing antibiotics for the first time in this episode;
  - Amoxycillin – 15-25mgs per kilo per dose given 3 X day for 7 days
  - Erythromycin - 7.5 mg/kg/ dose 4 x per day for 7 days
  - Cefaclor - 10-15 mg/kg/dose 3 x per day for 7 days
  - Cotrimoxazole - 24 mg/kg/dose 2 x per day for 7 days

Currently on antibiotics refers to the child already on antibiotics for infection. These are prescribed previously in the Respiratory Clinic, hospital or by the patients own GP.

- **Continuous/Never Resolved Infection:** If the child is unresponsive to the first course of antibiotics provide them with extended antibiotics of either;
  - Augmentin – 15mgs per kilo per dose given 2 X per day for 14 days
  - Erythromycin - 7.5 mg/kg/ dose 4 x per day for 14 days where severe infection 12.5 mg/kg/ dose 4 x per day or 15 mg/kg/ dose 3 x per day for 14 days
  - Cefaclor - 10-15 mg/kg/dose 3 x per day for 14 days.
  - Cotrimoxazole - 24 mg/kg/dose 2 x per day for 14 days

If the child is still unresponsive following a second course of antibiotics discuss the case with the secondary/tertiary clinic. Physiotherapy may be recommended after review in the secondary/tertiary clinic.

Note: After antibiotics are prescribed the Clinic Nurse is to make a follow up phone call to the caregiver to review treatment and assess if the child needs to be seen in clinic prior to their next scheduled visit.

Contact the secondary/tertiary clinic if the child experiences recurrent infections including at multiple sites for example; ENT, cellulitis, eczema, insect bites, LRI and tooth abscesses.

4-4.4 This question asks if the child requires asthma treatment. Follow the NZ Guidelines Group Best Practice Evidence based guidelines for treatment of wheeze and chest infection in infants under 1 year.
http://www.paediatrics.org.nz/files/guidelines/Wheezeendorsed.pdf

Or; the NZ Guidelines Group Best Practice Evidence based guidelines for management of asthma in children aged 1-15 years.
http://www.paediatrics.org.nz/files/guidelines/Asthmaendorsed.pdf

Note: For children ≥ 1 where Beta-2-agonist seems effective but is still used daily, trial IHCS. If there is a possible asthma diagnoses discuss case with the secondary/tertiary clinic.

5-5.1.2 This question asks if the child requires a chest x-ray (CXR). Every child in the intervention requires an initial baseline CXR. If one was not taken during hospital admission when the child was enrolled in the study a CXR is required, this is to be taken at the first clinic, (**Note:** the child does not need to be well).

Additional CXR's during the study

- The paediatric radiologist will review all initial baseline CXRs and recommend if repeat CXR is required. This is to be completed when the child is **well** at a follow-up clinic. The clinic nurse will inform the primary care practitioner if a referral for a CXR is required.
- CXRs can also be ordered to monitor a child's response to treatment or as part of the assessment as per usual care.

If a CXR is required select if a referral was made and which x-ray site you referred the child to. If the child was not referred on the day of the clinic select why.

6. Does the Clinic Nurse need to contact the care giver to discuss the respiratory treatment i.e. for antibiotic review.

7. Does a follow up appointment to the respiratory clinic need to be made prior to the next scheduled clinic visit i.e. to monitor progress following treatment.

8. The secondary/tertiary clinic will provide consultation and/ or advise on the following areas;

1) **Diagnosis**: For example; asthma / bronchiectasis and exclusion of diagnoses such as Cystic Fibrosis
2) **Second opinion:** On history and physical findings such as clubbing and non respiratory findings such as heart murmur, developmental delay, growth, failure to thrive, rickets, obstructive sleep apnoea, urinary tract infection, deep sacral pit, eczema, child protection etc
3) **Investigation:** High Resolution CT, bronchoscopy, lung function in older children, barium studies, immune function, various blood tests (e.g. for persistent iron deficiency despite treatment)
4) **Treatment:** Intense respiratory treatment using medication and Multi-disciplinary Team including Physiotherapist, Dietician and Social Worker as appropriate.

