Lungs 4 Life (Preventing non-cystic fibrosis (CF) Bronchiectasis in children)

By Adele Cluett, Alison Howitt, Annie Nicholas & Nicholas Price

KO AWATEA
HEALTH SYSTEM INNOVATION AND IMPROVEMENT

The Lungs 4 Life Project Team

Dr Adrian Trenholme
(Clinical Head Kidz First)

Annie Nicholas
(Staff Nurse Kidz First)

Adele Cluett & Nick Price
(Speciality Clinical Nurse) & (Improvement Advisor)

Alison Howitt
(Project Manager)

HEALTH SYSTEM INNOVATION AND IMPROVEMENT

Background

- Previous studies have documented that the rate of non-cystic fibrosis (CF) bronchiectasis is higher amongst Maaori and Pacific Island children than other ethnic groups.

- Key Risk Factors identified were:
  - Hospitalisation with pneumonia
  - Recurrent hospitalisation (> x3 admissions) with lower respiratory infection under the age of 2 years old.
  - Radiologic abnormalities
  - Chronic wet cough or wheeze
  - Pacific or Maaori ethnicity
  - Low socioeconomic areas

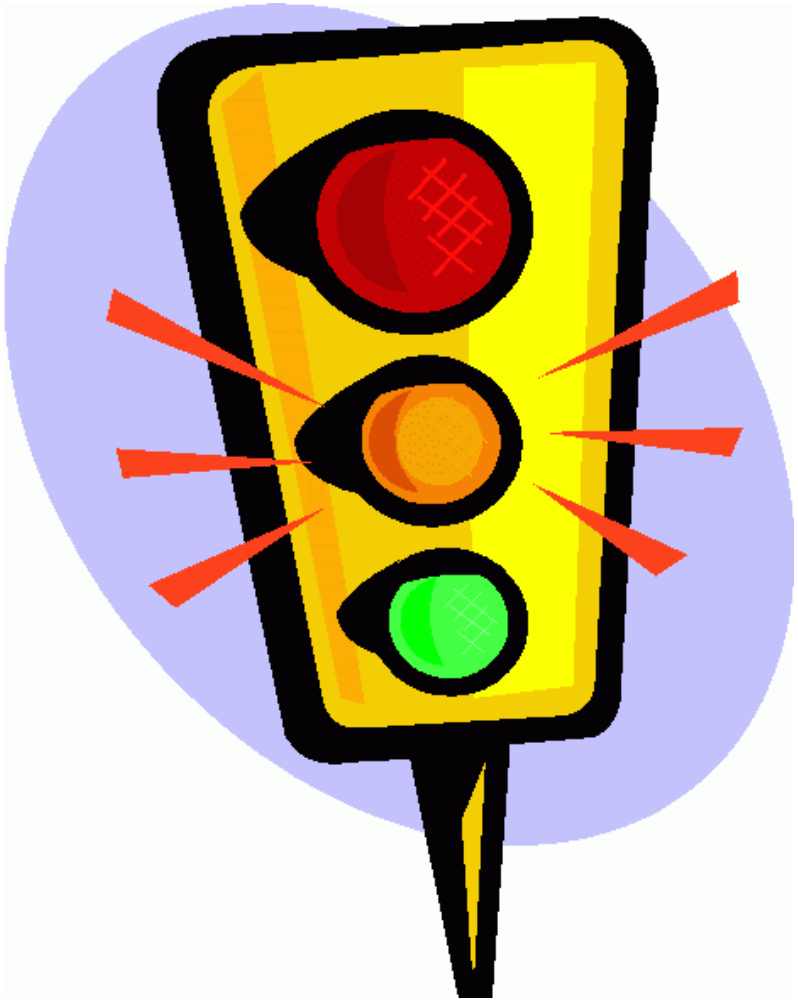
What we found

- There is no best practice approach to identifying, treating and managing these high risk children.
- There exists a health equity gap for Maaori & Pacific Island children
- As Nurses working at Kidz First we see a number of recurrent patients with multiple significant LRTI admissions
- No clear integration between primary and secondary care services

Case review

- 10 month old Baby A.
    - >10 Presentations to hospital
    - 2 x ICU admissions requiring CPAP
    - Multiple diagnoses via CXR of pneumonia and Bronchiolitis
    - > 3 days of admission to hospital.
- There was no follow up plan for Baby A.
- Baby A is one of the many children that present to Kidz First with a significant history, and at “high-risk” for developing Bronchiectasis.
- This demonstrated the need for preventative pathways.