Consider referral to the secondary/tertiary clinic if any of the following apply;
Cough:

- Chronic moist cough (CMC) unresponsive to 2 courses of antibiotic treatment (either one short and one long or two long courses).

First dose

- Amoxicillin 15-25 mg per kilo 3 x per day for 7 days, option of;
- Erythromycin - 7.5 mg/kg/ dose 4 x per day for 7 days,
- Cefaclor - 10-15 mg/kg/dose 3 x per day for 7 days
- Cotrimoxazole - 24 mg/kg/dose 2 x per day for 7 days

Extended antibiotics

- Augmentin 15mg per kilo 2 x per day for 14 days, option of;
- Erythromycin - 7.5 mg/kg/ dose 4 x per day for 14 days, where severe infection 12.5 mg/kg/ dose 4 x per day or 15 mg/kg/ dose 3 x per day for 14 days
- Cefaclor - 10-15 mg/kg/dose 3 x per day for 14 days.
- Cotrimoxazole - 24 mg/kg/dose 2 x per day for 14 days

- Crackles on examination / Moist cough in clinic persisting after 2 courses of antibiotic treatment (either one short and one long or two long courses-see above for dose information).

Chest X-ray:

- Abnormal CXR persisting after 3 months
- CXR consistent with Bronchiectasis at any stage
- CXR showing hilar lymphadenopathy (enlargement of mediastinal lymph nodes).

Asthma:

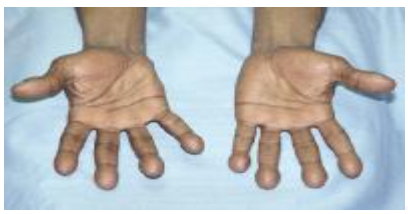
- Asthma diagnosed with nurse assessment of response to Ventolin with poor response to steroid prophylaxis after a 3 months trial or potential asthma diagnosis and under 2 years of age.

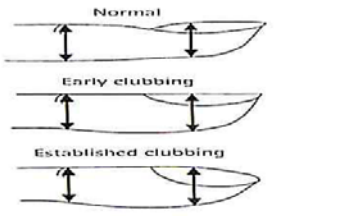
Hospital Admissions:

- Further 2 admissions to hospital with LRI
- Recurrent hospitalisation>4 episodes-any type

Other:

- Finger clubbing (Hippocratic fingers) on clinical examination at any stage. Bulbous, club like deformation of the distal portion of fingers and toes from connective - tissue proliferation (see below).





- Clinical suspicion of obstructive sleep apnoea: disorder of breathing during sleep characterised by prolonged upper airway obstruction and/or intermittent complete obstruction that disrupts normal ventilation during sleep and normal sleep patterns (Best practice evidence based guideline-Assessment of sleep disordered breathing in childhood 2005, Paediatric Society of New Zealand). Symptoms can include;
  - Nasal obstruction, adenoidal facies, enlarged tonsils
  - Failure to thrive/ slowing in weight gain
  - Any children whose parents are concerned about snoring

- Harrisons sulci (groove at the lower end of the ribcage) or pectus carinatum (protrusion of the chest over the sternum) persistent over 6 months.

- Clinical suspicion of aspiration i.e. choking, gagging or vomiting with feeds.
- Parental request

9-10. If there is anything that requires further follow up in the home or with the child's family the Community Health Worker is able to do this. The Nurse can make a follow up phone call to monitor response to antibiotics. Enter a date and time that suits the family to follow up with them.

11. The person completing the intervention form should initial here.

12-14. *This section is only to be filled in at antibiotic review between regular clinic visits.*

12. Record the following observations as collected at the clinic visit.

12.1 Temperature in Degrees Celsius (axilla temperature)
12.2 Record respiratory rate for young infants. We recommend recording the respiratory rate for the full minute to ensure accuracy.
12.3 Record heart rate per minute
12.4 Record oxygen saturations on air, tick N/A if this is unable to be collected.
12.5 List the weight in kilograms (kg).
12.6 The patients length/height should be recorded at every clinic visit as part of the assessment of growth and development, record in centimetres.
12.7 Assess if the child has any increased work of breathing.