Present emerging ideas



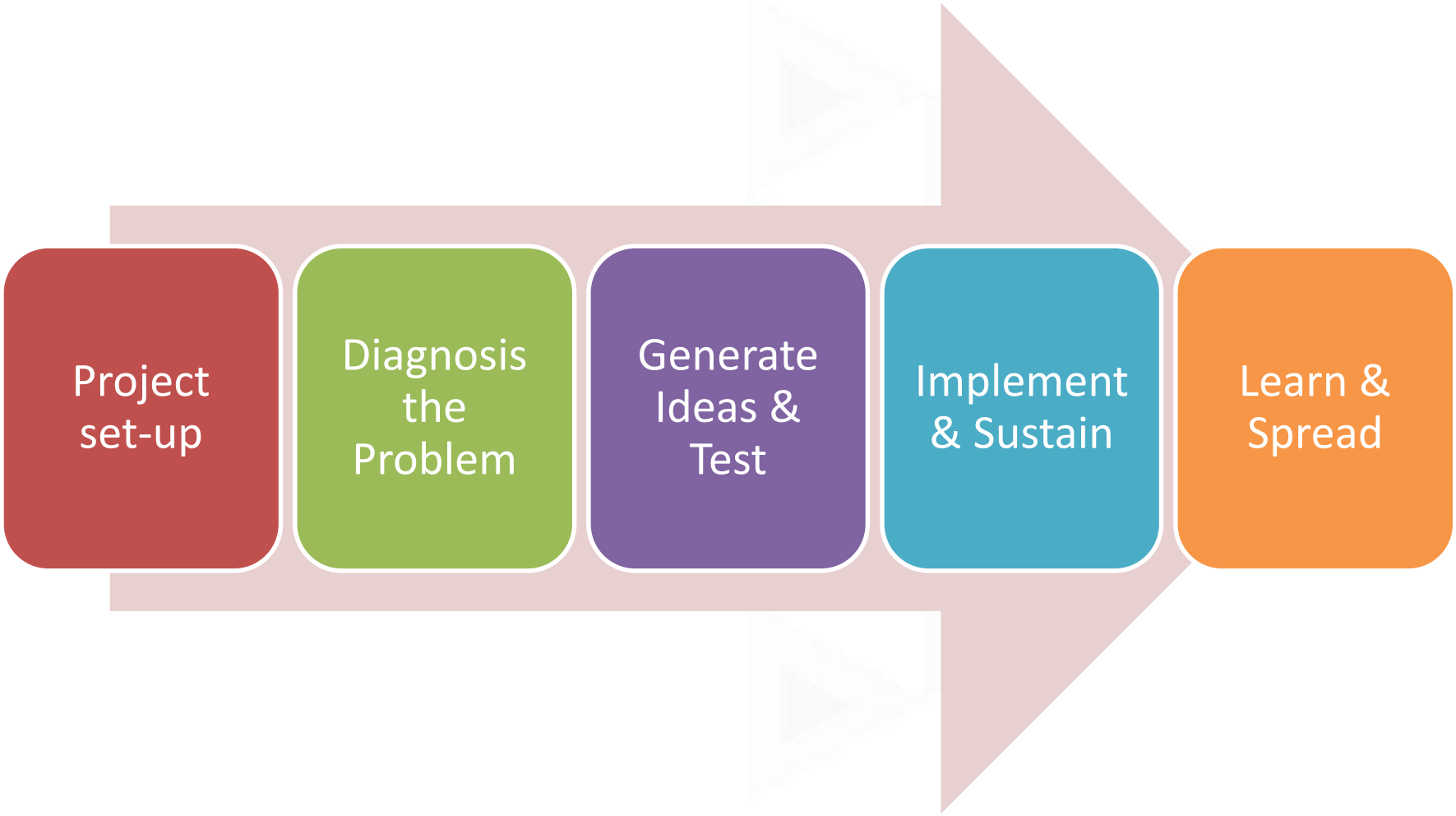
We use a Traffic light system to help identify the “at-risk” & “high risk” children in the hospital.

Yellow = First Admission with significant Lower respiratory tract infection (LRTI)

Orange = Second Admission with significant LRTI. And/or frequent presentations without significant LRTI episode.

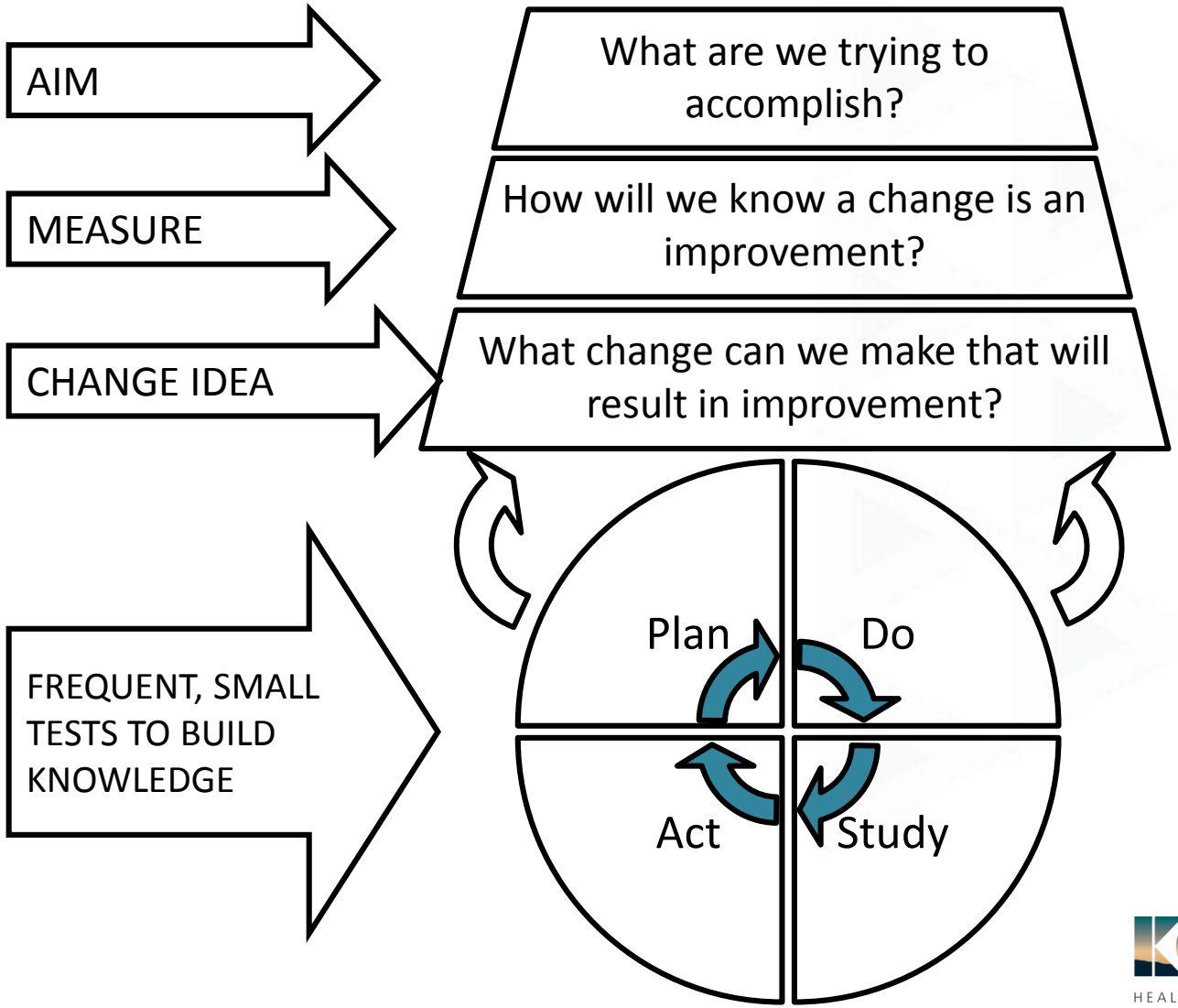
Red = Three or more admissions with significant LRTI. Any child who presents with a history of chronic wet cough or wheeze.