Work of Breathing	**Mild**	**Moderate**	**Severe**
Respiratory rate	<2 months > 60/min 2-12months 50/min		>70/min
Nasal flare & / or grunting	Absent	Absent	Present
Feeding	Normal	-Less than usual -Frequently stops Quantity > half normal	-Not interested -Choking -Quantity < half normal
Chest wall indrawing	None/mild	Moderate	Severe
Behaviour history	Normal	Irritable	Lethargic
Cyanosis	Absent	Absent	Present

PSNZ, Guideline, Wheeze and chest infection in infants under 1 year, 2005 (http://www.paediatrics.org.nz/files/guidelines/Wheezeendorsed.pdf)

Use of accessory muscles: the child may use the sternomastoid muscle to assist with breathing. In young infants this may lead to head bobbing, this is a sign of severe distress.

13. Examination of the ears: Following examination with an otoscope (or auriscope) indicate if your findings for both the right and left ears were normal or abnormal. If abnormal follow the Hearing Intervention form.

Note: An Insufflator should be used in the examination to diagnose effusion.

13.1.3 and 13.2.3 Examination not performed This indicates that the examination was not performed as the child did not tolerate the examination.

Immunisation

Patient Label

Date of Clinic _____

1. Confirmed current immunisation status?
   ☐**Yes** *(Continue)* ☐No *(go to question 4)* ☐Awaiting response *(go to question 4)*

2. Immunisations offered? ☐Yes ☐No

3. Required immunisations provided today ☐Yes ☐No *(go to question 3.2)*
   3.1 **If Yes,** Immunisation schedule updated ☐Yes ☐No

   3.2 **If No,** Select reason immunisation not given
   - Consent not given ☐Yes ☐No
   - Immunisation contra-indicated ☐Yes ☐No
   - Patient to visit own primary care provider ☐Yes ☐No
   - Carer requested later date ☐Yes ☐No
   - Other (*Specify)*_____ _____ _____

   _____ _____ _____

Immunisations Given at this visit:

AGE	(Please tick in box for immunisations given)					
	DTaP-IPV Hip-HepB	Hib	MMR	Pneumococcal	TB BCG	Immunisation delayed by >4 weeks from recommended time Y/N
Birth					*	
6 weeks	*			*		
3 months	*			*		
5 months	*			*		
15 months		*	*	*		
4 years	(DTap-IPV)*		*			

Other: _____

Other: _____

Further Action

4. Follow up appointment for immunisation ☐Yes ☐No
5. Review at next clinic ☐Yes ☐No

6. Follow up with Community Health Worker? ☐Yes ☐No

   *Reason for follow up*_____

   _____

   Date: _____ Time: _____ or ☐ To be arranged

7. Intervention form completed by _____ *(Initial)*

CRF6 Guideline

Immunisation

Date of Clinic: List the date that the child attended the Respiratory Community clinic.

1. Please query either the National Immunisation Register (NIR) or the child's own General Practice for the immunisation status before offering immunisations. If you are unable to immediately confirm the status from either source check again within one week.

2. If the immunisation status is confirmed and immunisations are due/overdue offer to provide the immunisation in clinic.

3-3.1 Document if immunisations were provided in the respiratory clinic and if so which ones on the schedule below. Only tick those immunisations that were given in clinic, not those provided over the child's life. Please also update the schedule that is at the front of the child's forms, this schedule needs to reflect the child's complete immunisation status. Indicate if there were any delays greater than four weeks in receiving the immunisations

3.2 If immunisations were due/overdue and not provided in the respiratory clinic mark the reason why. Follow the Ministry of Health immunisation guidelines to assess if immunisations are contra-indicated. If the legal guardian is not present no immunisations can be given, attempt to attain verbal consent from the legal guardian. If present record if the legal guardian consented to the immunisation or declined treatment.

Contraindications:
Acute febrile illness
Minor infections without significant fever or systemic upset are not contraindications to immunisation. The decision to administer or delay immunisation because of a current or recent acute illness depends on the severity of the illness and the aetiology of the disease.4 All vaccines can be administered to persons with minor acute illness (e.g., diarrhoea or mild upper respiratory tract infections), but should be postponed if the subject has a significant fever over 38˚C. Precautions

Reaction to a previous dose
Careful consideration will be needed depending on the nature of the reaction. If in doubt about the safety of future doses, seek specialist advice. An anaphylactic reaction to a previous dose is a contraindication to further doses of that vaccine.

Allergy to vaccine components
Delayed type hypersensitivity to the traces of antibiotics (e.g., neomycin in MMR) is not a contraindication to the vaccine. If an individual has had anaphylaxis to an antibiotic contained in the vaccine, seek specialist advice. Egg allergy is not a contraindication to the measles or MMR vaccines. Large studies have confirmed these children can be vaccinated safely. Other components of the vaccine (e.g. gelatin) may be responsible for allergic reactions. Anaphylaxis to a prior dose of MMR is a contraindication to a further dose. It is therefore recommended that any child who has a history of anaphylaxis with cardiorespiratory symptoms should be vaccinated under close supervision, with adrenaline and age appropriate resuscitation equipment immediately available.

Vaccinators must be aware of the possibility that allergic reactions, including anaphylaxis, may occur after vaccination without any apparent risk factors (see chapter 2 Immunisation schedule).

Recent receipt of another vaccine, blood or immunoglobulin product
There are theoretical concerns about impaired immune responses if two live virus vaccines are given within four weeks of each other, and there is evidence7 to substantiate these concerns. If two live virus vaccines are not given concurrently, doses should be separated by four weeks, where possible.

Live virus vaccines should be given at least three weeks before, or up to six months after, doses of human normal immunoglobulin. This is because immunoglobulin may interfere with the response to live viral vaccines. This interference may extend beyond three months for the measles vaccine, depending on the dose given. MMR should be given three weeks before or up to six months after receipt of blood or immunoglobulin.
http://www.moh.govt.nz/moh.nsf/pagesmh/4617/$File/200601generalconsiderations.pdf

4. If required immunisations were not given, consider making an additional follow up appointment with the legal guardian.

5. If immunisations are due close to the next respiratory clinic appointment please review the child's immunisation at the next clinic.

6. If there is anything that requires further follow up in the home or with the child's family the Community Health Worker is able to do this. Enter a date and time that suits the family for the Community Health Worker to follow up with them.

7. The person completing the intervention form should initial here.

Nutrition

Patient Label

Date of Clinic _____

1. Diet adequacy survey completed ☐Yes ☐**No**
   1.1 **If No**, Form to be completed: In clinic today ☐Yes ☐No
   In community by CHW ☐Yes ☐No
   Scheduled for next clinic ☐Yes ☐No

2. Treatment declined ☐ Yes *(go to question 5)* ☐**No** *(Continue)*

3. Health promotion advice provided?
☐No ☐**Yes**
   3.1 **If Yes,** Lifestyle change promoted ☐Yes ☐No
   Food education provided ☐Yes ☐No
   Activity education provided ☐Yes ☐No

4. **Dietary issues identified in clinic**
(tick at least one and follow treatment guidelines)
   4.1 Failure to thrive
   ☐No ☐**Yes**
      4.1.1 Resolved at three months ☐Yes ☐No ☐N/A
      4.1.2 Referral to secondary care ☐Yes ☐No ☐N/A

   4.2 High BMI/Obesity
   ☐No ☐**Yes**
      4.2.1 Lifestyle change promoted ☐Yes ☐No
      4.2.2 Food education provided ☐Yes ☐No
      4.2.3 Activity education provided ☐Yes ☐No
      4.2.4 Weight targets set with family ☐Yes ☐No
      4.2.5 Growth chart provided ☐Yes ☐No