Ko Awatea Improvement Methodology



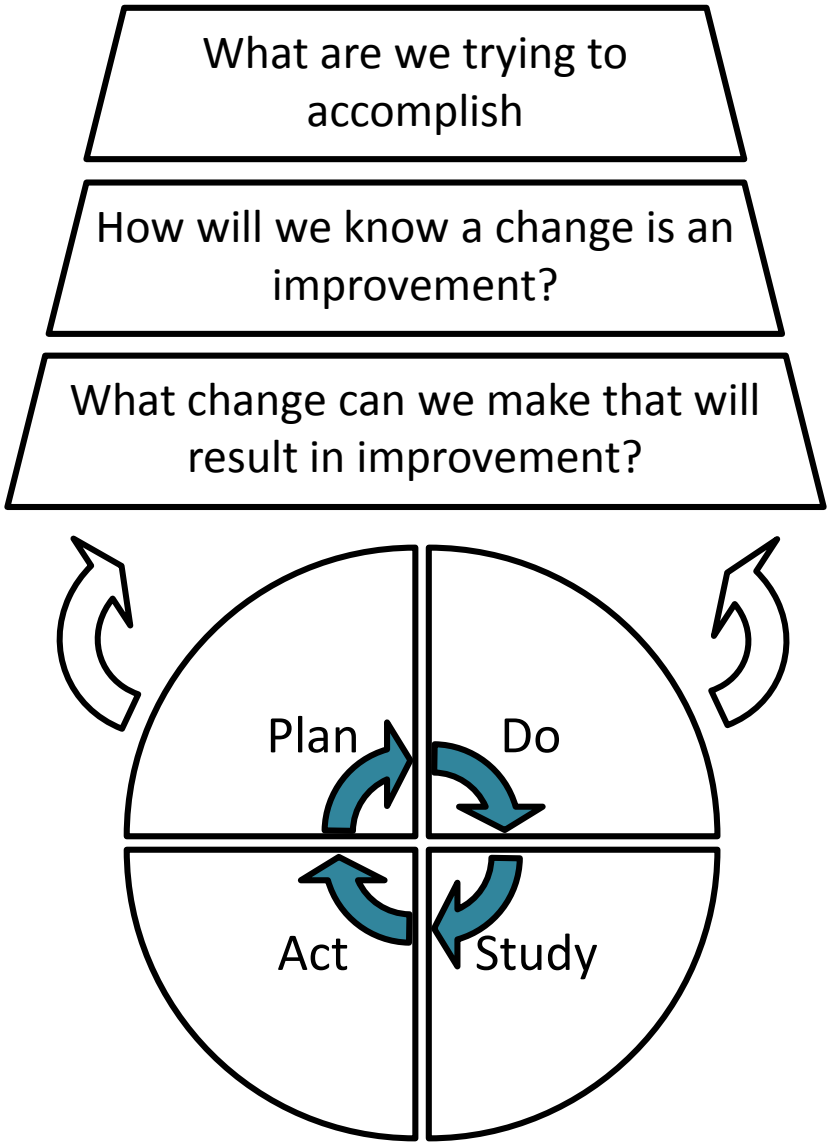
KO AWATEA
HEALTH SYSTEM INNOVATION AND IMPROVEMENT

IHI's Model for Improvement



KO AWATEA
HEALTH SYSTEM INNOVATION AND IMPROVEMENT

Model for Improvement



- Identification of “High-Risk” children and test change ideas to prevent the development of bronchiectasis.
- We developed measures for the project and each change idea we trialled e.g. Screening tool
- We reviewed previous studies and current practice to develop a set of change ideas to be tested in primary and secondary care.

- We’re currently testing these change ideas with the P-D-S-A Cycle to assess whether we Adopt, Adapt or Abandon.

KO AWATEA
HEALTH SYSTEM INNOVATION AND IMPROVEMENT

Success & Challenges

- Having the screening tool helps to group these high risk children so we can implement preventative measures in their care.
- Developing consistent discharge planning for “high-risk” & “at-risk” children.
- Co-ordinating care between primary and secondary services. To enable better treatment and management of high risk children.
- Positive feedback from families about education and discharge planning.
- As clinicians, testing ideas at times was a challenge due to working schedules.

Strategies & Reflections

- Identifying these high risk children has highlighted the need to provide a service that will establish links between primary and secondary care.
- Utilising the tools being developed in other aspects of our nursing to support our families.
- Time management has been a key aspect in this campaign, working with different areas of the health care team.
- Creating Networks within various health care teams.

Any Questions?