   4.3 Iron deficiency
   ☐N/A ☐No ☐**Yes** (if yes answer 4.3.1-4.3.4)
      4.3.1 Oral Iron prescribed ☐Yes ☐No
      4.3.2 Supervised Iron intake ☐Yes ☐No
      4.3.3 Six month blood test required ☐Yes ☐No ☐N/A
      4.3.4 Resolved at six months ☐Yes ☐No ☐N/A

   4.4 Vitamin D deficiency
   ☐N/A ☐No ☐**Yes** (if yes answer 4.4.1-4.4.3)
      4.4.1 Calciferol therapy provided ☐Yes ☐No
      4.4.2 Six month blood test required ☐Yes ☐No ☐N/A
      4.4.3 Resolved at six months ☐Yes ☐No ☐N/A

   4.5 Vitadol C prescribed ☐Yes ☐No

5. Follow up with Community Health Worker? ☐Yes ☐No

*Reason for follow up*_____
_____

Suitable Date: _____ Time: _____ or ☐ To be arranged

6. Intervention form completed by _____ *(Initial)*

CRF Guideline

Nutrition

Date of Clinic: List the date that the child attended the Respiratory Community clinic.

1-1.1 The diet adequacy survey is to be completed for all children. If this is not completed in the respiratory clinic the Community Health Worker can do a home visit.

2. Record if the care giver agreed to proceed through the intervention or declined.

3-3.1 Was nutrition education provided to the family at clinic?

Treatment: Chose one simple piece of advice from each area for the family to work on for example, eat as a family for one meal a day, stop making sugar drinks available and visit a play ground three times a week.

- **Lifestyle change** includes but is not limited to; having healthy snacks available, the family eating together, where and when the family eats.
- **Food education** includes but is not limited to; the food triangle, serving size, limiting sugar drinks etc.
- **Activity education** includes but is not limited to; playing at a park, swimming, family walking to local shops etc.

4.This section must be completed by the Community Respiratory Clinicians (Doctors / Nurse Practitioner) and seeks to identify what dietary issues the child has and how the child is progressing following treatment.

4.1 Failure to Thrive: Failure to thrive is defined as disproportionate failure to gain weight in comparison to height. One definition is "a weight deviation downward from the true percentile (defined as the maximum percentile reached between 4-8 weeks of age) crossing two or more percentile lines and persisting for more than one month".

Note: Failure to thrive does not mean failure to grow. Weight gain is primarily affected, there is less effect on length and minimal effect on head circumference. This may also be identified by a child being below the low BMI cut off point.

Treatment: Is dependent on the underlying aetiology - see the Kidz First protocol.

4.1.1 Resolved at three months refers to the baby to be no more than one weight centile below the height centile.

4.1.2 Complete or significant resolution is expected within three months. If there is no significant progress by three months following intervention or the issue is not resolved by six months discuss with paediatrician and consider referral to the secondary care clinic.

4.2-4.2.5 High BMI/Obesity: Children in the 91th percentile and above are at risk of adult obesity. BMI is to be established using the MoH growth chart.

Treatment: Follow up at each visit and focus on three specific lifestyle, diet and activity changes for example; eat as a family for one meal a day, stop making sugar drinks available and visit a play ground three times a week.

- **Lifestyle change** includes but is not limited to; having healthy snacks available, the family eating together, where and when the family eats.
- **Food education** includes but is not limited to; the food triangle, serving size, limiting sugar drinks etc.
- **Activity education** includes but is not limited to; playing at a park, swimming, family walking to local shops etc.

Weigh the baby at each clinic, give weight targets for family over six months and supply a growth chart to family.

For children with severe obesity (BMI > 3 SD) contact the secondary/tertiary clinic.

4.3-4.3.4 Iron Deficiency/Anaemia: Iron status is measured by Ferritin, red blood cell distribution width (RDW) and Haemoglobin and using normal ranges by age.

- Group One - Abnormal RDW: very likely iron deficiency
- Group Two - Low Ferritin/normal RDW: very likely iron deficiency
- Group Three - Normal/elevated Ferritin/normal RDW: uncertain of iron status
- Group Four - Very high Ferritin/normal RDW: unlikely to be iron deficient

Iron deficiency can be confirmed by;

- bloods taken during hospital admission
- or, if not taken in hospital do micro-collect at the practice.
- or, for children where permission for blood tests has not been given assess dietary Iron intake, follow the 'boost your Iron' guideline and supplement where appropriate.

Treatment: Treat groups one and two according to the Kidz First protocol and repeat tests on group three (see above). Discuss with Paediatrician if unresolved after 3 months. Consider weekly / bi weekly supervised Iron intake if no response to oral Iron. Discuss with Paediatrician if unresolved after six months. Consider weekly/bi weekly supervised Iron intake if oral Iron therapy is difficult to implement.

4.4-4.4.3 Vitamin D deficiency/insufficiency: The normal level for Vitamin D in children is 50-160 nmol/L.

- Deficiency is defined as levels <25 nmol/L.
- Insufficiency is defined as levels 25-50 nmol/L.

Risk factors for low Vitamin D include:

- Dark skin colour
- Reduced sun exposure (covering clothing, time inside)
- Breast feeding with other risk factors present (skin colour, maternal vitamin D levels low, time inside)

Follow Royal Children's Hospital Melbourne guidelines for investigation and therapy. Repeat blood tests to confirm resolution after three or six months. Discuss with Paediatrician if unresolved after six months.

4.5 Record whether vitadol C was prescribed.

5. If there is anything that requires further follow-up in the home or with the child's family the Community Health Worker is able to do this. Enter a date and time that suits the family for the Community Health Worker to follow up with them.

6. The person completing the intervention form should initial here.

Ear Health

Patient Label

Date of Clinic _____

1. **Examination of the ears**

1.1 **Right Ear** *(tick at least one)*	1.2 **Left Ear** *(tick at least one)*
1.1.1 ☐ Normal	1.2.1 ☐ Normal
1.1.2 ☐ Otitis media with effusion	1.2.2 ☐ Otitis media with effusion
1.1.3 ☐ Acute otitis media	1.2.3 ☐ Acute otitis media
1.1.4 ☐ Acute otitis media with perforation	1.2.4 ☐ Acute otitis media with perforation
1.1.5 ☐ Chronic suppurative otitis media	1.2.5 ☐ Chronic suppurative otitis media
1.1.6 ☐ Dry perforation	1.2.6 ☐ Dry perforation
1.1.7 ☐ Other *(Specify)*_____	1.2.7 ☐ Other *(Specify)*_____

2. **Treatment provided in today's clinic as per guidelines**

☐ No ☐ **Yes** *(tick at least one)*

2.5 ☐ Analgesic
2.6 ☐ Antibiotic *(Specify)*_____
2.7 ☐ Other, *(Specify)*_____

3. Does the child have a suspected hearing problem?

☐ No ☐ Yes

If Yes, Hearing loss suspected due to:

3.1 ☐ Repeated acute ear infections
3.2 ☐ Parental history
3.3 ☐ Speech delay
3.4 ☐ Other, *(Specify)*_____ _____ _____

4. **Further Action**

4.1 Follow up with patients GP	☐ Yes	☐ No
4.2 Review at next clinic	☐ Yes	☐ No
4.3 Referral to ENT Specialist	☐ Yes	☐ No
4.4 Referral to Audiologist	☐ Yes	☐ No
4.5 ☐ Other, *(Specify)*_____	_____	_____
_____	_____	_____

5. Follow up with Community Health Worker? ☐ Yes ☐ No
6. Follow up with Community Clinic Nurse? ☐ Yes ☐ No

*Reason for follow up*_____
_____
_____

Suitable Date: _____ Time: _____ or ☐ To be arranged

7. Intervention form completed by _____ *(Initial)*

CRF8 Guideline

Ear Health

Date of Clinic: List the date that the child attended the Respiratory Community clinic.

1-1.2 Hearing Examination: Record the results of the hearing examination.

- **Normal:** Indicate if examination of the ear appears normal i.e no redness, inflammation or collection of fluid.
- **Otitis media with effusion:** Middle ear inflammation accompanied by the accumulation of fluid in the middle ear cleft, without symptoms and signs of acute inflammation.
- **Acute otitis media:** Inflammation of the middle ear of rapid onset presenting most often with local symptoms (earache and/or rubbing or tugging the ear) and systemic signs fever, irritability and poor sleep)
- **Acute otitis media with perforation:** Otitis media as described above however the ear drum is perforated due to the infection.
- **Chronic suppurtative otitis media:** Perforation in the tympanic membrane and active bacterial infection within the middle ear space for several weeks or more. There may be enough pus that it drains to the outside of the ear (otorrhea).
- **Dry Perforation:** Perforation with no signs of inflammation or symptoms of infection.

2. Treatment should follow the recommendations in the "antibiotics for acute otitis media in children" article for further detail see NZ Guidelines Group Acute Otitis Media (April 1998) and the Scottish Intercollegiate Guidelines Network; Diagnosis and Management of Childhood Otitis Media in Primary Care. Tick if the child is given antibiotics for the treatment of their Ear Infection.

3. Indicate if you suspect the child has hearing loss and why it is suspected. Where there is suspected hearing loss consider referral for further hearing screening.

4-4.4 Further Action: This is to indicate if any additional follow up is required. Select who is required to complete the additional follow up and the reason for the additional follow up.

5-6. If there is anything that requires further follow up in the home or with the child's family the Community Health Worker is able to do this. The Nurse can make a follow up phone call to monitor response to antibiotics. Enter a date and time that suits the family for follow up with them.

7. The person completing the intervention form should initial here.

Newborn hearing screening information:
If a parent is unsure if a child has had a newborn hearing screening test, phone 2593851, provide the NHI to confirm if the child has had the screening completed. If the child is under 3 months of age this service will then follow up with the patient to book the patient in.
If the child is over 3 months of age they require a GP referral to the audiology clinic at Manukau Superclinic.

Skin Health

Patient Label

Date of Clinic _____

1. **Condition of the Skin** *(tick at least one)*

1.1 ☐Impetigo	1.5 ☐Insect bites
1.2 ☐Tinea	1.6 ☐Boils
1.3 ☐Scabies	1.7 ☐Cellulitis
1.4 ☐Eczema/Dermatitis	1.7 ☐Other, *(Specify)*_____
	_____

2. **Treatment Provided**

☐No ☐**Yes** *(tick at least one)*

2.1 ☐Moisture Creams	2.5 ☐Topical antifungal
2.2 ☐Topical steroid	2.6 ☐Antihistamine
2.3 ☐Topical antibiotic	2.7 ☐Oral antibiotic *(Specify)*_____
2.4 ☐Topical antiparasitic	2.8 ☐Other, *(Specify)*_____

3. **Laboratory Testing**

☐No ☐**Yes**

3.1 Swabs taken ☐**Yes** ☐No

If Yes, Specify Result: _____ Date of Test: _____

3.2 Other test, ☐**Yes** ☐No

If Yes, Specify Test:_____ _____ Date of Test: _____

Specify Result:_____

4. **Further Action**

4.1 Follow up with patients GP	☐Yes ☐No	
4.2 Review at next clinic	☐Yes ☐No	
4.3 ☐Other, *(Specify)*_____	_____	_____
_____	_____	_____

5. Follow up with Community Health Worker? ☐Yes ☐No

*Reason for follow up*_____

_____

Date: _____ Time: _____ or ☐ To be arranged

6. Intervention form completed by _____ *(Initial)*

CRF Guideline

Skin

Date of Clinic: List the date that the child attended the Respiratory Community clinic.

1 Condition of the skin: Record the results of the skin examination.

1.1 Impetigo: Primarily caused by *Staphylococcus aureus*, and sometimes by *Streptococcus pyogenes*.

- **Bullous impetigo:** causes painless, fluid-filled blisters usually on trunk, arms and legs. The skin around the blister is usually red and itchy but not sore. The blisters break and scab over with a yellow-colored crust, may be large or small, and may last longer than sores from other types of impetigo.
- **Ecthyma:** is a more serious form of impetigo where infection penetrates deeper into the skin's second layer, the dermis.

Signs and symptoms include:

- Painful fluid or pus-filled sores that become deep ulcers, usually on the legs and feet
- A hard, thick, gray-yellow crust covering the sores
- Swollen lymph glands in the affected area
- Little holes the size of pinheads to pennies appear after crust recedes
- Scars that remain after the ulcers heal

1.2 Tinea: refers to a skin infection with a dermatophyte (ringworm) fungus. Dermatophyte infection is confirmed by microscopy and culture of skin scrapings.

1.3 Scabies: Caused by a tiny parasite *Sarcoptes scabiei* which burrows under the host's skin, causing intense allergic itching. Scabies mites prefer thin hairless skin, and for this reason concentrate on intertriginous parts of the body below the neck (e.g., between fingers and in skin folds), avoiding callused areas. Infants may be infected over any part of the body.

1.4 Eczema, or dermatitis: symptoms vary with all different forms of the condition. They range from skin rashes to bumpy rashes or including blisters. Common signs include redness of the skin, swelling, itching and skin lesions and sometimes oozing and scarring.

- **Seborrhoeic dermatitis:** in infants (<3months) is a non-contagious condition of skin areas rich in oil glands (eg, the face, scalp, and upper trunk). Seborrheic dermatitis is marked by overproduction of skin cells (leading to flaking) and sometimes inflammation (leading to redness and itching). It varies in severity from mild dandruff of the scalp to scaly, red patches on the skin.
- **Atopic dermatitis:** is the most common form of dermatitis for children and can affect any part of the body.

1.5 Insect Bites: Indicate if the child has multiple insect bites for example, flea or mosquitoes.

1.6 Boils (or Furuncle): is a deep infective folliculitis (infection of the hair follicle). It is almost always caused by infection by the bacterium *Staphylococcus aureus*, resulting in a painful swollen area on the skin caused by an accumulation of pus and dead tissue.

1.7 Cellulitis: a diffuse inflammation of connective tissue with severe inflammation of dermal and subcutaneous layers of the skin. Cellulitis can be caused by normal skin flora or by exogenous bacteria, and often occurs where the skin has previously been broken: cracks in the skin, cuts, blisters, burns and insect bites.

Treatment: Most patients can be treated with oral antibiotics at home, for 5-10 days. If there are signs of systemic illness or extensive cellulitis, treatment may require intravenous antibiotics as an outpatient or in hospital. For **oral treatment** in the community, Cephalexin is the recommended drug due to palatability plus twice daily dosing schedule. Alternatives include; Amoxycillin/clavulinate or Flucloxacillin. Children often have difficulty taking oral Flucloxacillin and it must be given on an empty stomach.

Antibiotic Dosages

Cephalexin (KEFLEX) Drug of choice	Oral 50 mg/kg/day 2 or 3 times a day
Amoxycillin/Clavulinate (Doses in mg of Amoxycillin)	Oral 50mg/kg/day 3 times a day
Erythromycin (Penicillin allergic)	Oral 40mg/kg/day 2 or 3 times a day with food

1.8 Other: Specify any other skin condition that might be affecting the child.

2. Select if treatment was provided in clinic and what type.

3. Select if a laboratory test was ordered for the child. At the following clinic review the child's skin and specify the results of the laboratory test. Enter the date the test was taken, not the date the results were available.

4-4.3 Further Action: This is to indicate if any additional follow up is required indicate who is required to complete the additional follow up and the reason for the additional follow up.

5. If there is anything that requires further follow up in the home or with the child's family the Community Health Worker is able to do this. Enter a date and time that suits the family for the Community Health Worker to follow up with them.

6. The person completing the intervention form should initial here.